Cottam Solar Project

Environmental Statement Appendix: 8.2: Potential Land Effects <u>Revision A (Tracked)</u>

Prepared by: Lanpro Services Ltd. January October 2023

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Schedule of Changes

SHEET REFERENCE	DESCRIPTION OF CHANGES	REASON FOR REVISION
<u>C6.3.8.2.2.2.1</u>	RLCT4A COTTAM 1	MISSING FROM INITIAL SUBMISSION
<u>C6.3.8.2.8.2</u>	NATURAL DESIGNATIONS	MISSING FROM INITIAL SUBMISSION
	<u>Соттам 2</u>	
<u>C6.3.8.2.8.3</u>	NATURAL DESIGNATIONS	MISSING FROM INITIAL SUBMISSION
	COTTAM 3A AND 3B	

Yellow highlight indicates potential significant effects may be identified during final assessment process on landscape receptor.				
National Character Area (NCA) / Regional Landscape Character Types (RLCT) Scoping Table	Site/Sites Cottam 1 5km Study Area	Site/Sites Cottam 2 5km Study Area	Site/Sites Cottam 3a 5km Study Area	Site/Sites Cottam 3b 5km Study Area
NCA Profile: 45 Northern Lincolnshire Edge with Coversands (NE554)	1	1	1	1
Elevated arable landscape with a distinct limestone cliff running north–south, the scarp slope providing extensive long views out to the west.	/	/	/	/
Double scarp around Scunthorpe of ironstone, and extensive areas of wind-blown sand, the Coversands, giving rise to infertile soils supporting heathland, acid grassland and	/	/	/	/
oak/birch woodlands, with rare species such as woodlark and grayling butterfly.				
Underlying limestone supporting small areas of calcareous grassland.				
Few watercourses on the plateau, which lies between the rivers Trent and Ancholme which flow into the Humber, and is cut through in the south by the River Witham.				
Semi-natural habitats of acid and calcareous grassland and broadleaved woodland are small and fragmented, and often associated with disused quarries.				
Limited woodland cover, with patches of both broadleaves and conifers associated with infertile sandy soils, elsewhere occasional shelterbelts.				
Long, straight roads and tracks, often with wide verges; Ermine Street follows the route of a key Roman north-south route.	/	/	/	/
Nucleated medieval settlement patterns following major routes, especially Ermine Street; sparse on higher land, with springline villages along the foot of the Cliff and some	/	/	/	/
estates and parklands. Other development comprises the major settlements of Lincoln and Scunthorpe, with their prominent landmarks of the cathedral and steelworks, and several active and re-used	/	/	/	/
airfields prominent on the ridgetop.	/	/	/	/
Vernacular architecture and walling, especially in villages, of local warm-coloured limestone with dark brown pantiles. Several ground features, especially on the plateau, include prehistoric burial mounds, Roman artefacts and abandoned medieval villages.	/	/	/	/
	/	/	/	/
NCA Profile: 48 Trent and Belvoir Vales (NE429) A gently undulating and low-lying landform in the main, with low ridges dividing shallow, broad river valleys, vales and flood plains. The mature, powerful River Trent flows north	/	/	/	/
through the full length of the area, meandering across its broad flood plain and continuing to influence the physical and human geography of the area as it has done for thousands of years.	/	/	/	/
The bedrock geology of Triassic and Jurassic mudstones has given rise to fertile clayey soils across much of the area, while extensive deposits of alluvium and sand and gravel have given rise to a wider variety of soils, especially in the flood plains and over much of the eastern part of the NCA.				
Agriculture is the dominant land use, with most farmland being used for growing cereals, oilseeds and other arable crops. While much pasture has been converted to arable use over the years, grazing is still significant in places, such as along the Trent and around settlements.	/	/	/	/
A regular pattern of medium to large fields enclosed by hawthorn hedgerows, and ditches in low-lying areas, dominates the landscape.	/	/	/	/
Very little semi-natural habitat remains across the area; however, areas of flood plain grazing marsh are still found in places along the Trent.				
Extraction of sand and gravel deposits continues within the Trent flood plain and the area to the west of Lincoln. Many former sites of extraction have been flooded, introducing new waterbodies and new wetland habitats to the landscape.				
Extensive use of red bricks and pantiles in the 19th century has contributed to the consistent character of traditional architecture within villages and farmsteads across the area. Stone hewn from harder courses within the mudstones, along with stone from neighbouring areas, also feature as building materials, especially in the churches.	/	/	/	/
A predominantly rural and sparsely settled area with small villages and dispersed farms linked by quiet lanes, contrasting with the busy market towns of Newark and Grantham, the cities of Nottingham and Lincoln, the major roads connecting them and the cross-country dual carriageways of the A1 and A46.	/	/	/	/
Immense coal-fired power stations in the north exert a visual influence over a wide area, not just because of their structures but also the plumes that rise from them and the pylons and power lines that are linked to them. The same applies to the gas-fired power station and sugar beet factory near Newark, albeit on a slightly smaller scale.	/	/	/	/
NCA Profile: 39 Humberhead Levels (NE339)			/	/
A low-lying, predominantly flat landscape, with large, regular and geometric arable fields without hedges but divided by ditches and dykes, many of which form important habitats and key corridors for species movement.			/	/
Much of the land is at or below mean high-water mark and maintained by drainage, with fertile soils giving rise to one of the most productive areas for root crops and cereals. Variations in underlying deposits create differences within the overall flat farmed landscape, including lowland raised mires and lowland heathland, many of which are of			/	/
international ecological and historical importance.				
Sandy deposits give rise to lowland heath, which in places supports remnant birch and oak woodlands, with some conifer plantations.				
Heavier soils around Fishlake and Sykehouse result in a smaller scale pastoral landscape, with small, thickly hedged fields, ditches and ponds, and a network of small lanes.				
Important historic landscapes include the Isle of Axholme, with evidence of mediaeval open fields, the warps (land enriched by regular silting) near Goole and cables (long thin strip fields) around Thorne.				
Widespread evidence of drainage history, in particular the extensive drainage from the 17th century, revealed through canalised rivers, dykes, old river courses, canals, bridges and pumping stations.			/	/
Views to distant horizons are often long and unbroken, with big expansive skies, and vertical elements like water towers, power stations and wind turbines are very prominent.			/	/
Floodplains, washlands and traditionally grazed alluvial flood meadows (or ings) associated with the major rivers and canals that cross the Levels give rise to important wetland				
habitats, supporting large numbers of wetland birds and wildfowl, especially over winter.				
The waterlogged soils hold internationally important archaeological and palaeo-archaeological deposits.				

Yellow highlight indicates potential significant effects may be identified during final assessment process on landscape receptor.				
National Character Area (NCA) / Regional Landscape Character Types (RLCT) Scoping Table	Site/Sites	Site/Sites	Site/Sites	Site/Sites
	Cottam 1	Cottam 2	Cottam 3a	Cottam 3b
	5km Study	5km Study	5km Study	5km Study
	Area	Area	Area	Area
Despite settlements, motorways and main roads, there is still a sense of remoteness to be experienced on the Levels, in particular on Thorne and Hatfield Moors and along the				
Lower Derwent Valley.				

Yellow highlight indicates potential significant effects may be identified during final assessment process on landscape receptor.				
National Character Area (NCA) / Regional Landscape Character Types (RLCT) Scoping Table	Site/Sites Cottam 1 5km Study Area	Site/Sites Cottam 2 5km Study Area	Site/Sites Cottam 3a 5km Study Area	Site/Sites Cottam 3b 5km Study Area
			,	
RLCT Profile: 2b Planned and Drained Fens and Carrlands (East Midlands)			/	/
Consistently low lying terrain and simple palette of land uses and landscape features gives visual unity and strong sense of identity.			/	/
Large scale open landscape of flat farmlands with extensive and uninterrupted vistas to distant horizons beneath vast skies.			/	/
18th and 19th century enclosure characterises historic landscape patterns underpinned by complex history of drainage and enclosure stretching as far back as the late Saxon period in some places.			,	/
			/	/
Significant areas at or below sea level, with modestly elevated areas acting as the focus of settlement. Hierarchy of canalised rivers, high level drains and ditches divide the landscape up into rigid geometric patterns, dictating the grain of the landscape and patterns of movement			/	/
and settlement.			/	/
Limited settlement pattern characterised by isolated farms and linear villages strung out along roads; majority of buildings in brick with tile roofs, further adding to uniform				,
character of the landscape.			/	/
Rich and varied arable land uses, root crops, bulbs, vegetables and horticultural glass houses give the landscape a highly productive character and seasonal variations in colour and texture.				
Strong sense of remoteness in expansive and sparsely settled areas although periods of intense activity during harvest.				
RLCT Profile: 3a Floodplain Valleys (East Midlands)	/			
Deep alluvium and gravel deposits mask underlying bedrock geology to create wide, flat alluvial floodplains surrounded by rising landform of adjacent Landscape Character				
Types.	/			
River channels, often along managed courses, bordered by riparian habitat.	/			
Predominance of pastoral land use, with cereal growing increasing in some areas. 'Warping' areas subject to more intensive cereal growing.	/			
Limited woodland cover; however, steep riverside bluffs and areas close to settlement or on former gravel extraction sites notable for a higher level of woodland cover.	/			
Regular pattern of medium to large fields defined by hedgerows or post and wire fencing, breaking down and becoming open in some areas.				
Hedgerow and riverside trees important component of landscape. Alder, Willow and Poplar are typical riverside trees.				
Limited settlement and development in rural areas.	/			
Sewage Treatment Works and power stations common close to larger settlements that fringe the floodplains.	/			
Roads and communication routes often define the outer edges of the floodplain.	/			
Restoration of sand and gravel extraction sites to open water creates new character across many areas.				
RLCT Profile: 4a Unwooded Vales (East Midlands)	/	/	/	/
Extensive, low lying rural landscape underlain by Triassic and Jurassic mudstones and clays and widespread superficial deposits.	/	/	/	/
Expansive long distance and panoramic views from higher ground at the margin of the vales gives a sense of visual containment.	/	/	/	/
Low hills and ridges gain visual prominence in an otherwise gently undulating landscape.	/	/	/	/
Complex drainage patterns of watercourses that flow within shallow undulations often flanked by pasture and riparian habitats.	/	/	/	/
Limited woodland cover; shelter belts and hedgerow trees gain greater visual significance and habitat value as a result.	/	/	/	/
Productive arable and pastoral farmland, with evidence of increasing reversion to arable cropping in recent times.	/	/	/	/
Regular pattern of medium sized fields enclosed by low and generally well maintained hedgerows and ditches in low lying areas; large modern fieldscapes evident in areas of	/	/	,	7
arable reversion.	/	/	/	/
Sparsely settled with small villages and dispersed farms linked by quiet rural lanes.	/	/	/	/
RLCT Profile: 4b Wooded Vales (East Midlands)	/	/	/	/
Gently undulating landform formed over soft mudstone and clay geology, sharing many characteristics with the wider Unwooded Vales Landscape Character Type.	/	/	/	/
Deposits of superficial geology, particularly cover sands and till influences local land use and semi-natural habitat cover.	/	/	/	/
Low hills and ridges gain visual prominence; elevated landform fringing vales give broad sense of containment. Numerous watercourses flow within shallow undulations often flanked by pasture and riparian habitat.	/	/	/	/
Relatively high levels of woodland cover, with notable tracts of ancient semi-natural woodland along outer fringes of parishes and large coniferous plantations.	/	/	/	/
Productive arable and pastoral farmland, with evidence of increasing reversion to arable cropping.	/	/	/	/
Irregular shaped assarted fields marked by belts of trees and tall hedgerows, juxtaposed with regular pattern of medium sized fields associated with enclosure of land, with low				
and generally well maintained hedgerows and ditches in low lying areas.	/	/	/	/
Open, modern fieldscapes created by hedgerow removal in areas of arable reversion.	/	/	/	/

Yellow highlight indicates potential significant effects may be identified during final assessment process on landscape receptor.				
National Character Area (NCA) / Regional Landscape Character Types (RLCT) Scoping Table	Site/Sites Cottam 1 5km Study Area	Site/Sites Cottam 2 5km Study Area	Site/Sites Cottam 3a 5km Study Area	Site/Sites Cottam 3b 5km Study Area
RLCT Profile: 6a Limestone Scarps and Dipsolpes (East Midlands)	/	1		
Limestone escarpment and dip-slope with strong north south alignment.	/	/		
Diverse patterns of land use and regular spring line settlements along scarp in contrast to the more open and exposed dip slope.	/	/		
Limestone villages retain strong historic character, and provide strong link to the nature of the underlying geology.	/	/		
Ermine Street forms a significant feature of the landscape, and continues to dictate landscape patterns and boundaries.	/			
Place names and some indicator species are reminders of once widespread heathland.				
Evidence of declining landscape condition across intensively farmed areas.	/	/		
LCA Profile: 1 Laughton Woods (West Lindsey)			/	/
Flat, open agricultural landscape dominated by large conifer plantations.			/	/
Large, smooth textured fields, with few hedgerow or boundary fences, subdivided by a grid of drainage ditches.			/	/
Small blocks of deciduous woodland shelter belts and occasional individual oaks.			/	/
Settlements are 'islands' of buildings and trees in the flat landscape; churches and landmarks.			/	/
String of small settlements along the River Trent with few trees and no churches.			/	/
Panoramic views and big skies.			/	/
LCA Profile: 2 Trent Valley (West Lindsey)	/	/	/	/
Low-lying, gently undulating landform with higher terrain to east and south of Gainsborough.	/	/	/	/
Significant blocks of deciduous woodland, good hedgerows and hedgerow trees create a relatively enclosed landscape.	/	/	/	/
River Trent and its adjacent washlands are enclosed by steep flood embankments.	/	/	/	/
Historic parkland landscape including a medieval deer park, and landmarks such as the ruins of Torksey Castle.				
Main roads are significant features in the landscape; recent development concentrated along the main road, bypassing original village centres.	/	/	/	/
Views towards the west are dominated by the power stations along the River Trent.	/	/	/	/
LCA Profile: 3 The Till Vale (West Lindsey)	/	/	/	/
Agricultural landscape with large, flat open fields.	/	/	/	/
Some fields have low hawthorn hedgerows, with few hedgerow trees.	/	/	/	/
Small blocks of mixed woodland and shelter belts	/	/	/	/
Extensive network of rivers, dykes and ditches, which have little visual presence in the landscape.	/	/	/	/
String of small nucleated settlements on higher undulating grounds along a minor north south route; sequence of views to landmark churches.	/	/	/	/
Large farm buildings and individual farmhouse on flatter land to the east.	/	/	/	/
Ancient enclosure roads with characteric wide verges and hedgerow boundaries, paricularly in the east.	/	/	/	/
Long westward views to the power station on the River Trent, and eastward views to the scarp face of the Lincoln 'Cliff'.	/	/	/	/
LCA Profile: 4 The Cliff (West Lindsey)	/	/	/	,
Straight, limestone capped scarp slope, with a due north-south alignment.	/	/	/	/
Diverse patterns of mixed pasture and arable land with good hedgerow boundaries.	/	/	/	/
Springline villages at the foot of the scarp with historic character and many trees.	/	/	, /	/
Historic halls and associated parkland landscapes.	/	/	/	/
	/	/	/	/
Pond and lakes along the springline.	/	/	/	/



Landscape Receptor – Regional Scale Landscape Character – 4b: Wooded Vales (Cottam 1)

Receptor Baseline:

Within the Cottam 1 Site/Sites, at a regional scale, landscape character is assessed within the East Midlands Regional Landscape Character Assessment as forming part of RLCT Profile: 4b Wooded Vales, which is shown on Figure 8.5 [C6.4.8.5]. Wooded Vales does not extend into the 2km Study Area, and only occupies the western most extent of the 5km Study Area. At the eastern most edge of RLCT 4a, the boundary is shared with RLCT Profile: 6a Limestone Scarps and Dipslopes.

The sites within Cottam 1 can be sub-divided into two distinct land areas;

- Cottam 1 North
- Cottam 1 South

Key Features:

Cottam 1 North:

This refers to the area located to the north of Ingham Road and to the west of this area there are the settlements of Kexby, Willingham by Stow, Normanby by Stow and Stow, which are located to each side of the B1241 (Sturton Road and Stow Road). To the centre of this area is the small hamlet of Coates and to the east there are the settlements of Fillingham and Ingham, which are located to each side of the B1398. The area is bisected by a secondary road, known as Fillingham Lane which then runs into Willingham Road, and which links the settlements of Willingham by Stow to Fillingham. Wooded Vales within the 5km study area for Cottam 1 sits within the Gate Burton settlement and carries itself north to the strong woodland that defines the landscape to the east of the settlements of Knaith and Lea. Some of the woodlands and parks within this Landscape Character type include Burton Wood, Park Plantation, Knaith Park, Thurlby Wood, Bass Wood Willoughton Wood and Birch Wood. Key characteristics of the Wooded Vales Landscape Character Type is that it is a gently undulating landform formed over soft mudstone and clay geology, sharing many characteristics with the wider Unwooded Vales. Within this landscape character type there is a relatively high level of woodland cover, with notable tracts of ancient semi-natural woodland along outer fringes of parishes and large coniferous plantations.

Cottam 1 South:

This refers to the area located to the south of Ingham Road and to the west of this area the settlements of Normanby by Stow and Sturton by Stow are located to each side of the B1241 (Sturton Road and Stow Road). To the centre of this area are a number of isolated residential properties and farmsteads. To the east of this area, the settlements of Cammeringham, Brattleby, Aisthorpe and Scampton are nestled into the foot of the ridgeline. Land within the Cottam 1 south Study Area also contains areas defined as 'Built Up Area' which is associated with the primary settlement of Gate Burton, and the main highway corridors including the A1500 (Tillbridge Road), which is a Roman road and the Gainsborough to Lincoln mainline railway. Numerous watercourses flow through the area within shallow undulations often flanked by pasture and riparian habitat, particularly to the southeast of Gainsborough. This Landscape Character type is also sparsely settled with small villages and dispersed farms linked by quiet rural winding lanes often flanked by tall hedgerows and tree belts. Woodlands are localized variations in the landform, where they shorten views and obstruct wide panoramas to create a more intimate scale landscape than what is experienced within the Unwooded Vales Landscape Character Type.

Character Context:

Cottam 1 is mainly located within RLCT 4a: Unwooded Vales, where the land area is found to the north and south of Ingham Road and in the context of the settlements of Coates, Thorpe in the Fallows, Sturton by Stow, Bransby, Kexby, Willingham by Stow, Normanby by Stow and Stow. To the east of Cottam 1, the landscape character type RLCT 6a: Limestone Scarps and Dipslopes shares the outer 2km Study Area (with RLCT 4a) and then extends into the 5km Study Area. The ridgeline (to the east) then gives strong containment where the settlements of Fillingham, Ingham and Cammeringham mark the boundary with the B1398.

RLCT 4b: Wooded Vales landscape character type is found to the west of the Cottam 1 Site/Sites on the outer bounds of the 5km study area and outside of the 2km study area.

RLCT 4b is not considered to form part of the immediate landscape context for the Cottam 1 Site/Sites since the character type is located to the west of the settlements Kexby, Willingham by Stow, Normanby by Stow and Stow where the intervening woodlands and arable land use provide strong element of separation in the landscape.

Environmental Statement Landscape and Visual Impact Assessment Appendix 8.2.2.1: Regional Overview Tables - Scoped Out [Reference: EN010133/APP/C6.3.8.2.2.1.1] Jan 2023



Receptor susceptibility to change	Value of Receptor	Sensitivity	Mitigation (Operation Magnitude of Change at
Receptor susceptionity to change		Scholevicy	Year 15)
In terms of forces for change, the Wooded Vales aims to promote new woodland planting as this is a significant component of the landscape. The aim should be to also protect the distinctive character of the settlements and consider the visual impact of any new development. The restoration of hedgerows should also be given priority to strengthen the field pattern and enhance linkages between woodlands. The impact on the setting of village churches is also particularly important as these are distinctive local landmarks. There are regular patterns of enclosure and modern arable fields where hedgerows have been removed, but due to the abundance of large woodland blocks this helps reinforce a sense of enclosure. Overall , the susceptibility of the Wooded Vales is conditioned by a number of key forces for change that have the potential to shape the future of the landscape. These include the agricultural intensification and farm amalgamation that is resulting in the loss or damage of many typical landscape features, including traditional patterns of field boundaries, remnants of ridge and furrow, and grasslands. The loss of grazing fields around the edges of villages that is leading to a more homogenous landscape. The landscape receptor is moderately susceptible to the proposed development, and a moderate ability to accommodate the specific proposed change, because the relevant characteristics of the landscape have some ability to accommodate it without undue adverse effects, taking account of the existing character and quality of the landscape, and/or achievement of relevant planning policies and strategies.	 <u>Scenic</u>: The Wooded Vales appeal to the visual senses where extensive panoramas are possible, often framed by larger areas of woodland. There are areas where rising landform allows opportunity for extensive views that uninterrupted by existing vegetation such as areas to the SE of Gainsborough within the landscape to the west of Upton. <u>Cultural</u>: The landscape shows evidence of small villages, hamlets and farms that are evenly distributed across the landscape. This includes settlement to the southwest of Gainsborough including Priory Farm, Padmoor Farm and Park Springs Farm which fall within the Area of Greater Landscape Value (AGLV). <u>Natural</u>: There are large areas of ancient and species-rich native woodland juxtaposed with regular blocks of coniferous plantations, particularly to the northeast of Gainsborough within the AGLV. Sizable areas of ancient wet woodland are also notable along several watercourses. Many wet woodland sites are characterized by native broadleaved species. <u>Recreation and Enjayment</u>: The Wooded Vales are valued for recreation which often focused on the PRoW network that follows the river corridor and to the SE of Gainsborough towards Upton. <u>Local Distinctiveness and Sense of Place</u>: The landscape has a 'strong sense of place' endorsed by the strong agricultural character, with wide areas retaining a sense of rural tranquility and intactness, notably where ancient hedgerow patterns, woodlands and winding rural lanes are a prominent characteristic. <u>Health and Wellbeing</u>: The Vooded Vales provide a very limited network of PRoW meaning that the river floodplain is the focus for recreation. <u>Important Spatial Function</u>; The landscape benefits from the woods and heaths that occupy the boundaries of the Vales parishes, and many village place names also provide some evidence with several woodlands being named after a local village such as Burton Wood and Lea Wood, indicating they once belonged to a p	Character: Woodland is a significant component of the landscape, but the distinctive character of the settlements are also important elements of the landscape that add to the 'sense of place' <u>Quality:</u> Agricultural intensification and farm amalgamation is resulting in the loss or damage of many typical landscape features, including traditional field boundaries, remnant ridge and furrow and grasslands. <u>Value:</u> The dense woodland cover helps create a mixed pattern of land use along with the arable land use and several watercourses. This is a sparsely settled landscape with relatively little urban growth. <u>Capacity:</u> Features such as the woodland blocks contribute to the sense of enclosure with many being named after local villages, but the distinctive character of settlements and their associated tree cover show less tolerance for landscape change.	Year 15) The aim should be to plan new woodland in the most suitable locations. This may include in and around settlements, where woodland would help integrate new development into the landscape and in more intimate low-lying areas, where woodland would help create a mixed pattern of land use. Consideration should also be given to the management of existing trees and woodland, enhancing biodiversity value and age structure through new planting and the creation of woodland edge habitats. An increase in grassland reversion should also be encouraged, increasing the occurrence of semi-natural habitats.
Medium	Medium to High	Medium to High	Not Applicable

Environmental Statement Landscape and Visual Impact Assessment Appendix 8.2.2.1: Regional Overview Tables - Scoped Out [Reference: EN010133/APP/C6.3.8.2.2.1.1] Jan 2023



Landscape Receptor - Regional Scale Landscape Character - 3a: Floodplain Valleys (Cottam 1)

Receptor Baseline:

Within the Cottam 1 Site/Sites, at a regional scale, landscape character is assessed within the East Midlands Regional Landscape Character Assessment as forming part of RLCT Profile: 3a Floodplain Valleys, which is shown on Figure 8.5 [C6.4.8.5]. Floodplain Valleys do not extend into the 2km Study Area and only occur within the western region of the 5km Study Area. The Floodplain Valleys mainly occur to the west of a group of settlements that extend south from Gainsborough and include Lea, Knaith, Gate Burton, Marton, Brampton and Torksey.

The Site/Sites within Cottam 1 can be sub-divided into two distinct areas:

- Cottam 1 North •
- Cottam 1 South

Key Features:

Cottam 1 North:

The land within the Floodplain Valleys is only a very small parcel of land that is generally sloping towards the west and the river Trent, with levels ranging from approximately 10m AOD to the eastern edge of the character area and falling to approximately 2m AOD at the edge of the river Trent corridor. It comprises the floodplain of permanent pasture on riverside meadows and arable fields on the drier gravel terraces. Key characteristics of the Floodplain Valleys are deep alluvium and gravel deposits that that mask underlying bedrock geology to create wide, flat alluvial floodplains surrounded by rising landform of adjacent Landscape Character Types. Hedgerow and riverside trees are also an important component of the landscape within this character type where Alder, Willow and Poplar are typical riverside trees and there are swathes of riverine woodland lining the river corridor, particularly the sharp 'U' bend in the river at Trent Port. Sewage treatment works and power stations are common close to larger settlements that fringe the floodplains with the nearest being Cottam Power Station outside the 5km Study Area to the southwest of Cottam 1. Most of the East Midlands region's major towns are located adjacent to the floodplains and have a strong but localized influence on their character. In other places, the floodplains constitute some of the most remote and peaceful terrestrial lowland areas in the East Midlands. The landscape around Marton shows the influence of settlement through the presence of a strategic road network, which exerts a strong influence on local character. In contrast, there are also areas where the open, unsettled character of the landscape is easily recognizable, creating a distinct 'sense of place'.

Cottam 1 South:

Whilst the floodplains themselves are generally devoid of settlement, the rivers and neighboring gravel terraces have been a focus for settlement for several thousands of years. The land within the Floodplain Valleys borders areas defined as 'Built Up Area' which is associated with the settlement of Marton and includes strategic highway corridors along the A1500 (Stow Park Road and Tillbridge Lane), which is a Roman road and the A156 which passes through Marton. This is typical of most the region's major towns that are located adjacent to floodplains and exert a strong but localized influence on their character. This landscape character type has limited woodland cover; however, steep riverside bluffs and areas close to settlement or on former gravel extraction sites are notable for a higher level of woodland cover and this is typically evident around the settlement of Marton. Historically, the floodplains would have shared common land use characteristics with a predominance of permanent pasture on riverside meadows and arable fields on drier gravel terraces and this is evident in the landscape around Marton where there is a mixture of pasture and arable land use.

Character Context:

Cottam 1 is mainly located within RLCT 4a: Unwooded Vales, where the land area is found to the north and south of Ingham Road and in the context of the settlements of Coates, Thorpe in the Fallows, Sturton by Stow, Bransby, Kexby, Willingham by Stow, Normanby by Stow and Stow. To the east of Cottam 1, the landscape character type RLCT 6a: Limestone Scarps and Dipslopes shares the outer 2km Study Area (with RLCT 4a) and then extends into the 5km Study Area. The ridgeline (to the east) then gives strong containment where the settlements of Fillingham, Ingham and Cammeringham mark the boundary with the B1398.

RLCT 3a: Floodplain Valleys landscape character type is found to the west of the Cottam 1 Site/Sites on the outer bounds of the 5km study area and outside of the 2km study area.

RLCT 3a is not considered to form part of the immediate landscape context for the Cottam 1 Site/Sites since the character type is located to the west of the settlements Kexby, Willingham by Stow, Normanby by Stow and Stow where the intervening woodlands and arable land use provide strong elements of separation in the landscape.

Environmental Statement Landscape and Visual Impact Assessment Appendix 8.2.2.1: Regional Overview Tables – Scoped Out [Reference: EN010133/APP/C6.3.8.2.2.1.2] Jan 2023



			Mitigation
Receptor susceptibility to change	Value of Receptor	Sensitivity	(Operation Magnitude of Change at Year 15)
In terms of forces for change, the Floodplain	<u>Scenic:</u> The Floodplain Valleys appeal to the visual senses in that vast stretches of the	Character:	The aim of the Floodplain Valleys should be
Valleys aims to protect the open and unsettled	floodplain retain an intact and traditional character, despite the intrusion from sand and	Medium landscape tolerance with	to plant small-scale woodlands and linear
character of the landscape from inappropriate	gravel extraction and power and energy infrastructure.	some scope for change to landscape	riverine belts of planting or associated with
development and that tree planting around		character. Although there is an aim	lakes and pools within the pastoral
settlement fringes can help with integration	Cultural: The landscape shows evidence of archaeology and built heritage particularly	to protect the open character, tree	floodplain with larger scale farm woods
and help contribute to the overall perception	where there are road crossings over the river or views to farms and villages on drier, more	planting around the edges of	with more open agricultural landscapes.
of a well treed landscape. The changes from	elevated land. Marton is typical of the many settlements in the floodplain that are linear,	settlements can help with integration	Limited native tree planting may also be
flood risk and engineered solutions are also	stretching out along roads parallel to the main river channel. Historic sites include mill sites	of built form.	appropriate.
changing the landscape, but there is potential	and races and canalized sections of rivers and associated locks and sluices.		
for landscape restoration projects to assist		<u>Quality:</u> The predominance of	The visual intrusion from sand and gravel
with mitigation of this change. The potential	Natural: There are extensive expanses of semi-natural habitat along the river corridor	permanent pasture on riverside	extraction is also a recognised feature of
for river landscape to change is also a key	including permanent grazing land interspersed with meandering river channels fringed by	meadows constitutes some of the	the landscape, but in producing restoration
consideration, but there is potential to	riparian habitats and riverside trees. Several former mineral sites are designated as Sites of	most remote and peaceful terrestrial	plans there is an opportunity to maximize
introduce positive landscape interventions	Special Scientific Interest (SSSI).	lowland areas of the East Midlands.	biodiversity benefits. The impact on long
such as biodiversity and nature conservation			distance views from surrounding towns
initiatives	Recreation and Enjoyment: The Floodplain Valleys are valued for recreation and whilst there	Value: Lower landscape tolerance or	and villages is also a key consideration.
	is a marked contrast between areas that remote, other areas close to settlements such	scope for landscape change since <u>the</u>	
Overall, the susceptibility of the Floodplain	Marton and Gate Burton have access to the floodplain landscape including core paths such	landscape has a distinctive scenic	
Valleys is conditioned by a number of key	as the Trent Valley Way.	quality and is valued by local	
forces for change that have the potential to		communities and visitors for	
shape the future of the landscape. These	Local Distinctiveness and Sense of Place: The landscape has a 'strong sense of place' in that	informal recreation and nature	
include the impact of settlement on the edges	field patterns are largely geometric with the pattern breaking down in some places to	conservation, notably for	
of the river floodplain, the interventions	create large areas of farmland.	overwintering birds.	
associated with flood risk, the shifting of river			
channels, sand and gravel extraction and	Health and Wellbeing: The floodplain landscape provides facilities that are well-used and	<u>Capacity:</u> Features contribute to a	
power and energy infrastructure. There are	valued by local communities and visitors including for informal recreation and nature,	sense of place and illustrate a time-	
however also significant benefits to be gained	notably for overwintering birds.	depth and could for example not be	
from a range of landscape and biodiversity		replaced other than in the long term.	
interventions such as restoration projects.	Important Spatial Function: The Floodplain Valleys are host to numerous gateways		
	established at strategic river crossings where settlement is typically located at the edge of		
The landscape receptor is moderately	the floodplain with riverside settlements. Marton is typically a gateway settlement with		
susceptible to the proposed development, and	historic origins including the Grade I Listed Church of St Margaret of Antioch.		
a moderate ability to accommodate the			
specific proposed change, because the	Overall , the value of the Floodplain Valleys is shaped by the historical predominance of		
relevant characteristics of the landscape have	permanent pasture on riverside meadows that constitute some of the most remote and		
some ability to accommodate it without undue	peaceful terrestrial lowland areas of the East Midlands. This lowland landscape is sparsely		
adverse effects, taking account of the existing	settled and tranquil in parts. This is in contrast to the landscape to the west where the		
character and quality of the landscape, and/or	influence of urban areas such as Retford and sand and gravel extraction have given rise to		
achievement of relevant planning policies and	significant encroachment.		
strategies.			
Medium	Medium to High	Medium to High	Not Applicable

Environmental Statement Landscape and Visual Impact Assessment Appendix 8.2.2.1: Regional Overview Tables – Scoped Out [Reference: EN010133/APP/C6.3.8.2.2.1.2] Jan 2023



Landscape Receptor - Regional Scale Landscape Character - 6a: Limestone Scarps and Dipslopes (Cottam 1)

Receptor Baseline:

Within the Cottam 1 Site/Sites, at a regional scale, landscape character is assessed within the East Midlands Regional Landscape Character Assessment as forming part of RLCT Profile: 6a Limestone Scarps and Dipslopes, which is shown on Figure 8.5 [C6.4.8.5]. Limestone Scarps and Dipslopes only occupies the eastern most edge of the of the 2km Study Area where it shares a boundary with RLCT Profile: 4a Unwooded Vales, and an eastern section of the 5km Study Area. The northwestern extent of the 5km Study Area is also host to a small part of RLCT Profile 3a: Floodplain Valleys and RLCT Profile: 4b Wooded Vales. The Limestone Scarps and Dipslopes Landscape Character Type is part of the Jurassic Limestone belt that runs from Dorset to the Humber.

The sites within Cottam 1 can be sub-divided into two distinct land areas:

- Cottam 1 North
- Cottam 1 South •

Key Features:

Cottam 1 North:

This refers to the area located to the north of Ingham Road and to the west of this area there are the settlements of Kexby, Willingham by Stow, Normanby by Stow and Stow, which are located to each side of the B1241 (Sturton Road and Stow Road). To the centre of this area is the small hamlet of Coates and to the east there are the settlements of Fillingham, Ingham, which are located to each side of the B1398. The area is bisected by a secondary road, known as Fillingham Lane which then runs into Willingham Road, and which links the settlements of Willingham by Stow to Fillingham. Another key characteristic of this regional landscape character area is the strong diverse pattern of land use and regular spring line settlements along the scarp in contrast to the more open and exposed dip slope. Ermine Street forms a significant feature of this landscape and continues to dictate landscape patterns and boundaries. Streams are relatively insubstantial and occupy gentle folds in the underlying landscape. These streams are the focus of settlements such as Glentworth, Fillingham and Ingham.

Cottam 1 South:

This refers to the area located to the south of Ingham Road and to the west of this area the settlements of Normanby by Stow and Sturton by Stow are located to each side of the B1241 (Sturton Road and Stow Road). To the centre of this area are several isolated residential properties and farmsteads. To the east of this area, the settlements of Cammeringham, Brattleby, Aisthorpe and Scampton are nestled into the foot of the ridgeline. Key characteristics of the Limestone Scarps and Dipslopes is a strong north south alignment. Limestone villages within this regional landscape character type retain strong historic character and provide a defined link to the nature of the underlying geology. The differences in soils and landform have a significance influence on land cover. The steeper scarp slopes are predominantly pastoral with intermittent woodlands, and this is a particular feature at Cammeringham, Brattleby and Aisthorpe. In contrast, where the scarp slope is noticeably gentler where arable fields can be observed to roll over the crest of the edge and down into the adjacent vale. This gentle arable characteristic is most noticeable in the landscape between Cammeringham and Brattleby. Intensive agricultural land uses have diminished the extent of semi-natural habitat across the landscape along with the low and generally poor quality of hedgerows. The limestone villages are a key feature of the landscape, particularly Stow, Sturton by Stow, Bransby and the small hamlet of Thorpe in the Fallows. Some small remnant species-rich grasslands and woodlands are locally significant, particularly when associated with parklands. Such parkland landscapes are common around Cammeringham, Brattleby and Aisthorpe.

Character Context:

Cottam 1 is mainly located within RLCT 4a: Unwooded Vales, where the land area is found to the north and south of Ingham Road and in the context of the settlements of Coates, Thorpe in the Fallows, Sturton by Stow, Bransby, Kexby, Willingham by Stow, Normanby by Stow and Stow. To the east of Cottam 1, the landscape character type RLCT 6a: Limestone Scarps and Dipslopes shares the outer 2km Study Area (with RLCT 4a) and then extends into the 5km Study Area. The ridgeline (to the east) then gives strong containment where the settlements of Fillingham, Ingham and Cammeringham mark the boundary with the B1398.

RLCT 6a: Limestone Scarps and Dipslopes landscape character type is found to the east of the Cottam 1 Site/Sites on the outer bounds of the 2km study area and within the 5km Study Area.

RLCT 6a is considered to form part of the immediate landscape context for the Cottam 1 Site/Sites since the character type is in the context of the settlements Fillingham, Ingham and Cammeringham where the landform rises towards the ridgeline and there may be few elements of separation within the landscape.

Environmental Statement Landscape and Visual Impact Assessment Appendix 8.2.2.1: Regional Overview Tables - Scoped Out [Reference: EN010133/APP/C6.3.8.2.2.1.3] Jan 2023



Receptor susceptibility to change	Value of Receptor	Sensitivity	
In terms of forces for change, the Limestone Scarps and Dipslopes aims to plan for new woodlands, ensuring new planting schemes take full advantage of opportunities to enhance the scarp slope. The aims should also be to ensure there is consideration of the relationship between Limestone Scarps and Dipslopes and Unwooded Vales to ensure new planting does not negatively impact upon the open character of the adjoining Landscape Character Type. The pressures are centered around existing woodlands that are often small and isolated and suffer from lack of management. The high demand for aggregates, and pressure for new and expanded quarries, is likely to further damage the landscape. Pressure from arable cultivation has resulted in field enlargement, removing field boundaries, and creating a more open landscape. Roman roads are a key feature, but they are under	Scenic: The Limestone Scarps and Dipslopes appeal to the visual senses where woodland along the scarp slope is a significant feature, defining the ridgeline and helping to contain settlement. Views towards Lincoln Cathedral are part of key views across the area. <u>Cultural:</u> The landscape shows evidence of Roman roads and network of enclosure roads that are distinctive features of the Limestone Scarps and Dipslopes. The course of Ermine Street is an important asset. Airfields are also a feature providing a link with the wartime past and a focal point for new settlements. Natural: There is a diverse character with pasture, arable, woodland and hedgerows that create an intricate and textured landscape. In some places, the water table is close to the surface, resulting in several streams emerging close to the top of the scarp and flowing eastwards. Recreation and Enjoyment: The Scarps and Dipslopes are valued for recreation which often focuses on the locations where the crests of ridges allow views across	<u>Character:</u> There is a diverse character with pasture, arable, woodland and hedgerows that create an intricate and textured landscape. <u>Quality:</u> Areas have a positive landscape character with some elements that could be described unique such as the views from the distinctive ridge towards the Tree floodplain. <u>Value:</u> The Scarps and Dipslopes provide a rural landscape that has remained largely intact where the landscape condition is generally	
threat from lack of management and inappropriate planting.	the area, in particular towards Lincoln Cathedral. The course of Ermine Street is a recreation and habitat corridor, which contributes to biodiversity and landscape character.	good. <u><i>Capacity:</i></u> There are areas of pastor	
Overall , the susceptibility of the Limestone Scarps and Dipslopes is conditioned by the escarpment, known locally as the Lincolnshire Edge or Cliff, that rises above the Trent Vale and forms a prominent and distinctive landscape feature. The Roman roads are also a key	<u>Local Distinctiveness and Sense of Place</u> : The landscape has a 'strong sense of place' with a subtle regimented character that is reinforced by the geometric patterns of fields. The transport routes and regularity of the scarp edge villages also exert a strong geometry.	landscape and wooded scarps interspersed with small stone-built villages and this helps retain a tangible connection to the landscap character, but these features are	
consideration created to link London with York. Superimposed on the north south axis of the Roman road is a less dominant but nonetheless distinctive pattern of east west routes and field boundaries that add geometric character. The relevant characteristics of the landscape therefore have a moderate ability to	<u>Health and Wellbeing</u> : The Scarps and Dipslopes provide a rural landscape that has remained largely intact where the landscape condition is generally good. There are areas of pastoral landscapes and wooded scarps interspersed with small stone-built villages and this helps retain a tangible connection to the landscape character.	vulnerable and show less tolerance for change.	
accommodate change without undue adverse effects. The landscape receptor is moderately susceptible to the proposed development, and a moderate ability to	<i>Important Spatial Function:</i> The landscape benefits from its low elevation, and the views from these lowlands towards the elevated areas, which act as a strong backdrop.		
accommodate the specific proposed change, because the relevant characteristics of the landscape have some ability to accommodate it without undue adverse effects, taking account of the existing character and quality of the landscape, and/or achievement of relevant planning policies and strategies.	Overall, the value of the Limestone Scarps and Dipslopes is shaped by the Jurassic limestone belt that is reminiscent of the Cotswolds, particularly in terms of the large-scale arable land uses. The consistent alignment of the 'Edge' or 'Cliff' has created a strong sense of linearity, further emphasized by ancient transportation routes. The straightness and sharpness of the edge makes up for where the scarp is lower in areas such as Fillingham and Ingham.		
Medium	Medium to High	Medium to High	

Environmental Statement Landscape and Visual Impact Assessment Appendix 8.2.2.1: Regional Overview Tables – Scoped Out [Reference: EN010133/APP/C6.3.8.2.2.1.3] Jan 2023

	Mitigation (Operation Magnitude of Change at Year 15)
as t	The aim should be to manage existing trees and woodland, encouraging new planting to ensure a varied structure, whilst removing invasive species. The restoration of hedgerows and stone walls should be given priority, creating a stronger field pattern and helping to integrate new development into the landscape. The aim is to also bring in opportunities to restore grassland and areas of pasture. In view of the range of geological and geomorphological features, such as the limestone villages, it is important that practices are in place for their care, maintenance and management, and the promotion of their educational and interpretational interest.
oral lt ce	Airfields are also a key feature, and the aim should be to ensure that any new development follows the footprint of existing structures as closely as possible, limiting visual intrusion and the loss of surrounding landscape features. The declining hedgerows and stone boundaries impart a denudation of character in some areas.
	Not Applicable



Landscape Receptor – Regional Scale Landscape Character – 4b: Wooded Vales (Cottam 2)

Receptor Baseline:

Within the Cottam 2 Site/Sites, at a regional scale, landscape character is assessed within the East Midlands Regional Landscape Character Assessment as forming part of RLCT Profile: 4b Wooded Vales, which is shown on Figure 8.5 [C6.4.8.5]. Wooded Vales does not extend into the 2km Study Area, and only occupies the western most extent of the 5km Study Area as it shares a boundary with the settlement of Gainsborough.

Key Features:

The landscape character type sits to the east of Gainsborough, avoiding any 'Built Up Areas' and extends south, following Gainsborough Road towards Gate Burton. The Wooded Vales includes woodlands such as Wharton Wood, Birch Wood, Thonock Grove, White's Wood, Warren Wood, Lea Wood, Bass Wood and Thurly Wood.

The main settlement of Gainsborough is located just within the 5km Study Area at the eastern edge. Other settlements include Blyton, Pilham, Corringham, Blyborough, Willoughton, Hemswell, Harpswell, Springthorpe and Heapham. The main highway corridors include the A631 (Corringham Road leading to Harpswell Lane), B1398 (Middle Street) and the A159 (Thonock Road).

Wooded Vales carries itself south from Gainsborough to include the strong woodland that defines the landscape to the east of the settlements of Knaith and Lea. Some of the woodlands and parks within this Landscape Character type include Burton Wood, Park Plantation, Knaith Park, Thurlby Wood, Bass Wood, Willoughton Wood and Birch Wood. Key characteristics of the Wooded Vales Landscape Character Type is that it is a gently undulating landform formed over soft mudstone and clay geology, sharing many characteristics with the wider Unwooded Vales. Within this landscape character type there is a relatively high level of woodland cover, with notable tracts of ancient semi-natural woodland along outer fringes of parishes and large coniferous plantations.

Numerous watercourses flow through the area within shallow undulations often flanked by pasture and riparian habitat, particularly around Springthorpe and Heapham. This Landscape Character type is also sparsely settled with small villages and dispersed farms linked by quiet rural winding lanes often flanked by tall hedgerows and tree belts. Woodlands are localized variations in the landform, where they shorten views and obstruct wide panoramas to create a more intimate scale landscape than what is experienced within the Unwooded Vales Landscape Character Type.

Key characteristics of the Wooded Vales also include gently undulating landform which has been formed over soft mudstone and clay geology, sharing many characteristics with the wider Unwooded Vales Landscape Character Type. Low hills and ridges gain visual prominence within this landscape as the elevated landform fringing the vales gives a broad sense of containment. Numerous watercourses flow within the shallow undulations which are often flanked by pasture and riparian habitats. There is a relatively high levels of woodland cover, with notable tracts of ancient semi-natural woodland along the outer fringes of parishes and large coniferous plantations. The landscape character is sparsely settled with small villages and dispersed farms linked by quiet rural winding lanes often flanked by tall hedgerows and tree belts.

The sparsely settled Wooded Vales Landscape Character Type generally occurs in north Lincolnshire and lies within the much broader and extensive Unwooded Vales.

Character Context:

Cottam 2 is mainly located within RLCT 4a: Unwooded Vales, where the land area is found to the north of the A631 (Corringham Road) in the context of the settlements of Pilham, Corringham and Springthorpe. To the east of Cottam 2, RLCT 6a: Limestone Scarps and Dipslopes shares the outer 2km Study Area where it extends into the 5km Study Area. The ridgeline (further to the east) then gives strong containment to RLCT 4a, where the settlements of Wilhoughton, Hemswell and Harpswell mark the boundary with the B1398.

RLCT 4b: Wooded Vales landscape character type is found to the west of the Cottam 2 Site/Sites on the outer bounds of the 5km study area and outside of the 2km study area.

RLCT 4b is not considered to form part of the immediate landscape context for the Cottam 2 Site/Sites since the character type is located to the west of the settlement of Corringham and the large woodland blocks that stand to the east of Gainsborough are substantial features that provide separation in the landscape.

Environmental Statement Landscape and Visual Impact Assessment Appendix 8.2.2.1: Regional Overview Tables – Scoped Out [Reference: EN010133/APP/C6.3.8.2.2.1.4] Jan 2023



Receptor susceptibility to change	Value of Receptor	Sensitivity	Mitigation (Operation Magnitude of Change at Year 15)
In terms of forces for change, the Wooded Vales aims to promote new woodland planting as this is a significant component of the landscape. The aim should be to also protect the distinctive character of the settlements and consider the visual impact of any new development. The restoration of hedgerows should also be given priority to strengthen the field pattern and enhance linkages between woodlands. The impact on the setting of village churches is also particularly important as these are distinctive local landmarks. There are regular patterns of enclosure and modern arable fields where hedgerows have been removed, but due to the abundance of large woodland blocks this helps reinforce a sense of enclosure. Overall , the susceptibility of the Wooded Vales is conditioned by a number of key forces for change that have the potential to shape the future of the landscape. These include the agricultural intensification and farm amalgamation that is resulting in the loss or damage of many typical landscape features, including traditional patterns of field boundaries, remnants of ridge and furrow, and grasslands. The loss of grazing fields around the edges of villages that is leading to a more homogenous landscape. The landscape receptor is moderately susceptible to the proposed development, and a moderate ability to accommodate the specific proposed change, because the relevant characteristics of the landscape have some ability to accommodate it without undue adverse effects, taking account of the existing character and quality of the landscape, and/or achievement of relevant planning policies and strategies.	 Scenic: The Wooded Vales appeal to the visual senses where extensive panoramas are possible, often framed by larger areas of woodland. There are areas where rising landform allows opportunity for extensive views that uninterrupted by existing vegetation such as areas to the southeast of Gainsborough within the landscape around Springthorpe. <i>Cultural:</i> The landscape shows evidence of small villages, hamlets and farms that are evenly distributed across the landscape. This includes settlement of Yawthorpe and outlying farmsteads at Thonock Grove and Wharton Wood which fall within the Area of Greater Landscape Value (AGLV). <i>Natural:</i> There are large areas of ancient and species-rich native woodland juxtaposed with regular blocks of coniferous plantations, particularly to the northeast of Gainsborough within the AGLV. Sizable areas of ancient wet woodlands are also notable along several watercourses. Many wet woodland sites are characterised by native broadleaved species. <i>Recreation and Enjoyment:</i> The Wooded Vales are valued for recreation which often focuses on the PRoW network that follows the route of the River Trent and almost runs parallel. The impact on the setting of village churches is also particularly important as these are distinctive local landmarks. <i>Local Distinctiveness and Sense of Place:</i> The landscape has a 'strong sense of place' endorsed by the strong agricultural character, with wide areas retaining a sense of rural tranquility and intactness, notably where ancient hedgerow patterns, woodlands and winding rural lanes are a prominent characteristic. <i>Health and Wellbeing:</i> The Wooded Vales provide a very limited network of PRoW meaning that the river floodplain is the main focus for recreation. <i>Important Spatial Function:</i> The landscape benefits from the woods and heaths that occupy the boundaries of the vale's parishes, and many village place names also provide some evidence with several woodlands bei	<u>Character:</u> Extensive panoramas are possible, often framed by larger areas of woodland and there would be generally a lower landscape tolerance or scope for landscape change in these areas. <u>Quality</u> : The strong presence of woodland is characteristic of this landscape and the large areas with regular blocks of plantations could be readily replicated. <u>Value</u> : The Wooded Vales are valued for recreation which often focuses on the PRoW network that follows the route of the River Trent and almost runs parallel. <u>Capacity</u> : The strong agricultural character, with wide areas retaining a sense of rural tranquility and intactness, notably where ancient hedgerow patterns, woodlands and winding rural lanes are a prominent characteristic, but vulnerable to change.	The aim should be to plan new woodlands in the most suitable locations. This may include in and around settlements, where woodland would help integrate new development into the landscape and in more intimate low-lying areas, where woodland would help create a mixed pattern of land use. Consideration should also be given to the management of existing trees and woodland, enhancing biodiversity value and age structure through new planting and the creation of woodland edge habitats. An increase in grassland reversion should also be encouraged, increasing the occurrence of semi-natural habitats. The restoration of hedgerows should also be given priority to strengthen the field pattern and enhance linkages between woodlands.
Medium	Medium to High	Medium to High	Not Applicable

Environmental Statement Landscape and Visual Impact Assessment Appendix 8.2.2.1: Regional Overview Tables – Scoped Out [Reference: EN010133/APP/C6.3.8.2.2.1.4] Jan 2023



Landscape Receptor – Regional Scale Landscape Character – 6a: Limestone Scarps and Dipslopes (Cottam 2)

Receptor Baseline:

Within the Cottam 2 Site/Sites, at a regional scale, landscape character is assessed within the East Midlands Regional Landscape Character Assessment as forming part of RLCT Profile: 6a Limestone Scarps and Dipslopes, which is shown on Figure 8.5 [C6.4.8.5]. Limestone Scarps and Dipslopes only occupies the eastern most edge of the 5km Study Area where it shares a boundary with RLCT Profile: 4a Unwooded Vales. The Limestone Scarps and Dipslopes Landscape Character Type is part of the Jurassic Limestone belt that runs from Dorset to the Humber.

Key Features:

This landscape character area borders Gravingham and spans the landscape north to south to each side of Ermine Street covering the settlements of Blyborough, Hemswell Cliff, Waddingham, Snitterby, Bishop Norton, Glentham, Hackthorn and Brattleby.

This regional landscape character area exhibits a strong diverse pattern of land use and regular spring line settlements along the scarp in contrast to the more open and exposed dip slope. Ermine Street forms a significant feature and continues to dictate landscape patterns and boundaries. Streams are relatively insubstantial and occupy gentle folds in the underlying landscape. These streams are the focus of settlements such as Willhoughton and Hemswell.

Limestone villages within this regional landscape character type retain strong historic character and provide a defined link to the nature of the underlying geology. The differences in soils and landform have a significant influence on land cover. The steeper scarp slopes are predominantly pastoral with intermittent woodlands, and this is a particular feature at Hemswell and Harpswell. In contrast, where the scarp slope is noticeably gentler where arable fields can be observed to roll over the crest of the edge and down into the adjacent vale. This is a gentle arable characteristic and is most noticeable in the landscape between Willhoughton and Hemswell. Intensive agricultural land uses have diminished the extent of semi-natural habitat across the landscape along with the low and generally poor quality of hedgerows. The limestone villages are a key feature of the landscape, particularly Pilham and Corringham and the small hamlet of Yawthorpe. Some small remnant species-rich grasslands and woodlands are locally significant, particularly when associated with parklands. Such parkland landscapes are common around Blyton and Blyborough.

Key characteristics of the Limestone Scarps and Dipslopes include the limestone escarpment and dip-slope with a strong north south alignment. Limestone villages retain a strong historic character and provide a good link to the nature of the underlying geology. Ermine Street forms a significant feature of the landscape and continues to dictate landscape patterns and boundaries. Place names and some indicator species are reminders of once widespread heathland and evidence of declining landscape condition across intensively farmed areas.

The Limestones Scarps and Dipslopes Character Type is part of the Jurassic limestone belt that runs from Dorset to the Humber. It is thought that the landscape has remained largely devoid of trees since the prehistoric period.

Character Context:

Cottam 2 is mainly located within RLCT 4a: Unwooded Vales, where the land area is found to the north of the A631 (Corringham Road) in the context of the settlements of Pilham, Corringham and Springthorpe. To the east of Cottam 2, RLCT 6a: Limestone Scarps and Dipslopes shares the outer 2km Study Area where it extends into the 5km Study Area. The ridgeline (further to the east) then gives strong containment (to RLCT 4a) where the settlements of Wilhoughton, Hemswell and Harpswell mark the boundary with the B1398.

RLCT 6a: Limestone Scarps and Dipslopes landscape character type is found to the east of the Cottam 2 Site/Sites on the outer bounds of the 5km Study Area.

RLCT 6a is considered to form part of the immediate landscape context for the Cottam 2 Site/Sites since the character type is in the context of the settlements of Willhoughton, Hemswell and Harpswell where the landform rises towards the ridgeline and where there may be few elements of separation within the landscape.

Environmental Statement Landscape and Visual Impact Assessment Appendix 8.2.2.1: Regional Overview Tables – Scoped Out [Reference: EN010133/APP/C6.3.8.2.2.1.5] Jan 2023



Receptor susceptibility to change	Value of Receptor	Sensitivity	Mitigation (Operation Magnitude of Change at Year 15)
In terms of forces for change, the Limestone Scarps and Dipslopes aims to plan for new woodlands, ensuring new planting schemes take full advantage of opportunities to enhance the scarp slope. The aims should also be to ensure there is consideration of the relationship between Limestone Scarps and Dipslopes and Unwooded Vales to ensure new planting does not negatively impact upon the open character of the adjoining Landscape Character Type. The pressures are centered around existing woodlands that are often small and isolated and suffer from lack of management. The high demand for aggregates, and pressure for new and expanded quarries, is likely to further damage the landscape. Pressure from arable cultivation has resulted in field enlargement, removing boundaries and creating a more open landscape. Roman roads are a key feature, but they are under threat from lack of management and inappropriate planting.	 <u>Scenic:</u> The Limestone Scarps and Dipslopes appeal to the visual senses where woodland along the scarp slope is a significant feature, defining the ridgeline and helping to contain settlement. Views towards Lincoln Cathedral are part of key views across the area. <u>Cultural</u>: The landscape shows evidence of Roman roads and network of enclosure roads that are distinctive features of the Limestone Scarps and Dipslopes. The course of Ermine Street is an important asset. Airfields are also a feature providing a link with the wartime past and a focal point for change. <u>Natural</u>: There is a diverse character with pasture, arable, woodland and hedgerows that create an intricate and textured landscape. In some places, the water table is close to the surface, resulting in several streams emerging close to the top of the scarp and flowing eastwards. <u>Recreation and Enjoyment</u>: The Scarps and Dipslopes are valued for recreation which often focuses on the locations where the crests of ridges allow views across the area, in particular towards Lincoln Cathedral. The course of Ermine Street is a recreation and habitat corridor, which contributes to biodiversity and landscape character. 	<u>Character:</u> There would be a medium landscape tolerance or some scope for landscape change. Airfields are also a feature providing a link with the wartime past and a focal point for change. <u>Quality:</u> The pressures are centered around existing woodlands that are often small and isolated and suffer from lack of management. <u>Value:</u> Pressure from arable cultivation has resulted in field enlargement, removing boundaries and creating a more open landscape that has caused alteration/degradation/ or erosion of some features. <u>Capacity:</u> The landscape benefits	The aim should be to manage existing trees and woodland, encouraging new planting to ensure a varied structure, whilst removing invasive species. The restoration of hedgerows and stone walls should be given priority, creating a stronger field pattern and helping to integrate new development into the landscape. The aim is also to also bring opportunities to restore grassland and areas of pasture. In view of the range of geological and geomorphological features, such as the limestone villages, it is important that practices are in place for their care, maintenance and management, and the promotion of their educational and interpretational interest. Airfields are also a key feature, and the aim should be to ensure that any new development follows the footprint of
Dipslopes is conditioned by the escarpment, known locally as the Lincolnshire Edge or Cliff, that rises above the Trent Vale and forms a prominent and distinctive landscape feature. The Roman roads are also a key consideration created to link London with York. Superimposed on the north south axis of the Roman road is a less dominant but nonetheless distinctive pattern of east west routes and field boundaries that add geometric character. The relevant characteristics of the landscape therefore have a moderate ability to accommodate change without undue adverse effects. The landscape receptor is moderately susceptible to the proposed development, and a moderate ability to accommodate the specific proposed change, because the relevant characteristics of the landscape have some ability to accommodate it without undue adverse effects, taking account of the existing character and quality of the landscape, and/or achievement of relevant planning policies and strategies.	 Local Distinctiveness and Sense of Place: The landscape has a 'strong sense of place' with a subtle regimented character that is reinforced by the geometric patterns of fields. The transport routes and regularity of the scarp edge villages also exert a strong geometry. <u>Health and Wellbeing:</u> The Scarps and Dipslopes provide a rural landscape that has remained largely intact where the landscape condition is generally good. There are areas of pastoral landscape and wooded scarps interspersed with small stone-built villages and this helps retain a tangible connection to landscape character. <u>Important Spatial Function:</u> The landscape benefits from its low elevation, and the views from these lowlands towards the elevated areas, which act as a strong backdrop. Overall, the value of the Limestone Scarps and Dipslopes is shaped by the pressure from arable cultivation where field enlargement is removing boundaries and creating a more open landscape. The consistent alignment of the escarpment has created a strong sense of linearity, further emphasized by ancient transportation routes. 	from its low elevation, and the views from these lowlands towards the elevated areas, which act as a strong backdrop, and this affects the tolerance of the landscape to change.	existing structures as closely as possible, limiting visual intrusion and the loss of surrounding landscape features. The declining hedgerows and stone boundaries impart a denudation of character in some areas.
Medium	Medium	Medium	Not Applicable

Environmental Statement Landscape and Visual Impact Assessment Appendix 8.2.2.1: Regional Overview Tables – Scoped Out [Reference: EN010133/APP/C6.3.8.2.2.1.5] Jan 2023



Landscape Receptor – Regional Scale Landscape Character – 2b: Planned and Drained Fens and Carrlands (Cottam 3a)

Receptor Baseline:

Within the Cottam 3a Site/Sites, at a regional scale, landscape character is assessed within the East Midlands Regional Landscape Character Assessment as forming part of RLCT Profile: 2b Planned and Drained Fens and Carrlands, which is shown on Figure 8.5 [C6.4.8.5]. Planned and Drained Fens is located outside the 2km Study Area, and only occupies the western most edge of the 5km Study Area where it shares a boundary with RLCT: 4a Unwooded Vales and RLCT Profile: 4b Wooded Vales. The Planned and Drained Fens and Carrlands landscape character type is part of a belt of consistently low-lying terrain that mostly occurs within the eastern part of the East Midlands Region.

There are areas defined as 'Built Up Area' that extend eastwards from Gainsborough towards Blyton and Corringham following the main transport routes of the A59 (Thonock Road) and A631 (Corringham Road), respectively, but they are located outside the 5km Study Area. The settlements of Morton, East Stockwith, West Stockwith and East Ferry are located close to the 5km Study Area boundary with RLCT Profile 2b: Planned and Drained Fens and Carrlands but at the outer edge.

Key Features:

This is the area of land located to the west of Laughton Woods and extending (towards the west) as far as the River Trent at Mean High Water. The river Trent, at this location, follows a sinuous alignment that extends from the western edge of Gainsborough towards Scunthorpe in the north. There is no main settlement within this landscape character type, that forms part of the Study Area, other than isolated residential dwellings and farmsteads, and the main settlement of Gainsborough is located just outside the 5km Study Area at the southwestern edge. Other settlement further east of this area include Scotter, Scotton and Blyton, which are located within or served by the A159 (Thonock Road). Within the remainder of the landscape character type, there is a limited road network, where connections mainly comprise of minor tracks leading in an east to west direction connecting dwellings and farmsteads. Planned and Drained Fens and Carrlands landscape character type has a simple palette of land uses and landscape features which gives visual unity and a strong sense of identity. The area is typified by large scale and open flat farmlands with extensive and uninterrupted vistas to distant horizons beneath vast skies. There are a significant number of areas within this landscape character type that are at or below sea level, with modestly elevated areas acting as the focus of settlement. There are rich and varied arable land uses, root crops, bulbs, vegetables and horticultural glass houses that give the landscape a highly productive character and seasonal variations in colour and texture. There is also a strong sense of remoteness due to the expansive and sparsely settled areas although there are periods of intense activity during harvest. The land within this landscape character type is highly productive and is particularly well suited to intensive modern arable agriculture.

Character Context:

Cottam 3a is mainly located within RLCT 4a: Unwooded Vales landscape character type, where the land area is found to the north of Kirton Road B1205 (and mainline railway) and to the north of the settlement of Pilham and northeast of the settlement of Blyton where it forms the boundary with the adjoining RLCT 4b: Wooded Vales. To the east of Cottam 3a, the settlement of Northorpe forms part of a wider collection of other scattered farmsteads across this landscape character type. The ridgeline (further to the east) then gives strong containment where the settlements of Kirton in Lindsey, Grayingham, Blyborough and Willhoughton mark the boundary with the B1398.

RLCT 2b: Planned and Drained Fens and Carrlands landscape character type is found to the west of the Cottam 3a Site/Sites within the 5km study area and outside of the 2km study area.

RLCT 2b is not considered to form part of the immediate landscape context for the Cottam 3a Site/Sites, since the character type is located to the west of the settlements of Blyton and Laughton (and beyond RLCT 4b: Wooded Vales) and then extends as far east as the Mean High Water with the River Trent.

Environmental Statement Landscape and Visual Impact Assessment Appendix 8.2.2.1: Regional Overview Tables - Scoped Out [Reference: EN010133/APP/C6.3.8.2.2.1.6] Jan 2023

Receptor susceptibility to change	Value of Receptor	Sensitivity	Mitigation (Operation Magnitude of Change at Year 15)
In terms of forces for change, the Planned and Drained Fens and Carrlands aims to	<u>Scenic</u> : The Planned and Drained Fens and Carrlands appeal to the visual senses since due to absence of settlement and activity there is a remote, tranquil character.	<u>Character</u> : Due to absence of	The aims for the Planned and Drained Fens and Carrlands should be to adapt
	to absence of settlement and activity there is a remote, tranquit character.	settlement and activity there is a	1
manage the diversification of farms which	<u><i>Cultural:</i></u> The landscape shows evidence of generally little settlement, with only isolated	remote, tranquil character, but this is not unique or a nationally scarce	agricultural land management practices to accommodate the projected effects of sea
look to provide attractions and accommodation. Farm amalgamation and	farmsteads and single dwellings. The prevalent use brick in the farmsteads adds visual unity		1 5
agricultural intensification should also be	to the landscape in the context of the winding course of the river Trent.	feature.	level rise as a consequence of climate change. The distinctive open character of
carefully managed to maintain rural		<u><i>Quality:</i></u> There are extensive	the landscape is also an important
character. Due to the flat, featureless	<u>Natural:</u> There are extensive expanses of agricultural landscape, which are carefully	expanses of agricultural landscape,	consideration when planning mitigation.
topography of the area, specifically lack of	managed, resulting in very few areas of semi natural habitat. Where present, areas of scrub,	which are carefully managed,	The type and location of new woodland
hedgerows, the implications of agricultural	semi natural woodland and reedbed gain added significance.	resulting in very few areas of semi	and tree planting is a key consideration.
intensification are evident. Improvements to		natural habitat.	Although very limited native tree planting
dykes and embankments as a result of	<u>Recreation and Enjoyment:</u> The Planned and Drained Fens and Carrlands are valued for their		may be appropriate, priority should be
intensive agriculture are also a key force for	strong local identity due to the arable land use and tranquil character. At times of the year	Value: Areas that have positive	given to managing more characteristic
change. Fast growing energy crops are also	during harvest seasonal laborers can reduce the tranquil character.	landscape character benefit from the	habitats, such as dykes and drainage
creating an impact on the landscape.		high level of visual unity from the	ditches, and the planting of natural
creating an impact on the landscape.	Local Distinctiveness and Sense of Place: The landscape has a limited 'sense of place' due to its	level landform, extensive arable land	vegetation in these locations.
Overall , the susceptibility of the Planned and	productive and utilitarian character, however the flat featureless landscape creates	use and sparse settlement to	
Drained Fens and Carrlands is conditioned by	expansive views across wide areas along the course of the river Trent.	interrupt the skyline, but this has less	
woodland cover, which is generally sparse.		tolerance for landscape change.	
Unless carefully sited, new planting can	<u>Health and Wellbeing:</u> The Planned and Drained Fens and Carrlands provide limited areas for		
introduce inappropriate and visually intrusive	recreation due to the distinct lack of public rights of way (PRoW).	<u><i>Capacity:</i></u> There is some time depth	
elements in the flat and open landscape. The		associated with old drove roads that	
proliferation of new large scale agricultural	Important Spatial Function: The landscape benefits from the high level of visual unity from	often lead away from the river Trent	
buildings and general increase in farm size	the level landform, extensive arable land use and sparse settlement to interrupt the skyline.	in an easterly direction towards	
can introduce visual intrusions and may be		Scotter, Scotton and Laughton,	
difficult to mitigate due to the sparse	Overall , the value of the Planned and Drained Fens and Carrlands is shaped by its drained	otherwise the landscape presents a	
woodland cover and conditions over planting.	and settled past that is overlain with a geometric modern landscape of later parliamentary	simple palette of land uses and	
	inclosure. There is some time depth associated with old drove roads that often lead away	features that have some capacity for	
The landscape receptor is moderately	from the river Trent in an easterly direction towards Scotter, Scotton and Laughton,	change.	
susceptible to the proposed development,	otherwise the landscape presents a simple palette of land uses and features.		
and a moderate ability to accommodate the			
specific proposed change, because the			
relevant characteristics of the landscape have			
some ability to accommodate it without			
undue adverse effects, taking account of the			
existing character and quality of the			
landscape, and/or achievement of relevant			
planning policies and strategies.			
Medium	Medium to Low	Medium to Low	Not Applicable



Environmental Statement Landscape and Visual Impact Assessment Appendix 8.2.2.1: Regional Overview Tables – Scoped Out [Reference: EN010133/APP/C6.3.8.2.2.1.6] Jan 2023



Landscape Receptor - Regional Scale Landscape Character - 4b: Wooded Vales (Cottam 3b)

Receptor Baseline:

Within the Cottam 3b Site/Sites, at a regional scale, landscape character is assessed within the East Midlands Regional Landscape Character Assessment as forming part of RLCT Profile: 4b Wooded Vales, which is shown on Figure 8.5 [C6.4.8.5]. Wooded Vales does not extend into the 2km Study Area, and only occupies the western most extent of the 5km Study Area. At the eastern most edge of RLCT 4a, the boundary is shared with RLCT Profile: 6a Limestone Scarps and Dipslopes.

Key Features:

This is the land area that sits to the south of the mainline railway and to the east of Pilham Lane. This landscape character type is located to the west of the settlement of Blyton and extends north towards Laughton Woods. The woodlands form part of the Laughton Area of Greater Landscape Value (AGLV) and occupy the western and northern extent of landscape character type. The woodlands to the east are bisected by the A159 that links Scotter with Blyton and to the west, Laughton Woods is bordered by the secondary road network that heads north from Morton through this area. To the center of Laughton Woods is Scotton Common with Hardwick Hill located to the west of the common where it rises to 30m AOD. Laughton Woods also includes a number of waterbodies including Green Howes Pond and Jerry's Bog and these are associated with a number of Sites of Special Scientific Interest (SSSI). With Cottam 3b, the majority of the land sits within Unwooded Vales. Wooded Vales then sit to the west and northwest of Cottam 3b and extend into the 5km Study Area. The RLCT 4b landscape character type consists of gently undulating landform formed over soft mudstone and clay geology, sharing many characteristics with the wider Unwooded Vales. There are deposits of superficial geology, particularly cover sands and till that influences local land use and semi-natural habitat cover. Low hills and ridges gain visual prominence as elevated landform to give a broad sense of containment, and these include areas of higher ground at Hardwick Hill and the landscape to the southwest of Scotter. There are numerous watercourses that flow within shallow undulations often flanked by pasture and riparian habitat, but many of them are formalized land drains with a geometric pattern. There is a higher concentration of land drains to the southern part of the area between Blyton and East Stockwith. There is a relatively high woodland cover within this landscape character type with notable tracts of ancient semi-natural woodland. There are notable areas of woodland at Owlet Plantation, to the east of East Stockwith and associated with Laughton Common and Scotton Common. This landscape character type is sparsely settled with dispersed farms linked by quiet rural lanes and tracks often flanked by tall hedgerows and tree belts. Most of the tracks have a strong east to west alignment that are possibly former drove roads leading to the Mean High Water and River Trent.

Character Context:

Cottam 3b is mainly located within RLCT 4a: Unwooded Vales, where the land area is found to the south of the B1205 (Kirton Road) and mainline railway, and in the context of the settlements of Pilham, Corringham and Springthorpe. To the east of Cottam 3b, the landscape character type RLCT 6a: Limestone Scarps and Dipslopes shares the outer 5km Study Area (with RLCT 4a). The ridgeline (to the east) then gives strong containment where the settlements of Kirton in Lindsey, Grayingham, Blyborough and Willhoughton mark the boundary with the B1398.

RLCT 4b: Wooded Vales landscape character type is found to the west and NW of the Cottam 3b Site/Sites on the boundary of the 2km Study Area and the 5km Study Area.

RLCT 4b is not considered to form part of the immediate landscape context for the Cottam 3b Site/Sites since the character type is located to the west of the settlement of Blyton where the intervening-built form, mainline railway, woodlands and arable land use provide strong element of separation within the landscape.

Environmental Statement Landscape and Visual Impact Assessment Appendix 8.2.2.1.7: Regional Overview Tables - Scoped Out [Reference: EN010133/APP/C6.3.8.2.2.1.7] Jan 2023

Receptor susceptibility to change	Value of Receptor	Sensitivity	Mitigation (Operation Magnitude of Change at Year 15)
In terms of forces for change, the Wooded Vales aims to promote new woodland planting as this is a significant component of the landscape. The aim should be to also protect the distinctive character of the settlements and consider the visual impact of any new development. The restoration of hedgerows should also be given priority to strengthen the field pattern and enhance linkages between woodlands. The impact on the setting of village churches is also particularly important as these are distinctive local landmarks. There are regular patterns of enclosure and modern arable fields where hedgerows have been removed, but due to the abundance of large woodland blocks this helps reinforce a sense of enclosure. Overall , the susceptibility of the Wooded Vales is conditioned by several key forces for change that have the potential to shape the future of the landscape. These include the agricultural intensification and farm amalgamation that is resulting in the loss or damage of many typical landscape features, including traditional patterns of field boundaries, remnants of ridge and furrow, and grasslands. The loss of grazing fields around the edges of villages that is leading to a more homogenous landscape. The landscape receptor is moderately susceptible to the proposed development, and a moderate ability to accommodate the specific proposed change, because the relevant characteristics of the landscape have some ability to accommodate it without undue adverse effects, taking account of the existing character and quality of the landscape, and/or achievement of relevant	 Scenic: The Wooded Vales appeal to the visual senses where extensive panoramas are possible, often framed by larger areas of woodland. There are areas where rising landform allows opportunity for extensive views that uninterrupted by existing vegetation such as areas at the edges of Laughton and Blyton. <u>Cultural</u>: The landscape shows evidence of small villages, hamlets and farms that are evenly distributed across the landscape. This includes settlement Blyton and Laughton. Laughton falls within the Laughton Area of Greater Landscape Value (AGLV) and supports a number of cultural assets including the Grade II Listed Laughton Hall Farmhouse and Grade I Listed Church of All Saints. <u>Natural</u>: There are large areas of ancient and species-rich native woodland juxtaposed with regular blocks of coniferous plantations, particularly within the AGLV. Sizable areas of ancient wet woodland are also notable along several watercourses. Many wet woodland sites are characterized by native broadleaved species. <u>Recreation and Enjoyment</u>. The Wooded Vales are valued for recreation which often focuses on the woodland trail network that is focused on Laughton Woods and which attracts visitors from nearby Gainsborough and Scunthorpe. <u>Local Distinctiveness and Sense of Place</u>: The landscape has a 'strong sense of place' endorsed by the woodland sand associated tracks and trails are a prominent characteristic. <u>Health and Wellbeing</u>: The Wooded Vales provide a very limited network of PRoW, meaning that the Laughton Woods area is the main focus for recreation. <u>Important Spatial Function</u>: The landscape benefits from the woodlands associated with Laughton Woods and outlying areas, including Blyton Carr, Owlet Plantation, Carmer Wood and Peacock Wood, Overall, the value of the Wooded Vales is shaped by the rising landform that allows opportunity for extensive views from the edges of Laughton and Blyton. The randscape possesses a	Character: The character is positive and defined by wooded areas where extensive panoramas are possible. The gently undulating landform, although commonplace, adds to the local distinctiveness. Quality: The agricultural intensification and farm amalgamation that is resulting in the loss or damage of many typical landscape features, including traditional patterns of field boundaries. Value: The Wooded Vales are valued for recreation which often focuses on the woodland trail network that is focused on Laughton Woods and which attracts visitors from nearby Gainsborough and Scunthorpe. Capacity: The presence of mature woodland brings a sense of place and a strong framework in parts of the area to mitigate against landscape change.	Year 15) The aim should be to plan new woodland in the most suitable locations. This may include in and around settlements, where woodland would help integrate new development into the landscape and in more intimate low-lying areas, where woodland would help create a mixed pattern of land use. Consideration should also be given to the management of existing trees and woodland, enhancing biodiversity value and age structure through new planting and the creation of woodland edge habitats. An increase in grassland reversion should also be encouraged, increasing the occurrence of semi-natural habitats.
planning policies and strategies. Medium	Medium to High	Medium to High	Not Applicable



Environmental Statement Landscape and Visual Impact Assessment Appendix 8.2.2.1.7: Regional Overview Tables – Scoped Out [Reference: EN010133/APP/C6.3.8.2.2.1.7] Jan 2023



Landscape Receptor - Regional Scale Landscape Character - 2b: Planned and Drained Fens and Carrlands (Cottam 3b)

Receptor Baseline:

Within the Cottam 3b Site/Sites, at a regional scale, landscape character is assessed within the East Midlands Regional Landscape Character Assessment as forming part of RLCT Profile: 2b Planned and Drained Fens and Carrlands, which is shown on Figure 8.5 [C6.4.8.5]. Planned and Drained Fens and Carrlands is located outside the 2km Study Area, and only occupies the SW most edge of the 5km Study Area where it shares a boundary with RLCT: 4a Unwooded Vales and RLCT Profile: 4b Wooded Vales. The Planned and Drained Fens and Carrlands landscape character type is part of a belt of consistently low-lying terrain that mostly occurs within the eastern part of the East Midlands Region.

There are areas defined as 'Built Up Area' that extend eastwards from Gainsborough towards Blyton and Corringham following the main transport routes of the A59 (Thonock Road) and A631 (Corringham Road), respectively, but they are located outside the 5km Study Area. The settlements of Morton, East Stockwith, West Stockwith and East Ferry are located close to the 5km Study Area boundary with RLCT Profile 2b: Planned and Drained Fens and Carrlands but at the outer edge.

Key Features:

This is the area of land located to the west of Laughton Woods and extending (towards the west) as far as the River Trent at Mean High Water. The River Trent, at this location, follows a sinuous alignment that extends from the western edge of Gainsborough towards Scunthorpe in the north. There is no main settlement within this landscape character type, that forms part of the Study Area, other than isolated residential dwellings and farmsteads, and the main settlement of Gainsborough is located just outside the 5km Study Area at the southwestern edge. Other settlement further east of this area include Scotter, Scotton and Blyton, which are located within or served by the A159 (Thonock Road). Within the remainder of the landscape character type, there is a limited road network, where connections mainly comprise of minor tracks leading in an east to west direction connecting dwellings and farmsteads. Planned and Drained Fens and Carrlands landscape character type has a simple palette of land uses and landscape features which gives visual unity and a strong sense of identity. The area is typified by large scale and open flat farmlands with extensive and uninterrupted vistas to distant horizons beneath vast skies. There are a significant number of areas within this landscape character type that are at or below sea level, with modestly elevated areas acting as the focus of settlement. There are rich and varied arable land uses, root crops, bulbs, vegetables and horticultural glass houses that give the landscape a highly productive character and seasonal variations in colour and texture. There is also a strong sense of remoteness due to the expansive and sparsely settled areas although there are periods of intense activity during harvest. The land within this landscape character type is highly productive and is particularly well suited to intensive modern arable agriculture.

Character Context:

Cottam 3b is mainly located within RLCT 4a: Unwooded Vales, where the land area is found to the south of Kirton Road B1205 (and mainline railway) and to the NE of the settlement of Pilham and SE of Blyton where the landscape character type forms the boundary with the adjoining RLCT 4b: Wooded Vales. To the east of Cottam 3b, the Medieval village of Southorpe, Southorpe Farm and Bonsdale Farm contribute to the settlement pattern and form part of a wider collection of scattered farmsteads across this landscape character type. The ridgeline (further to the east) then gives strong containment where the settlements of Grayingham, Blyborough and Willhoughton mark the boundary with the B1398.

RLCT 2b: Planned and Drained Fens and Carrlands landscape character type is found to the north and west of the Cottam 3b Site/Sites within the 5km study area but outside of the 2km study area.

RLCT 2b is not considered to form part of the immediate landscape context for the Cottam 3b Site/Sites, since the character type is located to the west of Blyton and Laughton (beyond RLCT 4b: Wooded Vales) and then extends as far east as the Mean High Water with the River Trent.

Environmental Statement Landscape and Visual Impact Assessment Appendix 8.2.2.1: Regional Overview Tables - Scoped Out [Reference: EN010133/APP/C6.3.8.2.2.1.8] Jan 2023

Receptor susceptibility to change	Value of Receptor	Sensitivity	Mitigation (Operation Magnitude of Change at Year 15)
In terms of forces for change, the Planned and Drained Fens and Carrlands aims to manage the diversification of farms which look to provide attractions, accommodation, and Farm amalgamation. Agricultural intensification should also be carefully managed to maintain rural character. Due to the flat, featureless topography of the area, specifically lack of hedgerows, the implications of agricultural intensification are evident. Improvements to dykes and embankments as a result of intensive agriculture are also a key force for change. Fast growing energy crops are also creating an impact on the landscape. Overall , the susceptibility of the Planned and Drained Fens and Carrlands is conditioned by that woodland cover, which is generally sparse. Unless carefully sited, new planting can introduce inappropriate and visually intrusive elements in the flat and open landscape. The proliferation of new large scale agricultural buildings and general increase in farm size can introduce visual intrusions and may be difficult to mitigate due to the sparse woodland cover and conditions over planting. The landscape receptor is moderately susceptible to the proposed development, and a moderate ability to accommodate the specific proposed change, because the relevant characteristics of the landscape have some ability to accommodate it without	 Scenic: The Planned and Drained Fens and Carrlands appeal to the visual senses since due to absence of settlement and activity there is a remote, tranquil character. <u>Cultural</u>: The landscape shows evidence of generally little settlement, with only isolated farmsteads and single dwellings. The prevalent use brick in the farmsteads adds visual unity to the landscape in the context of the winding course of the River Trent. There are a significant number of areas within this landscape character that are at or below sea level, with modestly elevated areas acting as the focus of settlement. <u>Natural</u>: There are extensive expanses of agricultural landscape, which are carefully managed, resulting in very few areas of semi natural habitat. Where present, areas of scrub, semi natural woodland and reedbed gain added significance. <u>Recreation and Enjoyment</u>: The Planned and Drained Fens and Carrlands are valued for their strong local identity due to the arable land use and tranquil character. At times of the year during harvest seasonal labourers can reduce the tranquil character. <u>Local Distinctiveness and Sense of Place</u>: The landscape has a limited 'sense of place' due to its productive and utilitarian character, however the flat featureless landscape creates expansive views across wide areas along the course of the River Trent. <u>Health and Wellbeing</u>: The Planned and Drained Fens and Carrlands provide limited areas for recreation due to the distinct lack of public rights of way (PRoW). <u>Important Spatial Function</u>: The landscape benefits from the high level of visual unity from the level landform, extensive arable land use and sparse settlement to interrupt the skyline. Overall, the value of the Planned and Drained Fens and Carrlands is shaped by the visual unity to the landscape that is typified by a geometric modern pattern of parliamentary enclosure. The topography is also flat and featureless and agricultural	Character: The distinctive open character of the landscape is important. Quality: The landscape is shaped by agricultural intensification, which adds a productive and utilitarian character with a limited sense of place. Value: The landscape benefits from the high level of visual unity from the level landform, extensive arable land use and sparse settlement to interrupt the skyline. Capacity: The flat featureless landscape creates expansive views across wide areas and although not described as unique, these perceptual/aesthetic aspects have some vulnerability to unsympathetic development.	
undue adverse effects, taking account of the existing character and quality of the landscape, and/or achievement of relevant planning policies and strategies.	Madiuma to Loui	Madium to Low	NetApplicable
Medium	Medium to Low	Medium to Low	Not Applicable



Environmental Statement Landscape and Visual Impact Assessment Appendix 8.2.2.1: Regional Overview Tables – Scoped Out [Reference: EN010133/APP/C6.3.8.2.2.1.8] Jan 2023



Landscape Receptor – Regional Scale Landscape Character – 4a: Unwooded Vales (Cottam 1 Site/Sites)

Receptor Baseline:

Within the Cottam 1 Site/Sites, at a regional scale, landscape character is assessed within the East Midlands Regional Landscape Character Assessment as forming part of RLCT Profile: 4a Unwooded Vales, which is shown on Figure 8.5 [C6.4.8.5]. Unwooded Vales extends across the majority of the 2km and 5km Study Area apart from the eastern most edge where it shares a boundary with RLCT Profile: 6a Limestone Scarps and Dipslopes. The western extent of the 5km Study Area is also host to a small part of RLCT Profile 3a: Floodplain Valleys and RLCT Profile: 4b Wooded Vales.

The Sites within Cottam 1 Site/Sites can be sub-divided into two distinct land areas:

- Cottam 1 North
- Cottam 1 South

Key Features:

Cottam 1 North Site:

This refers to the area located to the north of Ingham Road and to the west of this area there are the settlements of Kexby, Willingham by Stow, Normanby by Stow and Stow, which are located to each side of the B1241 (Sturton Road and Stow Road). To the centre of this area is the small hamlet of Coates and to the east there are the settlements of Fillingham and Ingham, which are located to each side of the B1398. The area is bisected by a secondary road, known as Fillingham Lane which then runs into Willingham Road, and which links the settlements of Willingham by Stow to Fillingham. The landscape mainly comprises productive arable and pastoral farmland, but there are areas of cereal and vegetable cropping to the east of Willingham by Stow around Stone Pit Lane where hedgerow removal has created some very large fields under single crop. Most of the Unwooded Vales retain a deeply rural and tranquil character, with farms and small nucleated villages located throughout areas of productive farmland, linked by narrow winding lanes and roads. Watercourses are often bordered by a narrow alluvial floodplain that wind through the landscape along shallow valleys, appearing little more than gentle folds in the landscape. This pattern of drainage is particularly evident between the settlement of Coates and Normanby by Stow and Willingham by Stow in the west of the Cottam 1 Site/Sites. This area boasts an extensive network of field drains including tributaries of the River Till that are only discernable by tracing alder and willow trees, rusty pastures, and belts of riparian habitat across the landscape. There are localised concentrations of woodland cover between Coates and Willingham by Stow that include Normanby Gorse and New Plantation, despite the overall tendency for limited woodland cover across the area.

Cottam 1 South Site:

This refers to the area located to the south of Ingham Road and to the west of this area the settlements of Normanby by Stow and Sturton by Stow are located to each side of the B1241 (Sturton Road and Stow Road). To the centre of this area are several isolated residential properties and farmsteads. To the east of this area, the settlements of Cammeringham, Brattleby, Aisthorpe and Scampton are nestled into the foot of the ridgeline. This Landscape Character type offers expansive long-distance views from higher ground at the margin of the Vales that gives a sense of visual containment. Within this landscape character type there is limited woodland cover which is a heavy contrast to Wooded Vales Landscape Character Type that is often seen close to Unwooded Vales. There are however localized concentrations of woodland cover to the northeast of Thorpe le Fallows including Brattleby Thorns, Brattleby Gorse, Beck Spinney, Horse Covert and Poplar Wood. The landscape type hosts sparse small villages and dispersed farms all linked together with rural lanes. Key characteristics of the Unwooded Vales is that they are extensive, low lying rural landscape underlain by Triassic and Jurassic mudstone and clays and widespread superficial deposits that generally give rise to low, gently undulating landform which add to the intimacy of the landscape. Occasionally, these hills and ridges rise out of the Vales such as Thorpe le Fallows, which rises to 10m AOD above the surrounding area. These ridges also mark the watersheds between watercourses since the landscape character type also hosts complex drainage patterns (River Till) of watercourses that flow within the shallow undulations often flanked by pasture and riparian habitats.

Character Context:

The Cottam 1 Site/Sites is mainly located within RLCT 4a: Unwooded Vales, where the land area is found to the north and south of Ingham Road and in the context of the settlements of Coates, Thorpe in the Fallows, Sturton by Stow, Bransby, Kexby, Willingham by Stow, Normanby by Stow and Stow. To the east of the Cottam 1 Site/Sites, the landscape character type RLCT 6a: Limestone Scarps and Dipslopes shares the outer 2km Study Area (with RLCT 4a) and then extends into the 5km Study Area. The ridgeline (to the east) then gives strong containment where the settlements of Fillingham, Ingham and Cammeringham mark the boundary with the B1398.

RLCT 4a: Unwooded Vakes landscape character type is main host to the Cottam 1 Site/Sites within the 2km Study Area and the 5km Study Area.

RLCT 4a is considered to form part of the immediate landscape context for the Cottam 1 Site/Sites.

Environmental Statement Landscape and Visual Impact Assessment Appendix 8.2.2: Regional Overview Tables - Not Significant [Reference: EN010133/APP/C6.3.8.2.2.2.1] January 2023



OLAR PROJECT				
Receptor susceptibility to change	Value of Receptor	Sensitivity	Embedded Mitigation	
In terms of forces for change, the Unwooded	<u>Scenic:</u> The Unwooded Vales appeal to the visual senses where the roads and watercourses	<u><i>Character:</i></u> Medium landscape	Embedded Mitigation would be taken into	
Vales aims to protect existing rural landscape	combine to give a subtle grain to the landscape. The interruptions at the bridge crossing	tolerance with some scope for	account at the construction, operation	
features, in particular the restoration of	provide local points of interest and the opportunity to capture views across the landscape to	change to landscape character.	(Year 1 and Year 15) and decommissioning	
hedgerows since the most widespread change	the higher landform fringing the Vales,	Enhancing the visibility of streams,	stages of the Scheme. This Embedded	
has been in agricultural intensification and the		dykes and other watercourses in	Mitigation is also referred to as primary	
change from pastoral to arable cropping that	<u>Cultural:</u> The landscape shows evidence of historic settlement with farms and nucleated	the landscape would bring forward	mitigation and would include the following	
has resulted in the loss of hedges, and	villages and small hamlets such as Thorpe le Fallows and Coates. The landscape surrounding	some positive benefits.	measures:	
consequently, increase in field size. The loss of	these settlements retain a deeply rural and tranquil character with farms linked by minor			
pasture is particularly evident around	lanes and roads. There are Roman roads that pass across the area such as Tillbridge Lane	<u><i>Quality:</i></u> The most widespread	Panels to be set a minimum of 3m from	
settlements, where grazing animals and	indicating that these low-lying areas provided convenient routes through the hills and	change has been in agricultural	Site boundaries.	
smaller field sizes contribute to the setting and	wetlands.	intensification, where the change		
structure of several villages. Many of the rural		from pastoral to arable cropping	Site boundary fencing to be set back 5m	
villages have not seen widespread expansion	<u>Natural:</u> The extensive expanses of semi-natural habitat, rivers and streams are an important	has resulted in loss of hedges, and	from adjacent existing hedgerows to allow	
but development pressures continue with the	landscape feature such as the River Till where the course can be observed by tracing sinuous	consequently increase in field sizes.	for proposed thickening and growth.	
demand for housing, commerce and industry	belts of riparian habit and riverside trees, particularly within the area to the south of Ingham			
creating visual intrusion and extending the	Road. Overall, in such a managed agricultural environment, networks of hedgerows and	<u>Value:</u> The landscape shows	Existing hedges are to be allowed to grow	
urban fringe. For development associated with	hedgerow trees gain significance in offering a refuge for birds and insects.	evidence of historic settlement with	out and will be managed to a height of 5m.	
the rural villages, specific mechanisms include		farms, nucleated villages, and small	Hedgerow trees will be encouraged to	
Village Design Statements, and tree planting	<u>Recreation and Enjoyment</u> : The Unwooded Vales are valued for recreation which often	hamlets such as Thorpe le Fallows	grow out to add further thickening and	
around settlement fringes to help integrate	focused on the locations where panoramic views are possible from elevated locations from	and Coates, which are features	growth to the field boundaries with the	
new development into the landscape.	rising land at the edges of the Vales. Whilst the landform of the Unwooded Vales is typically	value that are not highly	addition of new hedgerow trees as	
	low and subdued, rising landform often provides locations where glimpse of neighboring	recognised.	appropriate, randomly spaced along the	
Overall, the susceptibility of the Unwooded	elevated are often sufficient to provide a sense of place and add to the recreation and		length of existing hedges.	
Vales is conditioned by managing growth,	enjoyment of the area. Typically, these locations occur around Thorpe le Fallows and Coates.	<u><i>Capacity:</i></u> Features are evident, but		
ensuring development is appropriate in terms		they are locally commonplace.	Lighting will be limited to downlights within	
of type, scale, and location. The flat, open	Local Distinctiveness and Sense of Place: The landscape has a 'strong sense of place' with major	Some features make a minimal	substations and battery banks only and	
landscape is also a key consideration and	landform features flanking the lower lying areas creating broad scale visual containment	contribution to landscape character	used when maintenance or security is	
whilst the aim is to plan new tree planting	along the ridgeline to the east at Cammeringham, Ingham and Fillingham. Wide panoramic	and scope for mitigation would	required. Lighting will be PIR operated and	
around key settlements, woodland does not	views are also possible from the low hills and ridges that form watersheds between	therefore help to reinforce their	will be calibrated to vehicle and personnel	
form a significant component of this	watercourses. This contrasts with the lower lying areas where intact hedgerows and belts of	prominence in the landscape.	movements. All visible lighting would be	
landscape, and in considering its open and	riverside trees truncate views.		50W, installed at a maximum height of 4m	
expansive character, extensive new woodland			with cowls fitted to prevent light spillage.	
planting would be generally inappropriate.	Health and Wellbeing: The Unwooded Vales provide a very limited network of PRoW leading		Lighting required within panelled areas will	
	to the dependence on the more direct arterial routes that run east to west across the area		be manually operated. There will be no	
The landscape receptor is moderately	linked by a series of narrow straight lanes.		lighting on perimeter fencing.	
susceptible to the proposed development, and				
a moderate ability to accommodate the	Important Spatial Function: The landscape benefits from high levels of visual containment		The landscape effects with only the	
specific proposed change, because the	despite the low levels of woodland cover. Instead, the local landform, hedgerows and shelter		Embedded Mitigation taken into account	
relevant characteristics of the landscape have	belts create visual containment and give the Vales Landscape an intimate character.		equate to those effects set out for the	
some ability to accommodate it without undue			operation stage (Year 1) and this includes	
adverse effects, taking account of the existing	Overall , the value of the Unwooded Vales is shaped by the strong agricultural character,		secondary mitigation which will have been	
character and quality of the landscape, and/or	with wide areas retaining a strong sense of rural tranquility. In contrast, the low levels of		carried out but will have had limited	
achievement of relevant planning policies and	woodland cover create a relatively open and expansive landscape. In recent decades, the		physical or landscape character impact at	
strategies.	productivity of the land has stimulated widespread change in the rural landscape.		this Embedded Mitigation stage.	
Medium	Medium	Medium	Not Applicable	
weaturn	mediam	weduum	Not Applicable	

Environmental Statement Landscape and Visual Impact Assessment Appendix 8.2.2: Regional Overview Tables – Not Significant [Reference: EN010133/APP/C6.3.8.2.2.2.1] January 2023



Construction	Operation (Year 1)	Operation (Year 15)	De
Activities during site preparation / enabling works, construction, and commissioning with effects such as	Within the Cottam 1 Site/Sites, the following secondary mitigation will be implemented at the operation stage	The effects at the Operational Phase at Year 15 without Mitigation equate to those effects at the beginning of	A s the
construction traffic, noise and vibration from	(Year 1) to enhance the regional landscape character:	Year 1 before any secondary mitigation has been	ass
construction activities, dust generation, site runoff, mud		applied. Mitigation embedded in the design will apply	ofe
on roads, and the visual intrusion of plant and	Cottam 1 North Site	as will the growing out of the existing hedges.	prii
machinery on site. At the early stages of the construction stage, ground, and lower-level activities	Across the Site, existing woodlands are to be enhanced with the addition of successional scrub to their	With secondary mitigation such as planting and grass	est aris
such as the construction of the solar panel areas and	boundaries and a 20m ecological buffer to retain their	seeding being taken into account at the operational	dec
associated infrastructure and inverters would	integrity and increase biodiversity.	stage (Year 15) the following changes to the landscape	vib
predominantly be screened by existing vegetation.		would occur and the effects are set out below:	ger
During the letter part of the construction stage views	Two watercourses that run broadly east/west across the	Views to the parth, south and wast of the Cite will	۲al
During the latter part of the construction stage, views would become available of the elevated activities above	Site are to be enhanced with a minimum 8m belt of tall herb mix adjacent on both sides with shelterbelt	Views to the north, south, east and west of the Site will be screened in the close-mid range through the new	Fol ret
the hedgerows, but these would be limited and would	planting along their lengths as appropriate to create	hedgerow and shelterbelt planting and the	ber
not affect the integrity of the character area and would	additional biodiversity and help to define the	enhancement of existing hedges which will be managed	hec
be short term.	watercourse visually within the landscape setting.	to a height of 5m. These new and augmented	ma
		hedgerows will provide a series of good quality field	lan
Other works would be undertaken in connection with the construction including fencing, gates, boundary	Blocks of scattered trees will help to integrate lone field trees into the landscape and visually link small blocks of	boundaries both formally strengthening the existing and historical field pattern and creating a multi-layered	cha ber
treatment and other means of enclosure and works for	trees.	landscape. Scattered tree belts will follow the routes of	wet
the provision of security and monitoring measures such		existing watercourses, strengthening this feature in the	the
as CCTV and the laying down of internal tracks. There	New and enhanced hedgerows within the Site, both	context of the wider landscape. Views of the longer	ma
would also be landscape and biodiversity mitigation	with additional irregularly spaced hedgerow trees will	distance, where hedgerows do not block these, will be	bio
works, including planting and the improvement of	further enhance the field boundary pattern and add to	of a layered, well treed landscape with a backdrop of	14/54
existing hedgerows to all boundaries of the Site/Sites creating a much greater level of vegetation locally,	the overall level of tree cover locally.	some wooded vegetation in places on the horizon. Both new and existing vegetation will have established and	thr
creating many associated beneficial effects.	Two areas of scattered tree belts are proposed adjacent	begun to mature, creating a much stronger structure to	viev
	to the informal watercourses to the east of the Site, and	the landscape, and retaining and enhancing the overall	the
These short-lived construction activities would not	these will provide additional levels of tree cover, help	character of the area.	gro
adversely affect the 4a Unwooded Vales Character Area	define the winding routes within the landscape and	The property conclusion will have established and will	lt is
as these are short term. There would be a change to the arable land use which will be beneficial to soils and	attenuate flood risk.	The proposed grassland will have established and will have settled into its natural scheme with some minor	Wit
watercourses, significantly increase biodiversity and	Roadside verge enhancement along the Willingham	appropriate management of differing regimes. The soil	dec
help to capture carbon. The field boundaries and the	Road, will help to improve both the visual and ecological	quality will be considerably improved through the lack	lan
associated tree cover would remain intact and help with	value of these verges helping to strengthen the	of cultivation and the chemical run-off will be reduced	
visual layering across the landscape and the integration	character of this route.	around the Site(s) enhancing the water quality	
of the new panels. There would be very limited, temporary, and short-term adverse changes to the	Cottam 1 South Site	generally. There will be considerable biodiversity gains through the establishment of the varied grassland types	
Character Area.	Cottam 1 South has a more varied landscape with areas	and regimes and a long-term increase in pollinator	
	of woodland to the east and the River Till to the west.	species and bird and other species and numbers locally.	
Overall, the Unwooded Vales Character Area 4a is able			
to accommodate the changes that arise through the	Scattered tree belts and herb mix waterside planting	Growth of existing and proposed vegetation is assumed	
construction of the Site with minor adverse effects. The integrity of all features will be retained and	will again add to the visibility of this watercourse across the wider landscape and increase its biodiversity value	to be:	
enhancement at ground level through initial grassland	as well as providing flood attenuation benefits.	Woodland/trees and shelterbelts: 2.5m max at Year 1,	
will have beneficial effects from the outset.		7.5m max at Year 15.	
	Regular shaped fields within the Site will be further		
	defined by both new and enhanced existing hedgerows	New hedgerows: 0.6m at Year 1 and 3.5m at Year 15.	
	providing a good level of tree cover over the Site and a multi-layered scene.	Existing hedgerows: 0.9m at Year 1 and 5m at Year 15.	
	maid-layered scene.	Existing neagerows. 0.5m at real 1 and 5m at real 15.	
	To the west, lower levels of development are proposed	Shrubs: 0.9m at Year 1 and 5m at Year 15.	
	adjacent to the River Till and these are mitigated by the		1

Environmental Statement Landscape and Visual Impact Assessment Appendix 8.2.2: Regional Overview Tables - Not Significant [Reference: EN010133/APP/C6.3.8.2.2.2.1] January 2023

ecommissioning

similar process to that of construction stage, but with ne Scheme being no longer operational. This is an ssessment of the Site in winter but assumes retention f existing vegetation and builds upon the proposed rimary and secondary mitigation that had been stablished as the future baseline. Effects are those rising from activities for the duration of the ecommissioning to include site traffic, noise and ibration from decommissioning activities, dust eneration and site runoff.

ollowing decommissioning, the land is likely to be eturned to arable production. The Site will however enefit from the significantly enhanced tree and nedgerow planting that has been carried out and has natured to create a much stronger and robust andscape, retaining, and enhancing the overall haracter and providing considerable biodiversity enefits over the years. Bird mitigation fields and vetland grazing marshes are likely to be retained and ne potential may exist to retain grass margins to naintain some varied land use and a high level of iodiversity in the local area.

Vithout Secondary Mitigation having been applied hroughout the scheme, the only change to the iews/landscape following decommissioning would be he existing hedgerows which will have been allowed to row out and will have been managed to a height of 5m. is assumed that these will be retained.

Vith Mitigation, the negative effects of the physical ecommissioning will be balanced out by the long term andscape and visual effects of this mitigation.

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	reversion of some areas to wetland grazing marsh and bird mitigation areas adjacent to the river. These, together with the scattered trees along its route, the augmented tree and hedgerow planting and riverside margins will reinforce this feature withing the local character area and increase levels of tree cover generally. Although new vegetation will be immature, existing hedgerows will have begun to grow out at Year 1 and the varied grassland areas will have become established, starting to create valuable habitats. Overall, this will help to link habitats and strengthen the	Following mitigation, at Year 15, The existing woodland and hedgerows locally will be augmented by increased vegetation cover creating both visual and ecological links across the landscape to the adjoining woodland blocks. Grassland mixes will have established and will create valuable habitats with soil structure greatly improved through cessation of arable cultivation. By Year 15, the Site/Sites at Cottam 1 will present a 'well treed' landscape in line with the character area aims, the existing vegetation having been allowed to grow out and new trees, hedgerows and scrub having fully established and begun to mature.
	overall character locally and maintain a sense of place. Important opportunities to bolster the local vegetation cover, buffering and connecting existing fragmented vegetation, aims to create a more resilient and biodiverse landscape.	The overall scene will be relatively well vegetated, with scattered and irregularly spaced trees, following the existing lines of both historic field boundaries and the road network as well as local watercourses.
	 Between Years 1 and 15, the following beneficial effects will be achieved in terms of the LCA Grassland reversion A more varied landscape across the LCA Improved management of existing vegetation Less intensively managed land Soil improvements Water quality improvements Increased visibility/definition of watercourses across the landscape. Increased woodland/vegetation cover Increased riparian species vegetation Significantly improved biodiversity Improved carbon retention/capture Overwintering opportunities within wetland and elsewhere with Bird mitigation Potential animal grazing Reinstatement of historic field patterns Strengthened Character Area generally Improved shelter/protection across the landscape 	This, together with the proposed mix of varied grasslands across the Site will help to somewhat reverse the over intensification of recent arable farming methods to create a much richer tapestry of habitats and features within the landscape. This varied development, set against the existing arable landscape will retain the overall perception of an open and expansive landscape but will appear as a more layered and cohesive scene across the Unwooded Vales and will help to integrate these with the Wooded Vales to the west. Following mitigation, the Site is able accommodate change without undue adverse effects and there will be considerable beneficial effects in the increased level of vegetation cover locally, the linking and enhancement of existing natural features and the biodiversity benefits that this will bring, creating a stronger, more resilient framework across the local character area of the 4a Unwooded Vales.
	 Adverse effects (mitigated): Panels and structures across landscape Increased hard standing areas – water runoff management required Potential minor pollution around substations Visual intrusion in early years Increased traffic in the local area The effects at the Operational Phase at Year 15 without Embedded Mitigation equate to those effects at the 	
	beginning of Year 1 before secondary mitigation has been applied. The Effects set out below include secondary mitigation which will have been carried out but will have had limited physical impact at this stage.	



5km Study A	5km Study Area:			
Magnitude	Low	Low	Medium	Ver
Level of Effect	Adverse & Short Term	Beneficial & Long Term	Beneficial & Long Term	Neu
Significance of Effect	Minor Not Significant	Minor Not Significant	Moderate Significant	Ne

In Combinatio	on Effects [Cumulative Sites]	Cumulative Effects [Cumulative Developments]
and 3a and 3b) is the limited impac Sites; together wit Sites and Study At	on effects upon LCA – 4a of the Cottam 1 Site with the other Cumulative Sites (Cottam Minor at year 1 of operation and Negligible at year 15 with mitigation. This is due to t upon the LCA as a result of the nature of the Scheme, the segregated nature of the th the existing landscape character associated with the fabric of the landscape of the rea. Embedded and Secondary Mitigation proposed would screen the panels and	 2 In Summary 2 The Cumulative Effects upon LCA – 4a of the Scheme with the other Cumulation and Negligible at year 15 with mitigation. This is due to the limited impact up Scheme, together with the existing landscape character associated with the Area. Embedded and Secondary Mitigation proposed would screen the pant character are reduced.
Fabric of the Lands	ects upon landscape character are reduced. <u>scape</u> pe the removal of or changes in individual elements or features of the landscape with	<i>Eabric of the Landscape</i> There would not be the removal of or changes in individual elements or featin
the character area	a.	There would be the introduction of new elements and features comprising within the character area
	ne introduction of new elements and features comprising the solar panel areas and th /ithin the character area.	ne <u>Aesthetic Aspects of the Landscape</u> Refer to Figure 8.15.2.1 [C6.4.8.15.2.1] which shows that with the Cottam 1
visibility with the	<u>f the Landscape</u> 15.1.1 [C6.4.8.15.1.1] which shows that with the Cottam 1 Site/Sites, cumulative Cottam 2 and Cottam 3a and 3b Sites would not be experienced across the majority c ea. This is due to the distance, the intervening woodlands, hedgerows, and tree cover	developments would not be experienced across the majority of the 5km stuintervening woodlands, hedgerows, and tree cover between the Site/Sites. also curtail cumulative visibility.
	Sites. The intervening settlements and built form would also curtail cumulative	There are local patches of cumulative visibility which may be focus of likely and Gate Burton Energy Park, Tillbridge Solar and West Burton Solar Park. T within the following figures:
effects, between t east of U south of	nor patches of cumulative intervisibility which may be a focus of likely significant the Cottam 1 Site/Sites and Cottam 2 Site/Sites, located to the: pton and to the south of Sturgate Airfield Kexby in the locality of Valley Farm /illingham by Stow in the locality of the residential property known as Carisbrooke	Figure 8.15.2.6 Cottam 1, 2,3a and 3b Gate Burton Cumulative Developmer Figure 8.15.2.8 Cottam 1, 2, 3a and 3b Tillbridge Solar Cumulative Developme Figure 8.15.2.9 Cottam 1, 2, 3a and 3b West Burton Cumulative Developme
east of St	turton by Stow, extending from West Syke Lane as far as Normanby by Stow.	<u>Overall Landscape Character of the Unwooded Vales</u> Overall, the character of the Unwooded Vales is shaped by the strong agricu sense of rural tranquility. In contrast, the low levels of woodland cover crea
and Cottam 3a Sit	nor patches of cumulative intervisibility between the Cottam 1 Site/Sites, Cottam 2 Si te, located to the: t of Sturton by Stow, extending between Tillbridge Road and Ingham Road.	
and Cottam 3b Sit	nor patches of cumulative intervisibility between Cottam 1 Site/Sites, Cottam 2 Site, te, located to the: t of Sturton by Stow, extending between School Lane Farm and Ingham Road.	
experience the ae	utes, especially footpaths or other rights of way, or transport routes, may potentially esthetic aspects of the cumulative sites revealed in succession as a series of sequentia r details refer to the following detailed visual receptor sheets:	ı

Environmental Statement Landscape and Visual Impact Assessment Appendix 8.2.2: Regional Overview Tables – Not Significant [Reference: EN010133/APP/C6.3.8.2.2.2.1] January 2023

ery Low

leutral & Short Term

legligible Not Significant

ulative Developments is Minor at year 1 of operation t upon the LCA as a result of the nature of the he fabric of the landscape of the Sites and Study banels and therefore the effects upon landscape

features of the landscape within the character area.

ng the solar panel areas and the substation area

1 Site/Sites, cumulative visibility with the cumulative study area. This is due to the distance, the es. The intervening settlements and built form would

ely significant effects, between the Cotton 1 Site/Sites k. This cumulative visibility is set out in further detail

nents Augmented ZTV [C6.4.8.15.2.6] opments Augmented ZTV [C6.4.8.15.2.8] ments Augmented ZTV [C6.3.4.15.2.9]

ricultural presence, with wide areas retaining a strong reate a relatively open and expansive landscape nked by a series of minor roads east to west and a ics of the landscape have some ability to of cumulative visibility for the Cottam 1 Site/Sites led Vales Character Area.



SOLAR PROJECT		
	Appendix 8.3.2.2 Individual Viewpoint Receptor Sheets [C6.3.8.3.2.2] Appendix 8.3.2.3 Individual Viewpoint Receptor Sheets [C6.3.8.3.2.3]	
	Appendix 8.3.2.4 Individual Viewpoint Receptor Sheets [C6.3.8.3.2.4]	
	Appendix 8.3.3.2 Individual Residential Receptor Sheets [C6.3.8.3.3.2]	
	Appendix 8.3.3.3 Individual Residential Receptor Sheets [C6.3.8.3.3.3]	
	Appendix 8.3.4.2 Individual Transport Receptor Sheets [C6.3.8.3.4.2]	
	Appendix 8.3.4.3 Individual Transport Receptor Sheets [C6.3.8.3.4.3]	
	Appendix 8.3.5.2 Individual PRoW Receptor Sheets [C6.3.8.3.5.2]	
	Appendix 8.3.5.3 Individual PRoW Receptor Sheets [C6.3.8.3.4.3]	
	Overall Landscape Character of the Unwooded Vales	
	Overall, the character of the Unwooded Vales is shaped by the strong agricultural presence, with wide areas retaining a strong sense of rural tranquility. In contrast, the low levels of woodland cover create a	
	relatively open and expansive landscape comprising an arable land use within a scattered pattern of	
	settlement, linked by a series of minor roads east to west and a more strategic road network north to	
	south. These relevant characteristics of the landscape have some ability to accommodate change	
	without undue adverse effects. The minor patches of cumulative visibility for the Cottam 1 Site/Sites	
	would not alter the overall character of the landscape within the Unwooded Vales Character Area.	
	The difference in effect between the addition of the Scheme to the cumulative baseline is low for the	
	Cumulative Sites because there are local patches of intensive cumulative change to a limited area of a	
	landscape of medium sensitivity, affecting a few characteristics without altering the overall impression of its character.	
	Construction: Low Operation (Year 1): Low	Construction: Low Operation (Year 1): Low
Magnitude	Operation (Year 1): with only Embedded Mitigation: Low	Operation (Year 1): with only Embedded Mitigation: Low
	Operation (Year 15): Very Low	Operation (Year 15): Very Low
	Decommissioning: Very Low	Decommissioning: Very Low
	Construction: Adverse & Short Term	Construction: Adverse & Short Term
Type of	Operation (Year 1): Adverse & Long Term Operation (Year 1): with only Embedded Mitigation: Adverse & Long Term	Operation (Year 1): Adverse & Long Term Operation (Year 1): with only Embedded Mitigation: Adverse & Long Ter
Effect	Operation (Year 15): Beneficial & Long Term	Operation (Year 15): Beneficial & Long Term
	Decommissioning: Neutral & Short Term	Decommissioning: Neutral & Short Term
	Construction: Minor Not Significant	Construction: Minor Not Significant
Significance	Operation (Year 1): Minor Not Significant Operation (Year 1): with only Embedded Mitigation: Minor Not Significant	Operation (Year 1): Minor Not Significant
of Effect	Operation (Year 1): With only Embedded Miligation: Minor Not Significant Operation (Year 15): Negligible Not Significant	Operation (Year 1): with only Embedded Mitigation: Minor Not Significa Operation (Year 15): Negligible Not Significant
	Decommissioning: Negligible Not Significant	Decommissioning: Negligible Not Significant

* Potential exists to use targeted, low-density sheep grazing in appropriate areas of wildflower meadow under panelled areas for short periods once a suitable sward has established. This may allow for diversification of grazing management. Grazing of tussock seeded areas may be appropriate to reduce the sward every three years. Careful monitoring is however required to prevent overgrazing with conservation grazing densities used.

Environmental Statement Landscape and Visual Impact Assessment Appendix 8.2.2: Regional Overview Tables – Not Significant [Reference: EN010133/APP/C6.3.8.2.2.2.1] January 2023

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Landscape Receptor – Regional Scale Landscape Character – 4a: Unwooded Vales (Cottam 2 Site)

Receptor Baseline:

Within the Cottam 2 Site at a regional scale, landscape character is assessed within the East Midlands Regional Landscape Character Assessment as forming part of RLCT Profile: 4a Unwooded Vales, which is shown on Figure 8.5 [C6.4.8.5]. Unwooded Vales extends across the entirety of the 2km Study Area and then extends into the 5km Study Area where at its eastern most edge it shares a boundary with RLCT Profile: 6a Limestone Scarps and Dipslopes. The western extent of the 5km Study Area is also host to a large part of RLCT Profile: 4b Wooded Valeys.

There are also areas defined as 'Built Up Area' that extend from Gainsborough towards Blyton and Corringham following the main transport routes. The settlements of Willoughton and Hemswell are located on the boundary with RLCT Profile 6a Limestone Scarps and Dipslopes.

Key Features:

The main settlement of Gainsborough is located just within the 5km Study Area at the eastern edge. Other settlements include Blyton, Pilham, Corringham, Blyborough, Willoughton, Hemswell, Harpswell, Springthorpe and Heapham. The main highway corridors include the A631 (Corringham Road leading to Harpswell Lane), B1398 (Middle Street) and the A159 (Thonock Road). Key characteristics of the Unwooded Vales landscape character include an extensive, low lying rural landscape underlain by Triassic and Jurassic mudstones and clays and widespread superficial deposits. There are expansive long distance and panoramic views from higher ground at the margin of the vales from the edge of settlements such as Hemswell and Willhoughton. The scarp slope that follows the edge of the vales gives a sense of visual containment. There are also low hills and ridges which gain visual prominence in an otherwise gently undulating landscape. The complex drainage patterns of watercourses flow within the shallow undulations often flanked by pasture and riparian habitats, which adds to the character of the area. There is limited woodland cover, and instead the landscape relies on shelterbelts and hedgerow trees to gain a greater visual significance. The Unwooded Vales within the East Midlands region is sparsely settled with small villages and dispersed farms, linked together by quiet rural lanes. This road pattern is a common feature within the Cottam 2 Site where the settlements of Corringham, Yawthorpe, Aisby and Pilham are linked by a series local lanes and tracks. The Unwooded Vales generally have a strong sense of place, with major landform features flanking the lower lying areas creating broad scale visual containment. Rivers and streams are also an important landscape feature, and these include Aisby Beck, Corringham Beck and Yawthorpe Beck.

Character Context:

The Cottam 2 Site is mainly located within RLCT 4a: Unwooded Vales, where the land area is found to the north of the A631 (Corringham Road) and in the context of the settlements of Pilham, Corringham and Springthorpe. To the east of the Cottam 2 Site, RLCT 6a: Limestone Scarps and Dipslopes shares the outer 5km Study Area. The ridgeline (to the east) then gives strong containment where the settlements of Willhoughton, Hemswell and Harpswell mark the boundary with the B1398.

RLCT 4a: Unwooded Vales landscape character type is host to the Cottam 2 Site within the 2km study area and the 5km study area.

RLCT 4a is considered to form part of the immediate landscape context for the Cottam 2 Site.

Environmental Statement Landscape and Visual Impact Assessment Appendix 8.2.2: Regional Overview Tables - Not Significant [Reference: EN010133/APP/C6.3.8.2.2.2.2] January 2023

Cottam
SOLAR PROJECT

Receptor susceptibility to change	Value of Receptor	Sensitivity	Embedded Mitigation
In terms of forces for change, the Unwooded Vales aims to protect existing rural landscape features, in particular the restoration of hedgerows since the most widespread change has been in agricultural intensification and the change from pastoral to arable cropping that has resulted in the loss of hedges, and consequently, an increase in field size. The loss of pasture is particularly evident around settlements, where grazing animals and smaller field sizes contribute to the setting and structure of several villages. Many of the rural villages have not seen widespread expansion but development pressures continue with the demand for housing, commerce and industry creating visual intrusion and extending the urban fringe. For development associated with the rural villages, specific mechanisms include Village Design Statements, and tree planting around settlement fringes to help integrate new development into the landscape. Overall, the susceptibility of the Unwooded Vales is conditioned by managing growth, ensuring development is appropriate in terms of type, scale, and location. The flat, open landscape is also a key consideration and whilst the aim is to plan new tree planting around key settlements, woodland does not form a significant component of this landscape, and in considering its open and expansive character, extensive new woodland planting would be generally inappropriate. The landscape receptor is moderately susceptible to the proposed development, and a moderate ability to accommodate the specific proposed change, because the relevant characteristics of the landscape have some ability to accommodate it without undue adverse effects, taking account of the existing character and quality of the landscape, and/or achievement of relevant planning policies and strategies.	 <u>Scenic</u>: The Unwooded Vales appeal to the visual senses where the roads and watercourses combine to give a subtle grain to the landscape. The interruptions at the bridge crossings, such as Aisby Beck, provide local points of interest and the opportunity to capture views across the landscape to the higher landform finging the Vales. <u>Cultural</u>: The landscape shows evidence of historic settlement with farms and nucleated villages and small hamlets such as Yawthorpe. The landscape surrounding these settlements retain a deeply rural and tranquil character with farms linked by minor lanes and roads. There are Roman roads that pass across the area such as Middle Street indicating that these low-lying areas provided convenient routes through the hills and wetlands. <u>Natural</u>: The extensive expanses of semi-natural habitat, rivers and streams are an important landscape feature such as Yawthorpe Beck and Coringham Beck. Overall, in such a managed agricultural environment, networks of hedgerows and hedgerow trees gain significance in offering a refuge for birds and insects. <u>Recreation and Enjoyment</u>: The Unwooded Vales are valued for recreation which often focused on the locations where panoramic views are possible from elevated locations from rising land at the edges of the Vales. Whilst the landform of the Unwooded Vales is typically low and subdued, rising landform often provides locations occur around Hemswell and Willoughton. <u>Local Distinctiveness and Sense of Place</u>: The landscape has a 'strong sense of place' with major landform features flanking the lower lying areas creating broad scale visual containment along the ridgeline to the east at Willhoughton, Hemswell Harpswell and Hemswell Cliff. <u>Health and Wellbeing</u>: The Unwooded Vales provide a very limited network of PRoW leading to the dependence on the more direct arterial routes thar run east to west across the area linked by a series of narrow straight lanes. <u>Umpor</u>	Character: Wide panoramic views also possible from the low hills and ridges that form watersheds between watercourses. This contrasts with the lower lying areas where intact hedgerows and belts of riverside trees truncate views. Quality: The landscape shows evidence of historic settlement with farms and nucleated villages and small hamlets such as Yawthorpe. The landscape surrounding these settlements retain a deeply rural and tranquil character with farms linked by minor lanes and roads. <u>Value:</u> Whilst the landform of the Unwooded Vales is typically low and subdued, rising landform often provides locations where glimpses of neighboring elevated lands are often sufficient to provide a sense of place and add to the recreation and enjoyment of the area. <u>Capacity:</u> Features are locally commonplace and in moderate condition. Although the remaining hedgerow network is generally strong, there is nevertheless evidence of decline in several areas, with gaps and few hedgerow trees.	Embedded Mitigation would be taken into account at the construction, operation (Year 1 and Year 15) and decommissioning stages of the Scheme. This Embedded Mitigation is also referred to as primary mitigation and would include the following measures: Panels to be set a minimum of 3m from Site boundaries. Site boundary fencing to be set back 5m from adjacent existing hedgerows to allow for proposed thickening and growth. Existing hedges are to be allowed to grow out and will be managed to a height of 5m. Hedgerow trees will be encouraged to grow out to add further thickening and growth to the field boundaries with the addition of new hedgerow trees as appropriate, randomly spaced along the length of existing hedges. Lighting will be limited to downlights within substations and battery banks only and used when maintenance or security is required. Lighting will be PIR operated and will be calibrated to vehicle and personnel movements. All visible lighting would be 50W, installed at a maximum height of 4m with cowls fitted to prevent light spillage. Lighting required within panelled areas will be manually operated. There will be no lighting on perimeter fencing. The landscape effects with only the Embedded Mitigation taken into account equate to those effects set out for the operation stage (Year 1) and this includes secondary mitigation which will have been carried out but will have had limited physical or landscape character impact at this Embedded Mitigation stage.
Medium	Medium	Medium	Not Applicable

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	Operation (Year 1)		
Activities during site preparation / enabling works,	Within the Cottam 2 Site, the following secondary	The effects at the Operational Phase at Year 15	
construction, and commissioning with effects such as	mitigation will be implemented at the operation stage	without Embedded Mitigation equate to those effects	
construction traffic, noise and vibration from	(Year 1) to enhance the regional landscape character:	at the beginning of Year 1 before any secondary	
construction activities, dust generation, site runoff,		mitigation has been applied. Mitigation embedded in	
mud on roads, and the visual intrusion of plant and	Shelterbelt and scattered tree planting to the west of	the design will apply as will the growing out of the	
machinery on site. At the early stages of the	the Cottam 2 Site will augment the general tree cover	existing hedges.	
construction stage, ground, and lower-level activities	adjacent to the settlement of Corringham.		
such as the construction of the solar panel areas and	adjucent to the settlement of confinghtm.	With secondary mitigation such as planting and grass	
associated infrastructure and inverters would	There is scope to provide short term and rotational	seeding being taken into account at the operational	
predominantly be screened by existing vegetation.	sheep grazing on fields to the west of the Site close to the settlement edge to reinforce the historical land	stage (Year 15) the following changes to the landscape would occur and the effects are set out below:	
During the latter part of the construction stage, views	use.		
would become available of the elevated activities		The landscape to the north, south, east, and west of	
above the hedgerows, but these would be limited and	Across the Site, the reinforcement of existing field	the Site will be bolstered in the close-mid range	
would not affect the integrity of the character area and	boundary vegetation, with adjacent ditches will help to	context through the new hedgerow and shelterbelt	
would be short term.	enhance the overall cover with the addition of	planting and the enhancement of existing hedges	
	hedgerow trees and the growing out of the existing	which will be managed to a height of 5m. These new	
Other works would be undertaken in connection with	low-cut hedges.	and augmented hedgerows will provide a series of	
the construction including fencing, gates, boundary		good quality field boundaries both formally	
reatment and other means of enclosure and works for	To the east of the Site a belt of scattered trees is to be	strengthening the existing and historical field pattern	
the provision of security and monitoring measures	set back from the watercourse with a tall herb mix	and creating a multi-layered landscape. Scattered tree	
such as CCTV and the laying down of internal tracks.	provided to create a rich and biodiverse water's edge.	belts will follow the routes of existing watercourses,	
There would also be landscape and biodiversity	These trees will provide additional tree cover locally	strengthening their visibility in the wider landscape.	
nitigation works, including planting and the	helping to add to the 'well-treed' feel of the area whilst	Views of the longer distance, where hedgerows do not	
mprovement of existing hedgerows to all boundaries	enhancing the visibility of the watercourse following its	block these, will be of a layered, well treed landscape	
of the Site/Sites creating a much greater level of	winding route.	with a backdrop of some wooded vegetation in places	
regetation locally, creating many associated beneficial	which is route.	on the horizon. Both new and existing vegetation will	
effects.	Shrub planting around existing ponds will help to	have established and begun to mature, creating a	
enects.	create blocks of vegetation where these are	much stronger structure to the landscape, and	
These short-lived construction activities would not	appropriate within the landscape.	retaining and enhancing the overall character of the	
adversely affect the 4a Unwooded Vales Character	appropriate within the landscape.		
Area as these are short term. There would be a change	Although new vegetation will be immature, existing	area.	
to the arable land use which will be beneficial to soils	hedgerows will have begun to grow out at Year 1 and	The proposed grassland will have established and will	
	0	The proposed grassland will have established and will	
and watercourses, significantly increase biodiversity	the varied grassland areas will have become established, starting to create valuable habitats.	have settled into its natural scheme with some minor	
and help to capture carbon. The field boundaries and	established, starting to create valuable habitats.	appropriate management of differing regimes. The soil	
the associated tree cover would remain intact and help	O severally their will have to likely have its to an electron other a	quality will be considerably improved through the lack of cultivation and the chemical run-off will be reduced	
with visual layering across the landscape and the	Overall, this will help to link habitats and strengthen		
ntegration of the new panels. There would be very	the overall character locally and maintain a sense of	around the Site(s) enhancing the water quality	
imited, temporary, and short-term adverse changes to	place. Important opportunities to bolster the local	generally. There will be considerable biodiversity gains	
he Unwooded Vales Character Area 4a.	vegetation cover, buffering and connecting existing	through the establishment of the varied grassland	
	fragmented vegetation, aims to create a more resilient	types and regimes and a long-term increase in	
Overall, the Unwooded Vales Character Area 4a is able	and biodiverse landscape.	pollinator species and bird and other species and	
to accommodate the changes that arise through the		numbers locally.	
construction of the Site without undue adverse effects.	Between Years 1 and 15, the following beneficial		
The integrity of all features will be retained and	effects will be achieved in terms of the LCA	Growth of existing and proposed vegetation is	
enhancement at ground level through initial grassland	- Grassland reversion	assumed to be:	
planting will have beneficial effects from the outset.	- A more varied landscape across the LCA		
	- Improved management of existing vegetation	Woodland/trees and shelterbelts: 2.5m max at Year 1,	
	 Less intensively managed land 	7.5m max at Year 15.	
	- Soil improvements		
	 Water quality improvements 	New hedgerows: 0.6m at Year 1 and 3.5m at Year 15.	

Environmental Statement Landscape and Visual Impact Assessment Appendix 8.2.2: Regional Overview Tables - Not Significant [Reference: EN010133/APP/C6.3.8.2.2.2.2] January 2023

nmissioning

r process to that of construction stage, but with eme being no longer operational. This is an nent of the Site in winter but assumes retention ng vegetation and builds upon the proposed and secondary mitigation that had been hed as the future baseline. Effects are those rom activities for the duration of the nissioning to include site traffic, noise and n from decommissioning activities, dust ion and site runoff.

g decommissioning, the land is likely to be d to arable production. The Site will however from the significantly enhanced tree and w planting that has been carried out and has to create a much stronger and robust pe, retaining, and enhancing the overall er and providing considerable biodiversity over the years. Bird mitigation fields and grazing marshes are likely to be retained and ential may exist to retain grass margins to n some varied land use and a high level of sity in the local area.

t Secondary Mitigation having been applied out the scheme, the only change to the ndscape following decommissioning would be ting hedgerows which will have been allowed out and will have been managed to a height of assumed that these will be retained.

tigation, the negative effects of the physical nissioning will be balanced out by the long ndscape and visual effects of this mitigation.

Environmental Statement Landscape and Visual Impact Assessment Appendix 8.2.2: Regional Overview Tables – Not Significant [Reference: EN010133/APP/C6.3.8.2.2.2.2] January 2023



Significance of Effect	Minor Not Significant	Minor Not Significant	Moderate Significant	Negli
Level of Effect	Adverse & Short Term	Beneficial & Long Term	Beneficial & Long Term	Neutr
Magnitude	Low	Low	Medium	Very L
		 Increased visibility/definition of watercourses across the landscape. Increased woodland/vegetation cover Increased riparian species vegetation Significantly improved biodiversity Improved carbon retention/capture Overwintering opportunities within wetland and elsewhere with Bird mitigation Potential animal grazing Reinstatement of historic field patterns Strengthened Character Area generally Improved shelter/protection across the landscape Adverse effects (mitigated): Panels and structures across landscape Increased hard standing areas - water runoff management required Potential minor pollution around substations Visual intrusion in early years Increased traffic in the local area The effects at the Operational Phase at Year 15 without Embedded Mitigation equate to those effects at the beginning of Year 1 before secondary mitigation has been applied. The Effects set out below include secondary mitigation which will have been carried out but will have had limited physical impact at this stage. 	Existing hedgerows: 0.9m at Year 1 and 5m at Year 15. Shrubs: 0.9m at Year 1 and 5m at Year 15. Following mitigation, at Year 15, The existing woodland and hedgerows locally will be augmented by increased vegetation cover creating both visual and ecological links across the landscape to the adjoining woodland blocks. Grassland mixes will have established and will create valuable habitats with soil structure greatly improved through cessation of arable cultivation. By Year 15, the Site at Cottam 3a will present a 'well treed' landscape in line with the character area aims, the existing vegetation having been allowed to grow out and new trees, hedgerows and scrub having fully established and begun to mature. The overall scene will be relatively well vegetated, with scattered and irregularly spaced trees, following the existing lines of both historic field boundaries and the road network as well as local watercourses. This, together with the proposed mix of varied grasslands across the Site will help to somewhat reverse the over intensification of recent arable farming methods to create a much richer tapestry of habitats and features within the landscape. This varied development, set against the existing arable landscape will retain the overall perception of an open and expansive landscape but will appear as a more layered and cohesive scene across the Unwooded Vales and will help to integrate these with the Wooded Valeys to the west. Following mitigation, the Site is able accommodate change without undue adverse effects and there will be considerable beneficial effects in the increased level of vegetation cover locally, the linking and enhancement of existing natural features and the biodiversity benefits that this will bring, creating a stronger, more resilient framework across the local character area of the 4a Unwooded Vales.	

/ Low

itral & Short Term

ligible Not Significant



In-Combination Effects [Cumulative Sites]	Cumulative Effects [Cumulative Developments]
<u>In Summary</u> The In-combination effects upon LCA – 4a of the Cottam 2 Site with the other Cumulative Site 3a and 3b) is Minor at year 1 of operation and Negligible at year 15 with mitigation. This is du limited impact upon the LCA as a result of the nature of the Scheme, the segregated nature of together with the existing landscape character associated with the fabric of the landscape of Study Area. Embedded and Secondary Mitigation proposed would screen the panels and the	ue to the of the Sites;operation and Negligible at year 15 with mitigation. This is due to the lim nature of the Scheme, together with the existing landscape character as Sites and Study Area. Embedded and Secondary Mitigation proposed work
effects upon landscape character are reduced. <u>Fabric of the Landscape</u> There would not be the removal of or changes in individual elements or features of the lands the character area.	scape within There would be the introduction of new elements and features comprisi
There would be the introduction of new elements and features comprising the solar panel ar substation area within the character area.	reas and the area within the character area. Aesthetic Aspects of the Landscape
Aesthetic Aspects of the Landscape Refer to Figure 8.15.1.2 [C6.4.8.15.1.2] which shows that with the Cottam 2 Site, cumulative of Cottam 1 Site/Sites and Cottam 3a and 3b Sites would not be experienced across the entirety study area. This is due to the distance, the intervening woodlands, hedgerows, and tree cover the Site/Sites. The intervening settlements and built form would also curtail cumulative visibility	visibility with y of the 2km er between Refer to Figure 8.15.2.2 [C6.4.8.15.2.2] which shows that with the Cottam developments would not be experienced across the majority of the 5km intervening woodlands, hedgerows, and tree cover between the Site/Site would also curtail cumulative visibility.
There are local patches of intervisibility between the Cottam 2 Site and with the Cottam 3a and Sites extending from the:	There are local patches of cumulative visibility which may be focus of like
 South boundary of the Cottam 2 Site, starting at the eastern edge of Corringham an far as Yawthorpe Beck and Yawthorpe West boundary of the Cottam 2 Site, extending as far as Pilham Lane 	d reaching as Figure 8.15.2.8 Cottam 1, 2, 3a and 3b Tillbridge Solar Cumulative Develo
 East boundary of the Cottam 2 Site, extending as far Yawthorpe and Yawthorpe Fox Northwest boundary of the Cottam 2 Site, extending as far as the Cottam 3a and 3b 	Covert Overall, the character of the Unwooded Vales is shaped by the strong ag
Potential cumulative visibility between the Cottam 2 Site and with the Cottam 3a and Cottam would not be experienced however, due to the intervening settlements of Corringham, Yawt Dunstall and Pilham. The flat landform and intervening vegetation cover would also close do visibility across the landscape between these areas.	horpe, Aisby, ability to accommodate change without undue adverse effects. The mine
There is a local patch of intervisibility between the Cottam 2 Site and with the Cottam 3b Site the:	comprising
 Northern-most tip of the Cottam 2 Site extending across the medieval village of Dunthe medieval village of Southorpe; and Southeast of the River Eau, extending as far as Huckerby Farm and Huckerby Bunga 	
Potential cumulative visibility between the Cottam 2 Site and the Cottam 3b Site would not b experienced however, due to the intervening vegetation lining Aisby Beck and Yawthorpe Be landform and intervening vegetation cover would also close down and inter-visibility across to between these Sites/Site.	ck. The flat
 There are local patches of intervisibility between All Sites comprising the: North of the Bonsdale Farm at Pilham, extending across the landscape to the north medieval village of Dunstall as far as the medieval village of Southorpe West of the settlement of Corringham, extending from Staplegate House as far Wind Pilham Lane 	
 West of Springthorpe, extending across the landscape as far as Harpswell Low Farm East of Yawthorpe, extending as far as Hemswell. 	i; and

Environmental Statement Landscape and Visual Impact Assessment Appendix 8.2.2: Regional Overview Tables – Not Significant [Reference: EN010133/APP/C6.3.8.2.2.2.2] January 2023

umulative Developments is Minor at year 1 of limited impact upon the LCA as a result of the associated with the fabric of the landscape of the would screen the panels and therefore the effects

or features of the landscape within the character

rising the solar panel areas and the substation

tam 2 Site, cumulative visibility with the cumulative km study area. This is due to the distance, the Sites. The intervening settlements and built form

likely significant effects, between the Cottam 2 and hin the following figures:

velopments Augmented ZTV [C6.4.8.15.2.8]

agricultural presence, with wide areas retaining a nd cover create a relatively open and expansive f settlement, linked by a series of minor roads east vant characteristics of the landscape have some inor patches of cumulative visibility for the Cottam in the Unwooded Vales Character Area.



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	Potential cumulative visibility between All Sites would not be experienced due to the intervening settlements of Corringham, Yawthorpe, Aisby, Dunstall and Pilham. The flat landform and intervening vegetation cover would also close down and inter-visibility across the landscape between these areas.	
	Users of linear routes, especially footpaths or other rights of way, or transport routes, may potentially experience the aesthetic aspects of the cumulative sites revealed in succession as a series of sequential views. For further details refer to the following detailed visual receptor sheets: Appendix 8.3.2.2 Individual Viewpoint Receptor Sheets [C6.3.8.3.2.2] Appendix 8.3.2.4 Individual Viewpoint Receptor Sheets [C6.3.8.3.2.4]	
	Appendix 8.3.3.2 Individual Residential Receptor Sheets [C6.3.8.3.3.2] Appendix 8.3.3.3 Individual Residential Receptor Sheets [C6.3.8.3.3.3]	
	Appendix 8.3.4.2 Individual Transport Receptor Sheets [C6.3.8.3.4.2] Appendix 8.3.4.3 Individual Transport Receptor Sheets [C6.3.8.3.4.3]	
	Appendix 8.3.5.2 Individual PRoW Receptor Sheets [C6.3.8.3.5.2] Appendix 8.3.5.3 Individual PRoW Receptor Sheets [C6.3.8.3.4.3]	
	<u>Overall Landscape Character of the Unwooded Vales</u> Overall, the character of the Unwooded Vales is shaped by the strong agricultural presence, with wide areas retaining a strong sense of rural tranquility. In contrast, the low levels of woodland cover create a relatively open and expansive landscape comprising an arable land use within a scattered pattern of settlement, linked by a series of minor roads east to west and a more strategic road network north to south. These relevant characteristics of the landscape have some ability to accommodate change without undue adverse effects. These local patches of cumulative visibility for the Cottam 2 Site would not alter the overall character of the landscape within the Unwooded Vales Character Area 4a.	
Magnitude	Construction: Low Operation (Year 1): Low Operation (Year 1) with only Embedded Mitigation: Low Operation (Year 15): Very Low Decommissioning: Very Low	Construction: Low Operation (Year 1): Low Operation (Year 1) with only Embedded Mitigation: Low Operation (Year Decommissioning: Very Low
Type of Effect	Construction: Adverse & Short Term Operation (Year 1): Adverse & Long Term Operation (Year 1) with only Embedded Mitigation: Adverse & Long Term Operation (Year 15) Beneficial & Long Term Decommissioning: Neutral & Short Term	Construction: Adverse & Short Term Operation (Year 1): Adverse & Long Term Operation (Year 1) with only Embedded Mitigation: Adverse & Long Ter Operation (Year 15): Beneficial & Long Term Decommissioning: Neutral & Short Term
Significance of Effect	Construction: Minor Not Significant Operation (Year 1): Minor Not Significant Operation (Year 1) with only Embedded Mitigation: Minor Not Significant Operation (Year 15) : Negligible Not Significant Decommissioning: Negligible Not Significant	Construction: Minor Not Significant Operation (Year 1): Minor Not Significant Operation (Year 1) with only Embedded Mitigation: Minor Not Signific Operation (Year 15): Negligible Not Significant Decommissioning: Negligible Not Significant
+ Data atial aviata t	To use targeted low-density sheep grazing in appropriate areas of wildflower meadow under papelled areas f	

* Potential exists to use targeted, low-density sheep grazing in appropriate areas of wildflower meadow under panelled areas for short periods once a suitable sward has established. This may allow for diversification of grazing management. Grazing of tussock seeded areas may be appropriate to reduce the sward every three years. Careful monitoring is however required to prevent overgrazing with conservation grazing densities used.

Environmental Statement Landscape and Visual Impact Assessment Appendix 8.2.2: Regional Overview Tables – Not Significant [Reference: EN010133/APP/C6.3.8.2.2.2.2] January 2023

(ear 15): Very Low

Term

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Landscape Receptor – Regional Scale Landscape Character – 4a: Unwooded Vales (Cottam 3a Site)

Receptor Baseline:

Within the Cottam 3a Site, at a regional scale, landscape character is assessed within the East Midlands Regional Landscape Character Assessment as forming part of RLCT Profile: 4a Unwooded Vales, which is shown on Figure 8.5 [C6.4.8.5]. Unwooded Vales is located within the 2km Study Area, but only extending across its eastern most part, then sharing the western most part with RLCT Profile 4b: Wooded Vales. The landscape character type then occupies an eastern part of the 5km Study Area where it shares a boundary with Kirton in Lindsey. The western part of the 5km Study Area then comprises of a mixture of RLCT 2b: Planned and Drained Fens and Carrlands, RLCT 4a: Unwooded Vales and RLCT 4b: Wooded Vales, The Unwooded Vales is generally characterised by mixed agriculture set within an enclosed landscape of low, well-maintained hedgerows.

There are also areas defined as 'Built Up Area' that extend from Gainsborough towards Blyton following the main transport routes. The settlements of Blyton, Laughton, Scotton and Scotter are located on the boundary with RLCT Profile 4b: Wooded Vales.

Key Features:

This is the land area that sits to the north of Kirton Road B1205 with a disused airfield located in its central part. To the east of the 2km Study Area the settlement of Northorpe occupies an area of locally higher ground at 20m AOD. The Cottam 3a Site therefore spans two different landscape character types with the majority located within Unwooded Vales whilst the western most corner of the Site/Sites (close to Blyton) is within the 'Built Up Area' which is associated with the main highway corridor of the A159 (Laughton Road). Unwooded Vales comprises of an extensive, low lying rural landscape underlain by Triassic and Jurassic mudstones and clays and widespread superficial deposits. This landscape character type offers expansive long distance and panoramic views from higher ground at the margin of the Unwooded Vales which gives a sense of visual containment. The land within this landscape character type has complex drainage patterns of watercourses that flow within shallow undulations often flanked by pasture and riparian habitats. Limited woodland cover is a key characteristic of the Unwooded Vales, and this therefore relies on shelterbelts and hedgerow trees to gain a greater visual significance and habitat value. The landscape within this landscape character type is sparsely settled with small villages and dispersed farms linked by quiet rural lanes.

Character Context:

The Cottam 3a Site is mainly located within RLCT 4a: Unwooded Vales landscape character type, where the land area is found to the north of Kirton Road B1205 (and mainline railway) and to the north of the settlement of Pilham and northeast of the settlement of Blyton where it forms the boundary with the adjoining RLCT 4b: Wooded Vales. To the east of the Cottam 3a Site, the settlement of Northorpe forms part of a wider collection of other scattered farmsteads across this landscape character type. The ridgeline (further to the east) then gives strong containment where the settlements of Kirton in Lindsey, Grayingham, Blyborough and Willhoughton mark the boundary with the B1398.

RLCT 4a: Unwooded Vales landscape character type is host to the Cottam 3a Site within the 2km study area and the 5km study area.

RLCT 4a is considered to form part of the immediate landscape context for the Cottam 3a Site

Environmental Statement Landscape and Visual Impact Assessment Appendix 8.2.2.2: Regional Overview Tables - Not Significant [Reference: EN010133/APP/C6.3.8.2.2.2.3] January 2023

Cottam
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Receptor susceptibility to change	Value of Receptor	Sensitivity	Embedded Mitigation
In terms of forces for change, the Unwooded Vales aims to protect existing rural landscape features, in particular the restoration of hedgerows since the most widespread change has been in agricultural intensification and the change from pastoral to arable cropping that has resulted in the loss of hedges, and consequently, an increase in field size. The loss of pasture is particularly evident around settlements, where grazing animals and smaller field sizes contribute to the setting and structure of several villages. Many of the rural villages have not seen widespread expansion but development pressures continue with the demand for housing, commerce and industry creating visual intrusion and extending the urban fringe. For development associated with the rural villages, specific mechanisms include Village Design Statements, and tree planting around settlement fringes to help integrate new development into the landscape. Overall, the susceptibility of the Unwooded Vales is conditioned by managing growth, ensuring development is appropriate in terms of type, scale, and location. The flat, open landscape is also a key consideration and whilst the aim is to plan new tree planting around key settlements, woodland does not form a significant component of this landscape, and in considering its open and expansive character, extensive new woodland planting would be generally inappropriate. The landscape receptor is moderately susceptible to the proposed development, and a moderate ability to accommodate the specific proposed change, because the relevant characteristics of the landscape have some ability to accommodate it without undue adverse effects, taking account of the existing character and quality of the landscape, and/or achievement of relevant planning policies and strategies.	 <u>Scenic</u>: The Unwooded Vales appeal to the visual senses where the roads and watercourses combine to give a subtle grain to the landscape. The interruptions at the bridge crossings, such as Northorpe Beck, provide local points of interest and the opportunity to capture views across the landscape to the higher landform fringing the Unwooded Vales at Kirton in Lindsey. <u>Cultural</u>: The landscape shows evidence of historic settlement with farms and nucleated villages and small hamlets such as Northorpe. The landscape surrounding these settlements retain some rural and tranquil character with farms, but minor lanes and roads are interrupted by the presence of the forme arifield. There are Roman roads that pass across the wider area such as Ermine Street indicating that these low-lying areas provided convenient routes through the hills and wetlands. <u>Natural</u>: The extensive expanses of semi-natural habitat, rivers, and streams are an important landscape feature such as Northorpe Beck and its associated tributaries. Overall, in such a managed airfield biased and large-scale agricultural environment, networks of hedgerows and hedgerow trees gain significance in offering a refuge for birds and insects. <u>Recreation and Enjoyment</u>: The Unwooded Vales are valued for recreation which often focuses on the locations where panoramic views are possible from elevated locations from rising land at the edges of the Vales. Whils the landform of the Unwooded Vales is ytically low and subdued, rising landform often provides locations where glimpse of neighboring elevated are often sufficient to provide a'sense of place' and add to the recreation and enjoyment of the area. Typically, these locations occur around Blyton to the southwest and Willoughton to the southeast. <u>Local Distinctiveness and Sense of Place</u>: The landscape has a 'strong sense of place' with major landform features flanking the lower bying areas creating broad scale visual containment along the ridgeli	Character: The roads and watercourses combine to give a subtle grain to the landscape. The interruptions at the bridge crossings, such as Blyton Beck, provide local points of interest and the opportunity to capture views across the landscape. Quality: The landscape shows evidence of historic settlement with farms and nucleated villages and small hamlets such as the Medieval village of Southorpe. The landscape surrounding these settlements retain some rural and tranquil character with farms, but minor lanes and roads are interrupted by the presence the former airfield in parts. Value: Areas have a positive landscape character but include some patches of degradation where agricultural intensification has eroded landscape character, particularly around the edges of settlements. Capacity: The landscape benefits from high levels of visual containment due to the local landform, hedgerows, and shelter belts and this helps tolerance for landscape change.	Embedded Mitigation would be taken into account at the construction, operation (Year 1 and Year 15) and decommissioning stages of the Scheme. This Embedded Mitigation is also referred to as primary mitigation and would include the following measures: Panels to be set a minimum of 3m from Site boundaries. Site boundary fencing to be set back 5m from adjacent existing hedgerows to allow for proposed thickening and growth. Existing hedges are to be allowed to grow out and will be managed to a height of 5m. Hedgerow trees will be encouraged to grow out to add further thickening and growth to the field boundaries with the addition of new hedgerow trees as appropriate, randomly spaced along the length of existing hedges. Lighting will be limited to downlights within substations and battery banks only and used when maintenance or security is required. Lighting will be P operated and will be calibrated to vehicle and personnel movements. A visible lighting would be 50W, installe at a maximum height of 4m with cow fitted to prevent light spillage. Lightin required within panelled areas will be manually operated. There will be no lighting on perimeter fencing. The landscape effects with only the Embedded Mitigation taken into account equate to those effects set o for the operation stage (Year 1) and this includes secondary mitigation which will have been carried out but will have had limited physical or



Medium	Medium	Medium	Embedded Mitigation stage Not Applicable
			landscape character impact at this

Construction	Operation (Year 1)	Operation (Year 15)	Decor
Activities during site preparation / enabling works,	The effects at the Operational Phase at Year 15	The effects at the Operational Phase at Year 15	A simila
construction, and commissioning with effects such as	without Mitigation equate to those effects at the	without Mitigation equate to those effects at the	with the
construction traffic, noise and vibration from	beginning of Year 1 before any secondary mitigation	beginning of Year 1 before any secondary mitigation	an asses
construction activities, dust generation, site runoff,	has been applied. Mitigation embedded in the design	has been applied. Mitigation embedded in the design	retentio
mud on roads, and the visual intrusion of plant and	will apply as will the growing out of the existing	will apply as will the growing out of the existing	propos
machinery on site. At the early stages of the	hedges.	hedges.	been es
construction stage, ground, and lower-level activities			those a
such as the construction of the solar panel areas and	With secondary mitigation such as planting and grass	With secondary mitigation such as planting and grass	decomr
associated infrastructure and inverters would	seeding being taken into account at the operational	seeding being taken into account at the operational	vibratio
redominantly be screened by existing vegetation.	stage (Year 15) the following changes to the landscape would occur and the effects are set out below.	stage (Year 15) the following changes to the landscape would occur and the effects are set out below.	generat
During the latter part of the construction stage, views			Followin
would become available of the elevated activities	A new hedgerow with hedgerow trees, enhanced	Views to the north, south, east, and west of the Cottam	returned
above the hedgerows, but these would be limited and	existing hedgerows and a belt of scattered trees are	3a Site will be screened in the close-mid range	benefit
would not affect the integrity of the character area and	proposed around field K1. This field is close to the	proximity due to the new hedgerow and shelterbelt	hedgero
would be short term.	settlement edge and the additional tree planting will	planting and the enhancement of existing hedges	mature
	help to increase the overall tree over around this area	which will be managed to a height of 5m. These new	landsca
Other works would be undertaken in connection with	creating a more 'well-treed' perception. The varied	and augmented hedgerows will provide a series of	characte
the construction including fencing, gates, boundary	grass mixes and potential for short term, rotational	good quality field boundaries both formally	benefits
reatment and other means of enclosure and works	sheep grazing within this small field will partially	strengthening the existing and historical field pattern	wetland
for the provision of security and monitoring measures	restore the historic pattern close to settlements.	and creating a multi-layered landscape. Scattered tree	the pot
such as CCTV and the laying down of internal tracks.		belts will follow the routes of existing watercourses,	maintai
There would also be landscape and biodiversity	Further within the Site a series of new hedges around	strengthening their visibility in the wider landscape.	biodive
mitigation works, including planting and the	the existing airfield structures will further enhance the	Views of the longer distance, where hedgerows do not	14/24
improvement of existing hedgerows to all boundaries	overall character and reduce the scale and bleakness	block these, will be of a layered, well treed landscape	Withou
of the Site/Sites creating a much greater level of	of this particular area whilst retaining the overall open	with a backdrop of some wooded vegetation in places	through
vegetation locally, creating many associated beneficial	character.	on the horizon. Both new and existing vegetation will	views/la
effects.	Enhanced hadgerous, particularly clange the Virtan	have established and begun to mature, creating a	the exis
These short-lived construction activities would not	Enhanced hedgerows, particularly along the Kirton Road will also help to break up the landscape to some	much stronger structure to the landscape, and retaining and enhancing the overall character of the	to grow 5m. It is
adversely affect the 4a Unwooded Vales Character	degree and the increase in vegetated cover will	area.	JIII. IL IS
Area as these are short term. There would be a change	enhance visitor experience along this route.		With M
to the arable land use which will be beneficial to soils	childrice visitor experience along this route.	The proposed grassland will have established and will	decomn
and watercourses, significantly increase biodiversity	A strong belt of successional scrub to the west of the	have settled into its natural scheme with some minor	term lar
and help to capture carbon. The field boundaries and	Site adjacent to Blyton as well as new hedgerows	appropriate management of differing regimes. The soil	
the associated tree cover would remain intact and help	around existing airfield features will help to integrate	quality will be considerably improved through the lack	
with visual layering across the landscape and the	the development into the landscape whilst	of cultivation and the chemical run-off will be reduced	
integration of the new panels. There would be very	strengthening the character close to this settlement.	around the Site(s) enhancing the water quality	
limited, temporary, and short-term adverse changes to		generally. There will be considerable biodiversity gains	
the Unwooded Vales Character Area 4a.	To the east of the Site, another belt of successional	through the establishment of the varied grassland	
	scrub will help to enhance the visibility of this small	types and regimes and a long-term increase in	
Overall, the Unwooded Vales Character Area 4a is able	watercourse within the landscape, following its	pollinator species and bird and other species and	
to accommodate the changes that arise through the	winding route.	numbers locally.	
construction of the Site without undue adverse effects.			
The integrity of all features will be retained and	Although new vegetation will be immature, existing	Growth of existing and proposed vegetation is	
enhancement at ground level through initial grassland	hedgerows will have begun to grow out at Year 1 and	assumed to be:	
planting will have beneficial effects from the outset.	-		

nmissioning

ar process to that of construction stage, but e Scheme being no longer operational. This is essment of the Site in winter but assumes on of existing vegetation and builds upon the ed primary and secondary mitigation that had stablished as the future baseline. Effects are arising from activities for the duration of the missioning to include site traffic, noise and on from decommissioning activities, dust tion and site runoff.

ng decommissioning, the land is likely to be ed to arable production. The Site will however from the significantly enhanced tree and ow planting that has been carried out and has ed to create a much stronger and robust ape, retaining, and enhancing the overall ter and providing considerable biodiversity s over the years. Bird mitigation fields and d grazing marshes are likely to be retained and tential may exist to retain grass margins to in some varied land use and a high level of ersity in the local area.

ut Secondary Mitigation having been applied hout the scheme, the only change to the andscape following decommissioning would be sting hedgerows which will have been allowed out and will have been managed to a height of assumed that these will be retained.

litigation, the negative effects of the physical missioning will be balanced out by the long indscape and visual effects of this mitigation.



Level of	Advorso & Short Lorm	L Repeticial X, Long Lerm	Beneficial & Long Term	Ne
Magnitude	Adverse & Short Term	Beneficial & Long Term	Popoficial & Long Term	NIa
5km Study A	Area:	Low	Medium	Ve
		 the varied grassland areas will have become established, starting to create valuable habitats. Overall, this will help to link habitats and strengthen the overall character locally and maintain a sense of place. Important opportunities to bolster the local vegetation cover, buffering and connecting existing fragmented vegetation, aims to create a more resilient and biodiverse landscape. Between Years 1 and 15, the following beneficial effects will be achieved in terms of the LCA Grassland reversion A more varied landscape across the LCA Improved management of existing vegetation Less intensively managed land Soil improvements Water quality improvements Increased visibility/definition of watercourses across the landscape. Increased visibility/definition cover Increased riparian species vegetation Significantly improved biodiversity Improved carbon retention/capture Overwintering opportunities within wetland and elsewhere with Bird mitigation Potential animal grazing Reinstatement of historic field patterns Strengthened Character Area generally Improved shelter/protection across the landscape Adverse effects (mitigated): Panels and structures across landscape Increased hard standing areas - water runoff management required Potential minor pollution around substations Visual intrusion in early years Increased traffic in the local area The effects at the Operational Phase at Year 15 without Embedded Mitigation equate to those effects at the beginning of Year 1 before secondary mitigation has been applied. The Effects set out below include secondary mitigation which will have been carried out but will have had limited physical impact at this stage. 	 Woodland/trees and shelterbelts: 2.5m max at Year 1, 7.5m max at Year 15. New hedgerows: 0.6m at Year 1 and 3.5m at Year 15. Existing hedgerows: 0.9m at Year 1 and 5m at Year 15. Shrubs: 0.9m at Year 1 and 5m at Year 15. Following mitigation, at Year 15, The existing woodland and hedgerows locally will be augmented by increased vegetation cover creating both visual and ecological links across the landscape to the adjoining woodland blocks. Grassland mixes will have established and will create valuable habitats with soil structure greatly improved through cessation of arable cultivation. By Year 15, the Cottam 3a Site will present a 'well treed' landscape in line with the character area aims, the existing vegetation having been allowed to grow out and new trees, hedgerows and scrub having fully established and begun to mature. The overall scene will be relatively well vegetated, with scattered and irregularly spaced trees, following the existing lines of both historic field boundaries and the road network as well as local watercourses. This, together with the proposed mix of varied grasslands across the Site will help to somewhat reverse the over intensification of recent arable farming methods to create a much richer tapestry of habitats and features within the landscape. This varied development, set against the existing arable landscape will retain the overall perception of an open and expansive landscape but will appear as a more layered and cohesive scene across the Unwooded Vales to the west. Following mitigation, the Site(s) are able accommodate change without undue adverse effects and there will be considerable beneficial effects in the increased level of vegetation cover locally, the linking and enhancement of existing natural features and the biodiversity benefits that this will bring, creating a stronger, more resilient framework across the local character area of the 4a Unwooded Vales. 	

/ery Low

Neutral & Short Term



Significance of Effect	Minor Not Significant	Minor Not Significant		Moderate Significant	Negligik
Landscape Re	eceptor – Regional Scale Landscape Characte	er – 4a: Unwooded Vales (Cottam 3a Site))		
	In-Combination Effects [Cumulative Sites]		Cum	nulative Effects [Cumulative Developments]]
	<u>In Summary</u> The In-combination effects upon LCA – 4a of the Cottam 2 and 3b) is Minor at year 1 of operation and Negligible a limited impact upon the LCA as a result of the nature of together with the existing landscape character associate Study Area. Embedded and Secondary Mitigation propose effects upon landscape character are reduced. <u>Fabric of the Landscape</u> There would not be the removal of or changes in individ the character area. There would be the introduction of new elements and fer	3a Site with the other Cumulative Sites (Cottam 1, at year 15 with mitigation. This is due to the the Scheme, the segregated nature of the Sites; ed with the fabric of the landscape of the Sites and sed would screen the panels and therefore the ual elements or features of the landscape within	The C opera natur Sites upon <u>Fabric</u> There area.	e would be the introduction of new elements and feature	e to the limi naracter ass roposed wor lements or f
	and Park House Farm, and reaching as far as NoEast boundary of Cottam 3a Site, and stopping stopping	vould not be experienced across the majority of vening woodlands, hedgerows, and tree cover built form would also curtail cumulative visibility a 3a and 3b Site, extending from the: ned to the west by the Green Respect Burial Park orthorpe in the east short of Cold Harbour Farm; and ng for a short distance as far as Grange Farm and and 3b Site would not be experienced however, due lway and the isolated settlement comprising vening woodland blocks, hedgerows and tree	Refer cumu distar built f There Site a Figur Overa strong lands to we ability	etic Aspects of the Landscape to Figure 8.15.1.3 [C6.4.8.15.1.3] which shows that with alative developments would not be experienced across the nce, the intervening woodlands, hedgerows, and tree con- form would also curtail cumulative visibility between the e are local patches of cumulative visibility which may be for and Tillbridge Solar. This cumulative visibility is set out in the 8.15.2.8 Cottam 1, 2, 3a and 3b Tillbridge Solar Cumula all Landscape Character of the Unwooded Vales all, the character of the Unwooded Vales is shaped by the g sense of rural tranquility. In contrast, the low levels of accape comprising an arable land use within a scattered p est and a more strategic road network north to south. The y to accommodate change without undue adverse effect the overall character of the landscape within the Unwoo	he majority ver between se Site/Sites focus of likel further deta ative Develo e strong agr woodland c attern of set nese relevan s. The cumu
	 There are local patches of intervisibility between Cottam South boundary of the Cottam 3b Site, bordered settlement of Dunstall to the east, and reaching South boundary of the Cottam 3a Site, bordered reaching Grange Farm and stopping short of the North boundary of the Cottam 3a Site, following stopping short to the west of the Green Respect Potential cumulative visibility between Cottam 3a, 3b an however, due to the intervening settlements of Corringh flat landform and intervening vegetation cover would also landscape between these cumulative sites. 	d by Pilham to the west and the medieval g as far as Springthorpe in the south d by the eastern edge of Blyton to the west, e mainline railway; and g the alignment of the A159 (Laughton Road) and t Burial Park. d the Cottam 2 Site would not be experienced ham, Yawthorpe, Aisby, Dunstall and Pilham. The			
	There is a local patch of intervisibility between All Sites, l	ocated to the:			

gible **Not Significant**

mulative Developments is Minor at year 1 of imited impact upon the LCA as a result of the associated with the fabric of the landscape of the vould screen the panels and therefore the effects

r features of the landscape within the character

sing the solar panel areas and the substation

am 3a and 3b Sites , cumulative visibility with the ty of the 5km study area. This is due to the een the Site/Sites. The intervening settlements and tes.

kely significant effects, between the Cottam 3a letail within the following figures:

elopments Augmented ZTV [C6.4.8.15.2.8]

agricultural presence, with wide areas retaining a cover create a relatively open and expansive settlement, linked by a series of minor roads east ant characteristics of the landscape have some mulative visibility for the Cottam 3a Site would not Character Area 4a.





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	• East of the Cottam 3b Site and north of the Bonsdale Farm at Pilham, extending across the landscape to the north of the medieval village of Dunstall as far as the medieval village of Southorpe.	
	Potential cumulative visibility between All Sites would not be experienced however, due to the intervening settlements of Corringham, Yawthorpe, Aisby, Dunstall and Pilham. The flat landform and intervening vegetation cover would also close down and inter-visibility across the landscape between these cumulative sites.	
	Users of linear routes, especially footpaths or other rights of way, or transport routes, may potentially experience the aesthetic aspects of the cumulative sites revealed in succession as a series of sequential views. For further details refer to the following detailed visual receptor sheets:	
	Appendix 8.3.2.2 Individual Viewpoint Receptor Sheets [C6.3.8.3.2.2] Appendix 8.3.2.3 Individual Viewpoint Receptor Sheets [C6.3.8.3.2.3] Appendix 8.3.2.4 Individual Viewpoint Receptor Sheets [C6.3.8.3.2.4]	
	Appendix 8.3.3.2 Individual Residential Receptor Sheets [C6.3.8.3.3.2] Appendix 8.3.3.3 Individual Residential Receptor Sheets [C6.3.8.3.3.3]	
	Appendix 8.3.4.2 Individual Transport Receptor Sheets [C6.3.8.3.4.2] Appendix 8.3.4.3 Individual Transport Receptor Sheets [C6.3.8.3.4.3]	
	Appendix 8.3.5.2 Individual PRoW Receptor Sheets [C6.3.8.3.5.2] Appendix 8.3.5.3 Individual PRoW Receptor Sheets [C6.3.8.3.4.3]	
	<u>Overall Landscape Character of the Unwooded Vales</u> Overall, the character of the Unwooded Vales is shaped by the strong agricultural presence, with wide areas retaining a strong sense of rural tranquility. In contrast, the low levels of woodland cover create a relatively open and expansive landscape comprising an arable land use within a scattered pattern of settlement, linked by a series of minor roads east to west and a more strategic road network north to south. These relevant characteristics of the landscape have some ability to accommodate change without undue adverse effects. The cumulative visibility for the Cottam 3a Site would not alter the overall character of the landscape within the Unwooded Vales Character Area 4a.	
Magnitude	Construction: Low Operation (Year 1): Low Operation (Year 1) with only Embedded Mitigation: Low Operation (Year 15) Very Low Decommissioning: Very Low	Construction: Low Operation (Year 1): Low Operation (Year 1) with only Embedded Mitigation: Low Operation (Year 15): Very Low Decommissioning: Very Low
Type of Effect	Construction: Adverse & Short Term Operation (Year 1): Adverse & Long Term Operation (Year 1) with only Embedded Mitigation: Adverse & Long Term Operation (Year 15): Beneficial & Long Term Decommissioning: Neutral & Short Term	Construction: Adverse & Short Term Operation (Year 1): Adverse & Long Term Operation (Year 1) with only Embedded Mitigation: Adverse & Long Term Operation (Year 15): Beneficial & Long Term Decommissioning: Neutral & Short Term
Significance of Effect	Construction: Minor Not Significant Operation (Year 1): Minor Not Significant Operation (Year 1) with only Embedded Mitigation: Minor Not Significant Operation (Year 15): Negligible Not Significant Decommissioning: Negligible Not Significant	Construction: Minor Not Significant Operation (Year 1): Minor Not Significant Operation (Year 1) with only Embedded Mitigation: Minor Not Significa Operation (Year 15): Negligible Not Significant Decommissioning: Negligible Not Significant
* Potontial ovists t	o use targeted low-density sheep grazing in appropriate areas of wildflower meadow under papelled areas f	

* Potential exists to use targeted, low-density sheep grazing in appropriate areas of wildflower meadow under panelled areas for short periods once a suitable sward has established. This may allow for diversification of grazing management. Grazing of tussock seeded areas may be appropriate to reduce the sward every three years. Careful monitoring is however required to prevent overgrazing with conservation grazing densities

Environmental Statement Landscape and Visual Impact Assessment Appendix 8.2.2.2: Regional Overview Tables – Not Significant [Reference: EN010133/APP/C6.3.8.2.2.2.3] January 2023

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Landscape Receptor – Regional Scale Landscape Character – 4b: Wooded Vales (Cottam 3a Site)

Receptor Baseline:

Within the Cottam 3a Site, at a regional scale, landscape character is assessed within the East Midlands Regional Landscape Character Assessment as forming part of RLCT Profile: 4b Wooded Vales, which is shown on Figure 8.5 [C6.4.8.5]. Wooded Vales extends into the western section of the 2km Study Area and shares a boundary with the 'Built Up Area' that extend eastwards from Gainsborough towards Blyton following the main transport route of the A159 (Thonock Road). The Wooded Vales also extends into the 5km Study Area and shares a boundary with RLCT Profile 2b: Planned and Drained Fens and Carrlands. The settlements of Blyton, Laughton, Scotton and Scotter are located close to the 5km Study Area boundary with RLCT Profile 4b: Wooded Vales.

Key Features:

This is the land area that sits to the north of the mainline railway and to the west of the Kirton Road B1205. This landscape character type is located to the west of the settlement of Blyton and that extends north towards Laughton Woods. The woodlands form part of the Laughton Area of Greater Landscape Value (AGLV) and occupy the western and northern extent of landscape character type. The woodlands to the east are bisected by the A159 that links Scotter with Blyton and to the west, Laughton Woods is bordered by the secondary road that heads north from Morton. To the center of Laughton Woods is Scotton Common with Hardwick Hill located to the west of the common and rising to 30m AOD. Laughton Woods also includes several waterbodies including Green Howes and Jerry's Bog. There are also several Sites of Special Scientific Interest (SSSI) associated with these waterbodies. The Cottam 3a Site extends across two different landscape character types within the 2km Study Area. The majority of the land sits within Unwooded Vales whilst the western part of the Site/Sites that sits close to Blyton is within areas defined as 'Built Up Area'. Wooded Vales sit to the west and northwest of both the Cottam 3a Site and extends into the 5km Study Area. The landscape character type consists of gently undulating landform formed over soft mudstone and clay geology, sharing many characteristics with the wider Unwooded Vales landscape character type. There are deposits of superficial geology, particularly cover sands and till influences local land use and semi-natural habitat cover. Low hills and ridges gain visual prominence as elevated landform to give a broad sense of containment, and these include areas of higher ground at Hardwick Hill and the landscape to the SW of Scotter. There are numerous watercourses that flow within shallow undulations often flanked by pasture and riparian habitat, but many of them are formalized land drains with a geometric pattern. There is a higher concentration of land drains to the southern part of the area between Blyton and East Stockwith. There is a relatively high woodland cover within this landscape character type with notable tracts of ancient semi-natural woodland along the outer fringes of parishes and large coniferous plantations. There are notable areas of woodland at Owlet Plantation, to the west of East Stockwith, within Laughton Common and Scotton Common. This landscape character type is sparsely settled with dispersed farms linked by quiet rural lanes and tracks often flanked by tall hedgerows and tree belts. Most of the tracks have a strong east to west alignment and possibly former drove roads leading to the river Trent.

Character Context:

The Cottam 3a Site is mainly located within RLCT 4a: Unwooded Vales landscape character type, where the land area is found to the north of Kirton Road (and mainline railway) and to the north of the settlement of Pilham and northeast of Blyton where it forms the boundary with the adjoining RLCT 4b: Wooded Vales. To the east of the Cottam 3a Site, the village of Northorpe adds to the settlement pattern and forms part of a wider collection of scattered farmsteads across this landscape character type. The ridgeline (further east) then gives strong containment where the settlements of Kirton in Lindsey, Grayingham, Blyborough and Willhoughton mark the boundary with the B1398.

RLCT 4b: Wooded Vales landscape character type is found immediately to the west of the Cottam 3a Site within the 2km Study Area and 5km Study Area.

RLCT 4b is considered to form part of the immediate landscape context for the Cottam 3a Site

Environmental Statement Landscape and Visual Impact Assessment Appendix 8.2.2.2.4: Regional Overview Tables - Not Significant [Reference: EN010133/APP/C6.3.8.2.2.2.4] January 2023



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Receptor susceptibility to change	Value of Receptor	Sensitivity	Embedded Mitigation
In terms of forces for change, the Wooded Vales aims to promote new woodland planting as this is a significant component of the landscape. The aim should be to also protect the distinctive character of the settlements and consider the visual impact of any new development. The restoration of hedgerows should also be given priority to strengthen the field pattern and enhance linkages between woodlands. The impact on the setting of village churches is also particularly important as these are distinctive local landmarks. There are regular patterns of enclosure and modern arable fields where hedgerows have been removed, but due to the abundance of large woodland blocks this helps reinforce a sense of enclosure. Overall, the susceptibility of the Wooded Vales is conditioned by several key forces for change that have the potential to shape the future of the landscape. These include the agricultural intensification and farm amalgamation that is resulting in the loss or damage of many typical landscape features, including traditional patterns of field boundaries, remnants of ridge and furrow, and grasslands. The loss of grazing fields around the edges of villages that is leading to a more homogenous landscape. The landscape receptor is moderately susceptible to the proposed development, and a moderate ability to accommodate the specific proposed change, because the relevant characteristics of the landscape have some ability to accommodate it without undue adverse effects, taking account of the existing character and quality of the landscape, and/or achievement of relevant planning policies and strategies.	 <u>Scenic</u>: The Wooded Vales appeal to the visual senses with extensive access to a variety of footpaths often framed by these large areas of woodland. There are areas where rising landform such as Hardwick Hill, but the dense woodland does not allow opportunity for views. <u>Cultural</u>: The landscape shows evidence of small villages, hamlets, and farms but they are scarcely distributed within the landscape. This includes settlement of Laughton with the Grade II Listed Laughton Hall Farmhouse and Grade I Listed Church of All Saints, both which fall within the Area of Greater Landscape Value (AGLV). <u>Natural</u>: There are large areas of ancient and species-rich native woodland juxtaposed with regular blocks of coniferous plantations that can be accessed by the woodland trail through Laughton Woods and Laughton Forest leading to the village of Scotton. Sizable areas of water bodies are also notable with wet woodland sites characterised by native broadleaved species and affording SSSI status. <u>Recreation and Enjayment</u>: The Wooded Vales are valued for recreation which are focused on the woodland trail network that crosses Laughton Woods, Laughton Forest, Scotton Common Nature Reserve and Green Howe Pond. <u>Local Distinctiveness and Sense of Place</u>: The landscape has a 'strong sense of place' endorsed by the strong woodland character, with some areas retaining a sense of tranquility and remoteness, notably within the central wooded parts. <u>Health and Wellbeing</u>: The Wooded Vales provide a very limited network of PRoW within the wider landscape, but this is more than compensated for within Laughton Woods, which is the main focus for recreation for people as far as Scunthorpe and Gainsborough. <u>Important Spatial Function</u>; The landscape benefits from the woodland areas that occupy the northern part of the area, but also extend south towards Gainsborough and East Stockwith and include Owlet Plantation. Overall, the value	Character: Areas have a positive character, but the loss of grazing fields around the edges of villages is leading to a more homogenous landscape. <u>Quality:</u> Mature vegetation is characteristic that occupies the northern part of the area with some areas retaining a sense of tranquility and remoteness. <u>Value:</u> The Wooded Vales are valued for recreation which are focused on the woodland trail network that crosses Laughton Woods, Laughton Forest, Scotton Common Nature Reserve and Green Howe Pond. <u>Capacity:</u> There would be a lower landscape tolerance and scope for landscape change due to the presence of extensive woodland that has seen relatively settlement intervention.	Embedded Mitigation would be taken into account at the construction, operation (Year 1 and Year 15) and decommissioning stages of the Scheme. This Embedded Mitigation is also referred to as primary mitigation and would include the following measures: Panels to be set a minimum of 3m from Site boundaries. Site boundary fencing to be set back 5m from adjacent existing hedgerows to allow for proposed thickening and growth. Existing hedges are to be allowed to grow out and will be managed to a height of 5m. Hedgerow trees will be encouraged to grow out to add further thickening and growth to the field boundaries with the addition of new hedgerow trees as appropriate, randomly spaced along the length of existing hedges. Lighting will be limited to downlights within substations and battery banks only and used when maintenance or security is required. Lighting will be PIR operated and will be calibrated to vehicle and personnel movements. All visible lighting would be 50W, installed at a maximum height of 4m with cowls fitted to prevent light spillage. Lighting required within panelled areas will be manually operated. There will be no lighting on perimeter fencing. The landscape effects set out for the operation stage (Year 1) and this includes secondary mitigation which will have been carried out but will have had limited physical or landscape character impact at this Embedded Mitigation stage.
Medium	Medium to High	Medium to High	Not Applicable



Construction	Operation (Year 1)	Operation (Year 15)	
Activities during site preparation / enabling works,	A very small section of the Cottam 3a Site lies within	The effects at the Operational Phase at Year 15	
	the Wooded Vales, being field K1. It relates more	without Mitigation equate to those effects at the	
	closely to the Unwooded Vales although the Wooded	beginning of Year 1 before any secondary mitigation	
	Vales to the west of the Site generally have some	has been applied. Mitigation embedded in the design	
•	influence on this area as a whole.	will apply as will the growing out of the existing	
machinery on site. At the early stages of the		hedges.	
construction stage, ground, and lower-level activities	Within the Cottam 3a Site, the following secondary		
	mitigation will be implemented at the operation stage	With secondary mitigation such as planting and grass	
	(Year 1) to enhance the regional landscape character:	seeding being taken into account at the operational	
predominantly be screened by existing vegetation.	The enhancement objectives for the two-character	stage (Year 15) the following changes to the landscape would occur and the effects are set out below.	
	areas include additional tree cover generally and some		
	increase in grassland. The wooded vales allow for	Views to the north, south, east and west of the Site will	
	more woodland planting in the area.	be screened in the close-mid range through the new	
would not affect the integrity of the character area and	1 0	hedgerow and shelterbelt planting and the	
would be short term.	Within the Cottam 3a Site, the following secondary	enhancement of existing hedges which will be	
	mitigation will enhance the regional landscape	managed to a height of 5m. These new and	
Other works would be undertaken in connection with	character.	augmented hedgerows will provide a series of good	
the construction including fencing, gates, boundary		quality hedgerows both formally strengthening the	
	A new hedgerow with hedgerow trees, enhanced	existing and historical field pattern and creating a	
	existing hedgerows and a belt of scattered trees are	multi-layered landscape. Scattered tree belts will	
such as CCTV and the laying down of internal tracks.	proposed around field K1. This field is close to the	follow the routes of existing watercourses,	
There would also be landscape and biodiversity	settlement edge and the additional tree planting will	strengthening their visibility in the wider landscape.	
•	help to increase the overall tree over around this area	Views of the longer distance, where hedgerows do not	
	creating a more 'well-treed' perception. The varied	block these, will be of a layered, well treed landscape	
	grass mixes and potential for short term, rotational	with a backdrop of some wooded vegetation in places	
vegetation locally, creating many associated beneficial effects.	sheep grazing within this small field will partially	on the horizon. Both new and existing vegetation will	
enects.	restore the historic pattern close to settlements.	have established and begun to mature, creating a much stronger structure to the landscape, and	
These short-lived construction activities would not	Further within the Site a series of new hedges around	retaining and enhancing the overall character of the	
	the existing airfield structures will further enhance the	area.	
	overall character and reduce the scale and bleakness		
0	of this particular area whilst retaining the overall open	The proposed grassland will have established and will	
	character.	have settled into its natural scheme with some minor	
help to capture carbon. The field boundaries and the		appropriate management of differing regimes. The soil	
associated tree cover would remain intact and help	Enhanced hedgerows, particularly along the Kirton	quality will be considerably improved through the lack	
with visual layering across the landscape and the	Road will also help to break up the landscape to some	of cultivation and the chemical run-off will be reduced	
integration of the new panels. There would be very	degree and the increase in vegetated cover will	around the Site(s) enhancing the water quality	
	enhance visitor experience along this route.	generally. There will be considerable biodiversity gains	
		through the establishment of the varied grassland	
Overall, the Wooded Vales Character Area is able to	A strong belt of successional scrub to the west of the	types and regimes and a long-term increase in	
accommodate the changes that arise through the	Site adjacent to Blyton as well as new hedgerows	pollinator species and bird and other species and	
construction of the Site without undue adverse effects.	around existing airfield features will help to integrate	numbers locally.	
The integrity of all features will be retained and	the development into the landscape whilst		
enhancement at ground level through initial grassland	strengthening the character close to this settlement.	A very small section of the Cottam 3a Site lies within	
planting will have beneficial effects from the outset.		the Wooded Vales, being field K1. It relates more	
	To the east of the Site, another belt of successional	closely to the Unwooded Vales although the Wooded	
	scrub will help to enhance the visibility of this small	Vales to the west of the Site generally have some	
	watercourse within the landscape, following its	influence on this area as a whole.	
	winding route.	Growth of existing and proposed vegetation is assumed to be:	
	Although new vegetation will be immature, existing	Woodland/trees and shelterbelts: 2.5m max at Year 1,	
	hedgerows will have begun to grow out at Year 1 and	7.5m max at Year 15.	

mmissioning

lar process to that of construction stage, but he Scheme being no longer operational. This is sessment of the Site in winter but assumes ion of existing vegetation and builds upon the sed primary and secondary mitigation that had established as the future baseline. Effects are arising from activities for the duration of the nmissioning to include site traffic, noise and ion from decommissioning activities, dust ation and site runoff.

ving decommissioning, the land is likely to be ned to arable production. The Site will however it from the significantly enhanced tree and row planting that has been carried out and has ed to create a much stronger and robust cape, retaining, and enhancing the overall cter and providing considerable biodiversity its over the years. Bird mitigation fields and nd grazing marshes are likely to be retained and otential may exist to retain grass margins to ain some varied land use and a high level of ersity in the local area.

out Secondary Mitigation having been applied ghout the scheme, the only change to the landscape following decommissioning would be isting hedgerows which will have been allowed w out and will have been managed to a height of is assumed that these will be retained.

Mitigation, the negative effects of the physical nmissioning will be balanced out by the long andscape and visual effects of this mitigation.



SOLAR PROJECT		[Reference
	the varied grassland areas will have become established, starting to create valuable habitats. Overall, this will help to link habitats and strengthen the overall character locally and maintain a sense of place. Important opportunities to bolster the local vegetation cover, buffering and connecting existing fragmented vegetation, aims to create a more resilient and biodiverse landscape. Between Years 1 and 15, the following beneficial effects will be achieved in terms of the LCA - Grassland reversion - A more varied landscape across the LCA - Improved management of existing vegetation - Less intensively managed land - Soil improvements - Water quality improvements - Increased visibility/definition of watercourses across the landscape. - Increased visibility/definition of watercourses across the landscape. - Increased visibility/definition of vatercourses across the landscape. - Increased visibility/definition of vatercourses across the landscape. - Increased visibility/definition of vatercourses across the landscape. - Increased riparian species vegetation - Significantly improved biodiversity - Improved carbon retention/capture - Overwintering opportunities within wetland and elsewhere with Bird mitigation - Potential animal grazing - Reinstatement of historic field patterns - Strengthened Character Area generally - Improved shelter/protection across the landscape Adverse effects (mitigated): - Panels and structures across landscape - Increased hard standing areas - water runoff management required - Potential minor pollution around substations - Visual intrusion in early years - Increased traffic in the local area The effects at the Operational Phase at Year 15 without Embedded Mitigation equate to those effects at the beginning of Year 1 before secondary mitigation has been applied. The Effects set out below include secondary mitigation which will have been carried out but will have had limited physical impact at this stage.	New hedgerows: 0.6m at Year 1 and 3.5m at Year 15. Existing hedgerows: 0.9m at Year 1 and 5m at Year 15. Shrubs: 0.9m at Year 1 and 5m at Year 15. Following mitigation, at Year 15, The existing woodland and hedgerows locally will be augmented by increased vegetation cover creating both visual and ecological links across the landscape to the adjoining woodland blocks. Grassland mixes will have established and will create valuable habitats with soil structure greatly improved through cessation of arable cultivation. By Year 15, the Site at Cottam 3a will present a 'well treed' landscape in line with the character area aims, the existing vegetation having been allowed to grow out and new trees, hedgerows and scrub having fully established and begun to mature. The overall scene will be relatively well vegetated, with scattered and irregularly spaced trees, following the existing lines of both historic field boundaries and the road network as well as local watercourses. This, together with the proposed mix of varied grasslands across the Site will help to somewhat reverse the over intensification of recent arable farming methods to create a much richer tapestry of habitats and features within the landscape. This varied development, set against the existing arable landscape will retain the overall perception of an open and expansive landscape but will appear as a more layered and cohesive scene across the Unwooded Vales and will help to integrate these with the Wooded Vales to the west. Following mitigation, the Site(s) are able accommodate change without undue adverse effects and there will be considerable beneficial effects in the increased level of vegetation cover locally, the linking and enhancement of existing natural features and the biodiversity benefits that this will bring, creating a stronger, more resilient framework across the local character area. The enhancement objectives for the two-character
		The enhancement objectives for the two-character areas include additional tree cover generally and some increase in grassland. The Wooded Vales allow for more woodland planting in the area. Within the Cottam 3a Site, the following mitigation will enhance the regional landscape character.



Magnitude	Very Low	Low	Low	\
5km Study A				_
		Low	creating a more 'well-treed' perception. The varied grass mixes and potential for short term, rotational sheep grazing within this small field will partially restore the historic pattern close to settlements. Further within the Site a series of new hedges around the existing airfield structures will further enhance the overall character and reduce the scale and bleakness of this particular area whilst retaining the overall open character. Enhanced hedgerows, particularly along the Kirton Road will also help to break up the landscape to some degree and the increase in vegetated cover will enhance visitor experience along this route. A strong belt of successional scrub to the west of the Site adjacent to Blyton as well as new hedgerows around existing airfield features will help to integrate the development into the landscape whilst strengthening the character close to this settlement. To the east of the Site, another belt of successional scrub will help to enhance the visibility of this small watercourse within the landscape, following its winding route. By Year 15, the Site at Cottam 3a will present a 'well treed' landscape in line with the character area aims, the existing vegetation having been allowed to grow out and new trees, hedgerows and scrub having fully established and begun to mature. The overall scene will be relatively well vegetated, with scattered and irregularly spaced trees, following the existing lines of both historic field boundaries and the road network. This, together with the proposed mix of varied grasslands across the Site will help to somewhat reverse the over intensification of recent arable farming methods to create a much richer tapestry of habitats and features within the landscape. This varied development, set against the existing arable landscape will retain the overall perception of an open and expansive landscape but will appear as a more layered and cohesive scene across the Unwooded Vales.	
			existing hedgerows and a belt of scattered trees are proposed around field K1. This field is close to the settlement edge and the additional tree planting will help to increase the overall tree over around this area	

Very Low



Level of Effect	Neutral & Short Term	Beneficial & Long Term		Beneficial & Long Term	Neutral
Significance of Effect	Negligible Not Significant	Minor Not Significant		Minor Not Significant	Negligit
andscape R	eceptor – Regional Scale Landscape	e Character – 4b: Wooded Vales (Cottam	Ba Site)		
	In-Combination Effects [Cumulati	ve Sites]	Cu	imulative Effects [Cumulative Deve	elopments]
	2 and 3b) is Negligible at year 1 of operation limited impact upon the LCA as a result of the together with the existing landscape charac	f the Cottam 3a Site with the other Cumulative Sites and Negligible at year 15 with mitigation. This is du he nature of the Scheme, the segregated nature of th ter associated with the fabric of the landscape of the gation proposed would screen the panels and therefore ed.	(Cottam 1, Th e to the op ne Sites; na Sites and Sit ore the up	<u>Summary</u> e Cumulative Effects upon LCA – 4b of the Sch eration and Negligible at year 15 with mitigati ture of the Scheme, together with the existing es and Study Area. Embedded and Secondary on landscape character are reduced.	ion. This is due to the lim glandscape character ass
	<i>Fabric of the Landscape</i> There would not be the removal of or chang the character area.	ges in individual elements or features of the landscap	e within are	Fabric of the LandscapeThere would not be the removal of or changes in individnarea.	
	There would be the introduction of new elements of the substation area.	ments and features comprising the solar panel areas		ere would be the introduction of new element ea.	ts and features comprisir
	the Cottam 1 Site/Sites, Cottam 2 Site and C the 2km study area. This is due to the distar	ch shows that with the Cottam 3a Site, cumulative vis fottam 3b Site would not be experienced across the r nce, the intervening woodlands, hedgerows, and tree lements and built form would also curtail cumulative	ibility with cum najority of dis cover bu visibility Th	thetic Aspects of the Landscape fer to Figure 8.15.1.3 [C6.4.8.15.1.3] which sh mulative developments would not be experien tance, the intervening woodlands, hedgerows ilt form would also curtail cumulative visibility ere are local patches of cumulative visibility e and Tillbridge Solar. This cumulative visibility	nced across the majority s, and tree cover betweer v between these Site/Sites which may be focus of like
	 Northeast boundary of the Cottam and Park House Farm, and reaching East boundary of Cottam 3a Site, and 	ween the Cottam 3a and 3b Sites, extending from the 3a Site, defined to the west by the Green Respect Bu g as far as Northorpe in the east nd stopping short of Cold Harbour Farm; and Site, extending for a short distance as far as Grange F	: rial Park Fig arm and Ov set	e and Tillbridge Solar. This cumulative visibility gure 8.15.2.8 Cottam 1, 2, 3a and 3b Tillbridge erall Landscape Character of the Wooded Vales erall, the character of the Wooded Vales is sho tlement intervention. The landscape possesse st. The landscape benefits from the woodlan	e Solar Cumulative Develo aped by the presence of es a former framework o
	Determination and the structure of the life of the structure states of			unanda Catinada a variada a val Enat Charloutitla a val t	

Potential cumulative visibility between the Cottam 3a and 3b Sites would not be experienced however, due to the intervening vegetation bordering the mainline railway and the isolated settlement comprising Grange Farm and Top Farm. The flat landform and intervening woodland blocks, hedgerows and tree cover would also close down any inter-visibility across the landscape between these cumulative sites.

There are local patches of intervisibility between the Cottam 3a, 3b Sites and the Cottam 2 Site, extending from the:

- South boundary of the Cottam 3b Site, bordered by Pilham to the west and the medieval settlement of Dunstall to the east, and reaching as far as Springthorpe in the south
- South boundary of the Cottam 3a Site, bordered by the eastern edge of Blyton to the west, reaching Grange Farm and stopping short of the mainline railway; and
- North boundary of the Cottam 3a Site, following the alignment of the A159 (Laughton Road) and • stopping short to the west of the Green Respect Burial Park.

Potential cumulative visibility between the Cottam 3a and, 3b Sites and the Cottam 2 Site would not be experienced however, due to the intervening settlements of Corringham, Yawthorpe, Aisby, Dunstall and

of Laughton Woods that has seen relatively little of drainage dykes that feed the river Trent to the northern part of the area, but also extend south towards Gainsborough and East Stockwith and include Owlet Plantation. These relevant characteristics of the landscape have some ability to accommodate change without undue adverse effects. The cumulative visibility for the Cottam 3b Site would not alter the overall character of the landscape within the Wooded Vales Character Area 4a.

Environmental Statement Landscape and Visual Impact Assessment Appendix 8.2.2.2.4: Regional Overview Tables - Not Significant [Reference: EN010133/APP/C6.3.8.2.2.2.4] January 2023

al & Short Term

gible Not Significant

mulative Developments is Negligible at year 1 of mited impact upon the LCA as a result of the associated with the fabric of the landscape of the vould screen the panels and therefore the effects

features of the landscape within the character

sing the solar panel areas and the substation

am 3a and 3b Sites, cumulative visibility with the ty of the 5km study area. This is due to the en the Site/Sites. The intervening settlements and tes.

ely significant effects, between the Cottam 3a etail within the following figures:

elopments Augmented ZTV [C6.4.8.15.2.8]



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	Pilham. The flat landform and intervening vegetation cover would also close down any inter-visibility	
	across the landscape between these cumulative sites.	
	There is a local patch of intervisibility between All Sites, located to the:	
	East of the Cottam 3b Site and north of the Bonsdale Farm at Pilham, extending across the	
	landscape to the north of the medieval village of Dunstall as far as the medieval village of	
	Southorpe.	
	Potential cumulative visibility between All Sites would not be experienced however, due to the intervening	
	settlements of Corringham, Yawthorpe, Aisby, Dunstall and Pilham. The flat landform and intervening	
	vegetation cover would also close down and inter-visibility across the landscape between these	
	cumulative sites.	
	Users of linear routes, especially footpaths or other rights of way, or transport routes, may potentially	
	experience the aesthetic aspects of the cumulative sites revealed in succession as a series of sequential	
	views. For further details refer to the following detailed visual receptor sheets:	
	Appendix 8.3.2.2 Individual Viewpoint Receptor Sheets [C6.3.8.3.2.2]	
	Appendix 8.3.2.3 Individual Viewpoint Receptor Sheets [C6.3.8.3.2.3]	
	Appendix 8.3.2.4 Individual Viewpoint Receptor Sheets [C6.3.8.3.2.4]	
	Appendix 8.3.3.2 Individual Residential Receptor Sheets [C6.3.8.3.3.2]	
	Appendix 8.3.3.3 Individual Residential Receptor Sheets [C6.3.8.3.3.3]	
	Appendix 8.3.4.2 Individual Transport Receptor Sheets [C6.3.8.3.4.2]	
	Appendix 8.3.4.3 Individual Transport Receptor Sheets [C6.3.8.3.4.3]	
	Appendix 8.3.5.2 Individual PRoW Receptor Sheets [C6.3.8.3.5.2]	
	Appendix 8.3.5.3 Individual PRoW Receptor Sheets [C6.3.8.3.4.3]	
	Overall Landscape Character of the Wooded Vales	
	Overall, the character of the Wooded Vales is shaped by the presence of Laughton Woods that has seen	
	relatively little settlement intervention. The landscape possesses a former framework of drainage dykes	
	that feed the river Trent to the west. The landscape benefits from the woodland areas that occupy the	
	northern part of the area, but also extend south towards Gainsborough and East Stockwith and include	
	Owlet Plantation. These relevant characteristics of the landscape have some ability to accommodate change without undue adverse effects. The cumulative visibility for the Cottam 3b Site would not alter the	
	overall character of the landscape within the Unwooded Vales Character Area 4a.	
	Construction: Very Low	Construction: Very Low
	Operation (Year 1): Very Low	Operation (Year 1): Very Low
Magnitude	Operation (Year 1): with only Embedded Mitigation Very Low	Operation (Year 1): with only Embedded Mitigation: Very Low
-	Operation (Year 15): Very Low	Operation (Year 15): Very Low
	Decommissioning: Very Low	Decommissioning: Very Low
	Construction: Adverse & Short Term	Construction: Adverse & Short Term
Type of	Operation (Year 1): Adverse & Long Term	Operation (Year 1): Adverse & Long Term
Effect	Operation (Year 1) with only Embedded Mitigation: Adverse & Long Term Operation (Year 15): Beneficial & Long Term	Operation (Year 1) with only Embedded Mitigation: Adverse & Long Ter Operation (Year 15): Beneficial & Long Term
	Decommissioning: Neutral & Short Term	Decommissioning: Neutral & Short Term
	Construction: Negligible Not Significant	Construction: Negligible Not Significant
Cignificance	Operation (Year 1): Negligible Not Significant	Operation (Year 1): Negligible Not Significant
Significance	Operation (Year 1) with only Embedded Mitigation: Negligible Not Significant	Operation (Year 1) with only Embedded Mitigation: Negligible Not Sigr
of Effect	Operation (Year 15): Negligible Not Significant	Operation (Year 15): Negligible Not Significant
	Decommissioning: Negligible Not Significant	Decommissioning: Negligible Not Significant

erm

ignificant



Landscape Receptor – Regional Scale Landscape Character – 4a: Unwooded Vales (Cottam 3b Site)

Receptor Baseline:

Within the Cottam 3b Site, at a regional scale, landscape character is assessed within the East Midlands Regional Landscape Character Assessment as forming part of RLCT Profile: 4a Unwooded Vales, which is shown on Figure 8.5 [C6.4.8.5]. Unwooded Vales extends into the eastern section of the 2km Study Area and shares a boundary with the 'Built Up Area' that extend eastwards from Gainsborough towards Blyton following the main transport route of the A159 (Thonock Road). The Unwooded Vales also extends into the 5km Study Area and shares a boundary with RLCT Profile 6a: Limestone Scarps and Dipslopes. The settlements of Grayingham, Blyborough, Willhoughton and Hemswell are located close to the 5km Study Area boundary with RLCT Profile 4a: Unwooded Vales and RLCT 6a: Limestone Scarps and Dipslopes.

Key Features:

This is the land area that sits to the south of the mainline railway and to the east of Pilham Lane. To the northeast of the 2km Study Area the settlement of Northorpe occupies an area of locally higher ground at 20m AOD. The Cottam 3b Site therefore spans two different landscape character types with the majority located within Unwooded Vales whilst the western most corner of the Site/Sites (close to Blyton) is within the 'Built Up Area' which is associated with the main highway corridor of the A159 (Thonock Road). Unwooded Vales comprises an extensive, low lying rural landscape underlain by Triassic and Jurassic mudstones and clays and widespread superficial deposits. This landscape character type offers expansive long distance and panoramic views from higher ground at the margin of the Unwooded Vales which gives a sense of visual containment. The land within this landscape character type has complex drainage patterns of watercourses that flow within shallow undulations often flanked by pasture and riparian habitats. Limited woodland cover is a key characteristic of the Unwooded Vales, and this therefore relies on shelterbelts and hedgerow trees to gain a greater visual significance and habitat value. The landscape within this landscape character type is sparsely settled with small villages and dispersed farms linked by quiet rural lanes.

Character Context:

The Cottam 3b Site is mainly located within RLCT 4a: Unwooded Vales landscape character type, where the land area is found to the south of Kirton Road B1205 (and mainline railway) and to the northeast of the settlement of Pilham and east of the settlement of Blyton where it forms the boundary with the adjoining RLCT 4b: Wooded Vales. To the east of the Cottam 3b Site, the settlement comprises a wider collection of scattered farmsteads. The ridgeline (further to the east) then gives strong containment where the settlements of Grayingham, Blyborough and Willhoughton mark the boundary with the B1398.

RLCT 4a: Unwooded Vales landscape character type is host to the Cottam 3b Site within the 2km study area and the 5km study area.

RLCT 4a is considered to form part of the immediate landscape context for the Cottam 3b Site.

Environmental Statement Landscape and Visual Impact Assessment Appendix 8.2.2.2: Regional Overview Tables - Not Significant [Reference: EN010133/APP/C6.3.8.2.2.2.5] January 2023



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Receptor susceptibility to change	Value of Receptor	Sensitivity	Embedded Mitigation
In terms of forces for change, the Unwooded	<u>Scenic:</u> The Unwooded Vales appeal to the visual senses where the roads and watercourses	<u>Character:</u> The roads and	Embedded Mitigation would be taken into
Vales aims to protect existing rural landscape	combine to give a subtle grain to the landscape. The interruptions at the bridge crossings, such	watercourses combine to give a	account at the construction, operation
features, in particular the restoration of	as Blyton Beck, provide local points of interest and the opportunity to capture views across the	subtle grain to the landscape.	(Year 1 and Year 15) and decommissioning
hedgerows since the most widespread change	landscape to the higher landform fringing the Unwooded Vales at Kirton in Lindsey.	The interruptions at the bridge	stages of the Scheme. This Embedded
has been in agricultural intensification and		crossings, such as Blyton Beck,	Mitigation is also referred to as primary
the change from pastoral to arable cropping	<u><i>Cultural:</i></u> The landscape shows evidence of historic settlement with farms and nucleated villages	provide local points of interest	mitigation and would include the following
that has resulted in the loss of hedges, and	and small hamlets such as the Medieval village of Southorpe. The landscape surrounding these	and the opportunity to capture	measures
consequently, an increase in filed size. The	settlements retain some rural and tranquil character with farms, but minor lanes and roads are	views across the landscape.	
loss of pasture is particularly evident around	interrupted by the presence the former airfield in parts. There are Roman roads that pass across		Panels to be set a minimum of 3m from
settlements, where grazing animals and	the wider area such as Ermine Street indicating that these low-lying areas provided convenient	<u><i>Quality:</i></u> The landscape shows	Site boundaries.
smaller field sizes contribute to the setting	routes through the hills and wetlands.	evidence of historic settlement	
and structure of several villages. Many of the		with farms and nucleated	Site boundary fencing to be set back 5m
rural villages have not seen widespread	<u>Natural:</u> There are extensive expanses of semi-natural habitat and rivers, and streams are an	villages and small hamlets such	from adjacent existing hedgerows to allow
expansion but development pressures	important landscape feature such Blyton Beck and its associated tributaries. Overall, in such a	as the Medieval village of	for proposed thickening and growth.
continue with the demand for housing,	managed airfield biased and large-scale agricultural environment, networks of hedgerows and	Southorpe. The landscape	
commerce and industry is creating visual	hedgerow trees gain significance in offering a refuge for birds and insects.	surrounding these settlements	Existing hedges are to be allowed to grow out
intrusion and extending the urban fringe.		retain some rural and tranquil	and will be managed to a height of 5m.
	<u>Recreation and Enjoyment:</u> The Unwooded Vales are valued for recreation which often focuses on	character with farms, but minor	Hedgerow trees will be encouraged to grow out
Overall , the susceptibility of the Unwooded	the locations where panoramic views are possible from elevated locations from rising land at the	lanes and roads are interrupted	to add further thickening and growth to the field boundaries with the addition of new hedgerow
Vales is conditioned by managing growth,	edges of the Vales. Whilst the landform of the Unwooded Vales is typically low and subdued,	by the presence the former	trees as appropriate, randomly spaced along
ensuring development is appropriate in terms	rising landform often provides locations where glimpse of neighboring elevations are often	airfield in parts.	the length of existing hedges.
of type, scale, and location. The flat, open	sufficient to provide a 'sense of place' and add to the recreation and enjoyment of the area.		
landscape is also a key consideration and	Typically, these locations occur around Blyton to the west and Willoughton to the southeast.	<u>Value:</u> Areas have a positive	Lighting will be limited to downlights within
whilst the aim is to plan new tree planting	Legal Distinctiveness and Cance of Diago. The landscape has a latrong same of placed with major	landscape character but include	substations and battery banks only and used
around key settlements, woodland does not	Local Distinctiveness and Sense of Place: The landscape has a 'strong sense of place' with major	some areas of degradation	when maintenance or security is required.
form a significant component of this	landform features flanking the lower lying areas creating broad scale visual containment along	where agricultural	Lighting will be PIR operated and will be
landscape, and in considering its open and	the ridgeline to the east at Willhoughton, Blyborough and Grayingham. Wide panoramic views	intensification has eroded	calibrated to vehicle and personnel movements.
expansive character, extensive new woodland	are also possible from the low hills and ridges that form watersheds between watercourses. This	landscape character, particularly	All visible lighting would be 50W, installed at a maximum height of 4m with cowls fitted to
planting would be generally inappropriate.	contrasts with the lower lying areas where intact hedgerows and belts of riverside trees truncate	around the edges of	prevent light spillage. Lighting required within
	views.	settlements.	panelled areas will be manually operated. There
The landscape receptor is moderately	Health and Wellbeing: The Unwooded Vales provide a very limited network of PRoW leading to the		will be no lighting on perimeter fencing.
susceptible to the proposed development,	dependence on the more routes that crisscross the area in all directions, linked by a series of	<u><i>Capacity:</i></u> The landscape benefits	
and a moderate ability to accommodate the	narrow tracks that lead to isolated farmsteads, and which often create 'no-through roads' in the	from high levels of visual	The landscape effects with only the
specific proposed change, because the	landscape.	containment due to the local	Embedded Mitigation taken into account
relevant characteristics of the landscape have	landscape.	landform, hedgerows, and	equate to those effects set out for the
some ability to accommodate it without	Important Spatial Function: The landscape benefits from high levels of visual containment despite	shelter belts and this helps	operation stage (Year 1) and this includes
undue adverse effects, taking account of the	the low levels of woodland cover. Instead, the local landform, hedgerows and shelter belts	tolerance for landscape change.	secondary mitigation which will have been
existing character and quality of the	create visual containment and give the Vales Landscape an intimate character.		carried out but will have had limited
landscape, and/or achievement of relevant			physical or landscape character impact at
planning policies and strategies.	Overall, the value of the Unwooded Vales is shaped by the strong agricultural character and		this Embedded Mitigation stage.
	presence of the mainline railway, with wide areas retaining a strong sense of openness.		
	Woodland cover does also not form a significant component in this relatively expansive		
	landscape. In recent decades, the demand for housing, commerce and industry is creating visual		
	intrusion and extending development pressures into the countryside.		



Construction	Operation (Year 1)	Operation (Year 15)	Decom
Activities during site preparation / enabling works,	Within the Cottam 3b Site, the following secondary	The effects at the Operational Phase at Year 15	A similar
construction, and commissioning with effects such as	mitigation will be implemented at the operation stage	without Mitigation equate to those effects at the	with the
construction traffic, noise and vibration from	(Year 1) to enhance the regional landscape character:	beginning of Year 1 before any secondary mitigation	an asses
construction activities, dust generation, site runoff,		has been applied. Mitigation embedded in the design	retentior
mud on roads, and the visual intrusion of plant and	Considerable strengthening of the existing	will apply as will the growing out of the existing	proposed
machinery on site. At the early stages of the	north/south field boundaries within the Site will	hedges.	been est
construction stage, ground, and lower-level activities	bolster the history field pattern in this area, especially		those ari
such as the construction of the solar panel areas and	where they form intersections with the local road	With secondary mitigation such as planting and grass	decomm
associated infrastructure and inverters would	network and bridge crossings over the watercourses.	seeding being taken into account at the operational	vibration
predominantly be screened by existing vegetation.		stage (Year 15) the following changes to the landscape	generatio
	New and enhanced hedgerows adjacent to the existing	would occur and the effects are set out below.	
During the latter part of the construction stage, views	PRoW will alter the character of this walk from an		Following
would become available of the elevated activities	exposed and open route to a more intimate and	Views to the north, south, east, and west of the Site	returned
above the hedgerows, but these would be limited and	sheltered one.	will be screened in the close-mid range through the	benefit fi
would not affect the integrity of the character area and		new hedgerow and shelterbelt planting and the	hedgerow
would be short term.	Enhanced hedgerow management and planting along	enhancement of existing hedges which will be	matured
	the eastern boundary of the Site from Blyton level	managed to a height of 5m. These new and	landscap
Other works would be undertaken in connection with	crossing down to the South of the Site will augment	augmented hedgerows will provide a series of good	characte
the construction including fencing, gates, boundary	this vegetated roadside planting.	quality hedgerows both formally strengthening the	benefits
treatment and other means of enclosure and works		existing and historical field pattern and creating a	wetland
for the provision of security and monitoring measures	Successional scrub planting along the railway line to	multi-layered landscape. Scattered tree belts will	the pote
such as CCTV and the laying down of internal tracks.	the northern boundary of the Site will reinforce this	follow the routes of existing watercourses,	maintain
There would also be landscape and biodiversity	landscape feature and provide biodiversity benefits.	strengthening their visibility in the wider landscape.	biodivers
mitigation works, including planting and the		Views of the longer distance, where hedgerows do not	
improvement of existing hedgerows to all boundaries	Although new vegetation will be immature, existing	block these, will be of a layered, well treed landscape	Without
of the Site/Sites creating a much greater level of	hedgerows will have begun to grow out at Year 1 and	with a backdrop of some wooded vegetation in places	through
vegetation locally, creating many associated beneficial	the varied grassland areas will have become	on the horizon. Both new and existing vegetation will	views/lar
effects.	established, starting to create valuable habitats.	have established and begun to mature, creating a	the exist
		much stronger structure to the landscape, and	to grow o
These short-lived construction activities would not	Overall, this will help to link habitats and strengthen	retaining and enhancing the overall character of the	5m. It is a
adversely affect the 4a Unwooded Vales Character	the overall character locally and maintain a sense of	area.	
Area as these are short term. There would be a change	place. Important opportunities to bolster the local		With Mit
to the arable land use which will be beneficial to soils	vegetation cover, buffering and connecting existing	The proposed grassland will have established and will	decomm
and watercourses, significantly increase biodiversity	fragmented vegetation, aims to create a more resilient	have settled into its natural scheme with some minor	term lan
and help to capture carbon. The field boundaries and	and biodiverse landscape.	appropriate management of differing regimes. The soil	
the associated tree cover would remain intact and help		quality will be considerably improved through the lack	
with visual layering across the landscape and the	Between Years 1 and 15, the following beneficial	of cultivation and the chemical run-off will be reduced	
integration of the new panels. There would be very	effects will be achieved in terms of the LCA	around the Site(s) enhancing the water quality	
limited, temporary, and short-term adverse changes to	- Grassland reversion	generally. There will be considerable biodiversity gains	
the Character Area.	- A more varied landscape across the LCA	through the establishment of the varied grassland	
	- Improved management of existing vegetation	types and regimes and a long-term increase in	
Overall, the Wooded Vales Character Area is able to	- Less intensively managed land	pollinator species and bird and other species and	
accommodate the changes that arise through the	- Soil improvements	numbers locally.	
construction of the Site without undue adverse effects.	- Water quality improvements		
The integrity of all features will be retained and	- Increased visibility/definition of watercourses	Growth of existing and proposed vegetation is	
enhancement at ground level through initial grassland	across the landscape.	assumed to be:	
planting will have beneficial effects from the outset.	 Increased woodland/vegetation cover 		
	- Increased riparian species vegetation	Woodland/trees and shelterbelts: 2.5m max at Year 1,	
	- Significantly improved biodiversity	7.5m max at Year 15.	
	- Improved carbon retention/capture		
	- Overwintering opportunities within wetland	New hedgerows: 0.6m at Year 1 and 3.5m at Year 15.	
	and elsewhere with Bird mitigation	Evicting hadgerows: 0.0m at Vess 4 and 5 m at Vess 45	
	 Potential animal grazing Reinstatement of historic field patterns 	Existing hedgerows: 0.9m at Year 1 and 5m at Year 15.	
	- Reinstatement of historic field patterns		

mmissioning

lar process to that of construction stage, but he Scheme being no longer operational. This is sessment of the Site in winter but assumes ion of existing vegetation and builds upon the sed primary and secondary mitigation that had established as the future baseline. Effects are arising from activities for the duration of the nmissioning to include site traffic, noise and ion from decommissioning activities, dust ation and site runoff.

ving decommissioning, the land is likely to be ed to arable production. The Site will however from the significantly enhanced tree and row planting that has been carried out and has ed to create a much stronger and robust cape, retaining, and enhancing the overall cter and providing considerable biodiversity its over the years. Bird mitigation fields and nd grazing marshes are likely to be retained and tential may exist to retain grass margins to ain some varied land use and a high level of ersity in the local area.

out Secondary Mitigation having been applied ghout the scheme, the only change to the landscape following decommissioning would be isting hedgerows which will have been allowed w out and will have been managed to a height of is assumed that these will be retained.

Mitigation, the negative effects of the physical nmissioning will be balanced out by the long andscape and visual effects of this mitigation.



LAR PROJECT		
	 Strengthened Character Area generally Improved shelter/protection across the landscape Adverse effects (mitigated): Panels and structures across landscape Increased hard standing areas - water runoff management required Potential minor pollution around substations Visual intrusion in early years Increased traffic in the local area The effects at the Operational Phase at Year 15 without Embedded Mitigation equate to those effects at the beginning of Year 1 before secondary mitigation has been applied. The Effects set out below include secondary mitigation which will have been carried out but will have had limited physical impact at this stage. 	 Shrubs: 0.9m at Year 1 and 5m at Year 15. Following mitigation, at Year 15, The existing woodland and hedgerows locally will be augmented by increased vegetation cover creating both visual and ecological links across the landscape to the adjoining woodland blocks. Grassland mixes will have established and will create valuable habitats with soil structure greatly improved through cessation of arable cultivation. By Year 15, the Site at Cottam 3a will present a 'well treed' landscape in line with the character area aims, the existing vegetation having been allowed to grow out and new trees, hedgerows and scrub having fully established and begun to mature. The overall scene will be relatively well vegetated, with scattered and irregularly spaced trees, following the existing lines of both historic field boundaries and the road network as well as local watercourses. This, together with the proposed mix of varied grasslands across the Site will help to somewhat reverse the over intensification of recent arable farming methods to create a much richer tapestry of habitats and features with the landscape. This varied development, set against the existing arable landscape will retain the overall perception of an open and expansive landscape but will appear as a more layered and cohesive scene across the Unwooded Vales and will help to integrate these with the Wooded Vales Vales to the west. Following mitigation, the Site(s) are able accommodate change without undue adverse effects and there will be considerable beneficial effects in the increased level of vegetation cover locally, the linking and enhancement of existing natural features and the biodiversity benefits that this will bring, creating a stronger, more resilient framework across the local character area. Within the Cottam 3b Site, the following mitigation will enhance the regional landscape character. Considerable beneficial effects of this walk from an exposed and open route to a more



Significance of Effect	Negligible Not Significant	Minor Not Significant	Moderate Significant	Neg
Level of Effect	Neutral & Short Term	Beneficial & Long Term	Beneficial & Long Term	Neu
Magnitude	Very Low	Low	Medium	Ver
5km Study A				·
			 crossing down to the South of the Site will augment this vegetated roadside planting. Successional scrub planting along the railway line to the northern boundary of the Site will reinforce this landscape feature and provide biodiversity benefits. By Year 15, the Site at Cottam 3a will present a 'well treed' landscape in line with the character area aims, the existing vegetation having been allowed to grow out and new trees, hedgerows and scrub having fully established and begun to mature. The overall scene will be relatively well vegetated, with scattered and irregularly spaced trees, following the existing lines of both historic field boundaries and the road network. This, together with the proposed mix of varied grasslands across the Site will help to somewhat reverse the over intensification of recent arable farming methods to create a much richer tapestry of habitats and features within the landscape. This varied development, set against the existing arable landscape will retain the overall perception of an open and expansive landscape but will appear as a more layered and cohesive scene across the Unwooded Vales. 	

ery Low

Neutral & Short Term

Negligible Not Significant



In-Combination Effects [Cumulative Sites]	Cumulative Effects [Cumulative Developments]
<u>In Summary</u> The In-combination effects upon LCA – 4a of the Cottam 3b Site and the other Cumulative Sites (Cot 2 and 3a) is Minor at year 1 of operation and Negligible at year 15 with mitigation. This is due to the limited impact upon the LCA as a result of the nature of the Scheme, the segregated nature of the Si together with the existing landscape character associated with the fabric of the landscape of the Site Study Area. Embedded and Secondary Mitigation proposed would screen the panels and therefore t effects upon landscape character are reduced.	 operation and Negligible at year 15 with mitigation. This is due to the lir nature of the Scheme, together with the existing landscape character as s and Sites and Study Area. Embedded and Secondary Mitigation proposed w
<i>Fabric of the Landscape</i> There would not be the removal of or changes in individual elements or features of the landscape w the character area.	<i>Fabric of the Landscape</i> There would not be the removal of or changes in individual elements or area.
There would be the introduction of new elements and features comprising the solar panel areas and substation area.	There would be the introduction of new elements and features comprise area.
<u>Aesthetic Aspects of the Landscape</u> Refer to Figure 8.15.1.3 [C6.4.8.15.1.3] which shows that with the Cottam 3b Site, cumulative visibilit the Cottam 1 Site/Sites, Cottam 2, and Cottam 3b Sites would not be experienced across the majorit the 2km study area. This is due to the distance, the intervening woodlands, hedgerows, and tree cov between the Site/Sites. The intervening settlements and built form would also curtail cumulative visio between these Site/Sites.	y of distance, the intervening woodlands, hedgerows, and tree cover betwee er built form would also curtail cumulative visibility between these Site/Site
 There are local patches of intervisibility between Cottam 3a and 3b Site/Sites, extending from the: Northeast boundary of the Cottam 3a Site/Sites, defined to the west by the Green Respect B Park and Park House Farm, and reaching as far as Northorpe in the east East boundary of Cottam 3a Site/Sites, and stopping short of Cold Harbour Farm; and North boundary of the Cottam 3b Site/Sites, extending for a short distance as far as Grange and Top Farm. 	Overall Landscape Character of the Unwooded Vales
however, due to the intervening vegetation bordering the mainline railway and the isolated settleme comprising Grange Farm and Top Farm. The flat landform and intervening woodland blocks, hedger and tree cover would also close down any inter-visibility across the landscape between these cumul sites.	not alter the overall character of the landscape within the Unwooded Va
 There are local patches of intervisibility between Cottam 3a, 3b and Cottam 2 Sites, extending from a South boundary of the Cottam 3b Site, bordered by Pilham to the west and the medieval settlement of Dunstall to the east, and reaching as far as Springthorpe in the south South boundary of the Cottam 3a Site, bordered by the eastern edge of Blyton to the west, reaching Grange Farm and stopping short of the mainline railway; and North boundary of the Cottam 3a Site, following the alignment of the A159 (Laughton Road stopping short to the west of the Green Respect Burial Park. 	
Potential cumulative visibility between Cottam 3a, 3b and the Cottam 2 Sites would not be experience however, due to the intervening settlements of Corringham, Yawthorpe, Aisby, Dunstall and Pilham. flat landform and intervening vegetation cover would also close down any inter-visibility across the landscape between these cumulative sites.	
 There is a local patch of intervisibility between All Sites, located to the: East of the Cottam 3b Site and north of the Bonsdale Farm at Pilham, extending across the landscape to the north of the medieval village of Dunstall as far as the medieval village of Southorpe. 	

umulative Developments is Minor at year 1 of limited impact upon the LCA as a result of the associated with the fabric of the landscape of the would screen the panels and therefore the effects

or features of the landscape within the character

rising the solar panel areas and the substation

tam 3a and 3b Sites, cumulative visibility with the rity of the 5km study area. This is due to the een the Site/Sites. The intervening settlements and Sites.

likely significant effects, between the Cottam 3a detail within the following figures:

velopments Augmented ZTV [C6.4.8.15.2.8]

agricultural presence, with wide areas retaining a nd cover create a relatively open and expansive f settlement, linked by a series of minor roads east evant characteristics of the landscape have some umulative visibility for the Cottam 3b Site would Vales Character Area 4a.



SOLAR PROJECT		
	Potential cumulative visibility between All Sites would not be experienced however, due to the intervening	
	settlements of Corringham, Yawthorpe, Aisby, Dunstall and Pilham. The flat landform and intervening	
	vegetation cover would also close down and inter-visibility across the landscape between these	
	cumulative sites.	
	Users of linear routes, especially footpaths or other rights of way, or transport routes, may potentially	
	experience the aesthetic aspects of the cumulative sites revealed in succession as a series of sequential	
	views. For further details refer to the following detailed visual receptor sheets:	
	Appendix 8.3.2.2 Individual Viewpoint Receptor Sheets [C6.3.8.3.2.2]	
	Appendix 8.3.2.3 Individual Viewpoint Receptor Sheets [C6.3.8.3.2.3]	
	Appendix 8.3.2.4 Individual Viewpoint Receptor Sheets [C6.3.8.3.2.4]	
	Appendix 8.3.3.2 Individual Residential Receptor Sheets [C6.3.8.3.3.2]	
	Appendix 8.3.3.3 Individual Residential Receptor Sheets [C6.3.8.3.3.3]	
	Appendix 8.3.4.2 Individual Transport Receptor Sheets [C6.3.8.3.4.2]	
	Appendix 8.3.4.3 Individual Transport Receptor Sheets [C6.3.8.3.4.3]	
	Appendix 8.3.5.2 Individual PRoW Receptor Sheets [C6.3.8.3.5.2]	
	Appendix 8.3.5.3 Individual PRoW Receptor Sheets [C6.3.8.3.4.3]	
	Overall Landscape Character of the Unwooded Vales	
	Overall, the character of the Unwooded Vales is shaped by the strong agricultural presence, with wide	
	areas retaining a strong sense of rural tranquility. In contrast, the low levels of woodland cover create a	
	relatively open and expansive landscape comprising an arable land use within a scattered pattern of	
	settlement, linked by a series of minor roads east to west and a more strategic road network north to	
	south. These relevant characteristics of the landscape have some ability to accommodate change without	
	undue adverse effects. The cumulative visibility for the Cottam 3b Site would not alter the overall	
	character of the landscape within the Unwooded Vales Character Area 4a.	
	Construction: Low	Construction: Low
	Operation (Year 1): Low	Operation (Year 1): Low
Magnitude	Operation (Year 1): with only Embedded Mitigation: Low	Operation (Year 1): with only Embedded Mitigation Low
	Operation (Year 15): Very Low	Operation (Year 15): Very Low
	Decommissioning: Very Low	Decommissioning: Very Low
	Construction: Adverse & Short Term	Construction: Adverse & Short Term
Type of	Operation (Year 1): Adverse & Long Term	Operation (Year 1): Adverse & Long Term
Effect	Operation (Year 1) with only Embedded Mitigation: Adverse & Long Term	Operation (Year 1) with only Embedded Mitigation: Adverse & Long Te
	Operation (Year 15): Beneficial & Long Term	Operation (Year 15: Beneficial & Long Term
	Decommissioning: Neutral & Short Term	Decommissioning: Neutral & Short Term
	Construction: Minor Not Significant	Construction: Minor Not Significant
of Effort	Operation (Year 1): Minor Not Significant	Operation (Year 1): Minor Not Significant
	Operation (Year 1) with only Embedded Mitigation: Minor Not Significant	Operation (Year 1) with only Embedded Mitigation: Minor Not Signific
	Operation (Year 15): Negligible Not Significant	Operation (Year 15): Negligible Not Significant
	Decommissioning: Negligible Not Significant	Decommissioning: Negligible Not Significant

* Potential exists to use targeted, low-density sheep grazing in appropriate areas of wildflower meadow under panelled areas for short periods once a suitable sward has established. This may allow for diversification of grazing management. Grazing of tussock seeded areas may be appropriate to reduce the sward every three years. Careful monitoring is however required to prevent overgrazing with conservation grazing densities used.

Environmental Statement Landscape and Visual Impact Assessment Appendix 8.2.2.2: Regional Overview Tables – Not Significant [Reference: EN010133/APP/C6.3.8.2.2.2.5] January 2023

Term

ificant



Landscape Receptor – Regional Scale Landscape Character – 4a: Unwooded Vales – Cable Route Corridor (Cottam 1 Site to Cottam 2 Site)

Receptor Baseline:

Within the Cottam 1 Site/Sites to the Cottam 2 Site, at a regional scale, landscape character is assessed within the East Midlands Regional Landscape Character Assessment as forming part of RLCT Profile: 4a Unwooded Vales, which is shown on Figure 8.5 [C6.4.8.5]. Unwooded Vales also extend into the area/areas identified for the Cable Route Corridor and 0.5km from the outer boundary.

Key Features:

The landscape mainly comprises of productive arable and pastoral farmland, but there are areas of cereal and vegetable cropping where hedgerow removal has created some very large fields under single crop. Most of the Unwooded Vales retain a deeply rural and tranquil character, with farms and small nucleated villages located throughout areas of productive farmland, linked by narrow winding lanes and roads. Watercourses are often bordered by a narrow alluvial floodplain that wind through the landscape along shallow valleys, appearing little more than gentle folds in the landscape. This pattern of drainage is particularly evident along the course of the River Till between the settlement of Willingham by Stow, Kexby, Upton and Springthorpe. This area boasts an extensive network of tributaries of the River Till that are only discernable by the tracing of alder and willow trees, rusty pastures, and belts of riparian habitat across the landscape. There are localized concentrations of woodland cover to the east of Kexby, Upton and Springthorpe that include Fillingham Low Wood, Big Wood and Harpswell Wood, despite the overall tendency for limited woodland cover across the area.

Character Context:

This landscape character type offers expansive long-distance views from higher ground at the margin of the Vales that gives a sense of visual containment. Within this landscape character type there is limited woodland cover which is a heavy contrast to Wooded Vales landscape character type that is often seen close to Unwooded Vales. There are however localized concentrations of woodland. The landscape type hosts sparse small villages and dispersed farms such as Upton Grange, Turpin Farm and Low Farm all linked together with rural lanes. Key characteristics of the Unwooded Vales is that they are extensive, low lying rural landscape underlain by Triassic and Jurassic mudstone and clays and widespread superficial deposits that generally give rise to low, gently undulating landform which add to the intimacy of the landscape. Occasionally, these hills and ridges rise out of the Vales such as areas to the west of Glentworth, which rises to 30m AOD above the surrounding area. These ridges also mark the watersheds between watercourses since the landscape character type also hosts complex drainage patterns (River Till) of watercourses that flow within the shallow undulations often flanked by pasture and riparian habitats.

The Cottam 1 Site/Sites to Cottam 2 Site is primarily located within RLCT 4a: Unwooded Vales. The land area is found to the north of Glentworth Road and in the context of the settlements of Kexby, Upton and Springthorpe.

RLCT 4a: Unwooded Vales landscape character type is the primary host to the area/areas identified for the Cable Route Corridor and 0.5km from the outer boundary of the Cottam 1 Site/Sites to the Cottam 2 Site Cable Route Corridor.

RLCT 4a is considered to form part of the immediate landscape context for the Cottam 1 Site/Sites to the Cottam 2 Site Cable Route Corridor.

Environmental Statement Landscape and Visual Impact Assessment Appendix 8.2.2.2: Regional Overview Tables - Not Significant [Reference: EN010133/APP/C6.3.8.2.2.2.6] January 2023



Receptor susceptibility to change	Value of Receptor	Sensitivity	Embedded Mitigation
In terms of forces for change, the Unwooded Vales aims to protect existing rural landscape features, in particular the restoration of hedgerows since the most widespread change has been in agricultural intensification and the change from pastoral to arable cropping that has resulted in the loss of hedges, and consequently, increase in field size. The loss of pasture is particularly evident around settlements, where grazing animals and smaller field sizes contribute to the setting and structure of several villages. Many of the rural villages have not seen widespread expansion but development pressures continue with the demand for housing, commerce and industry creating visual intrusion and extending the urban fringe. For development associated with the rural villages, specific mechanisms include Village Design Statements, and tree planting around settlement fringes to help integrate new development its appropriate in terms of type, scale and location. The flat, open landscape is also a key consideration and whilst the aim is to plan new tree planting around key settlements, woodland does not form a significant component of this landscape, and in considering its open and expansive character, extensive new woodland planting would be generally inappropriate. The aims for the Unwooded Vales should be to plan new tree planting around key settlements and other suitable locations. Trees should be to plan new tree planting around key settlements and ther suitable locations. Trees should be to planting would be generally inappropriate.	 <u>Scenic</u>: The Unwooded Vales appeal to the visual senses where the roads and watercourses combine to give a subtle grain to the landscape. The interruptions at the bridge crossings provide local points of interest and the opportunity to capture views across the landscape to the higher landform fringing the Vales, <u>Cultural</u>: The landscape shows evidence of historic settlement with farms and nucleated villages and small hamlets such as Thorpe le Fallows and Coates. The landscape surrounding these settlements retains a deeply rural and tranquil character with farms linked by minor lanes and roads. There are Roman roads such as Tillbridge Lane indicating that these low-lying areas provided convenient routes through the hills and wetlands. <u>Natural</u>: The extensive expanses of semi-natural habitat, rivers, and streams are an important landscape feature such the River Till where the course can be observed by tracing sinuous belts of riparian habit and riverside trees, particularly within the area to the south of Ingham Road. Overall, in such a managed agricultural environment, networks of hedgerows and hedgerow trees gain significance in offering a refuge for birds and insects. <u>Recreation and Enjoyment</u>: The Unwooded Vales are valued for recreation which is often focused on the locations where panoramic views are possible from elevated locations such as rising land at the edges of the Vales. <u>Local Distinctiveness and Sense of Place</u>: The landscape has a 'strong sense of place' with major landform features flanking the lower lying areas creating a broad scale visual containment along the ridgeline to the east at Cammeringham, Ingham and Fillingham. Wide panoramic views are also possible from the low hills and ridges that form watersheds between watercourses. This contrasts with the lower lying areas where intact hedgerows and belts of riverside trees truncat views. <u>Health and Wellbeing</u>: The Unwooded Vales provide a very limited network o	Character: The interruptions at bridge crossings are a significant component of the landscape that provide local points of interest, and which are locally distinctive. Quality: The extensive expanses of semi-natural habitat, rivers, and streams are an important landscape feature such the River Till where the course can be observed by tracing sinuous belts of riparian habit and riverside trees, which gives the area a positive character. <u>Value:</u> Wide panoramic views are possible from the low hills and ridges that form watersheds between watercourses. This contrasts with the lower lying areas where intact hedgerows and belts of riverside trees truncate views. <u>Capacity:</u> The landscape has some vulnerability to unsympathetic development, but features are generally commonplace that could be readily replaced.	Embedded Mitigation would be taken into account at the construction, operation (Year 1 and Year 15) and decommissioning stages of the Scheme. This Embedded Mitigation is also referred to as primary mitigation and would include the following measures: Panels to be set a minimum of 3m from Site boundaries. Site boundary fencing to be set back 5m from adjacent existing hedgerows to allow for proposed thickening and growth. Existing hedges are to be allowed to grow out and will be managed to a height of 5m Hedgerow trees will be encouraged to grow out to add further thickening and growth to the field boundaries with the addition of new hedgerow trees as appropriate, randomly spaced along the length of existing hedges. Lighting will be limited to downlights withi substations and battery banks only and used when maintenance or security is required. Lighting will be PIR operated and will be calibrated to vehicle and personnel movements. All visible lighting would be 50W, installed at a maximum height of 4m with cowls fitted to prevent light spillage. Lighting required within panelled areas wi be manually operated. There will be no lighting on perimeter fencing.



Landscape Receptors – Cable Route Corri	dor (Cottam 1 Site/Sites to Cottam 2 Site)	
Medium	Medium	Medium
le Fallows and Coates.		
Typically, these locations occur around Thorpe		
recreation and enjoyment of the area.		
to provide a sense of place and add to the		
neighboring elevated lands is often sufficient		
often provides locations where glimpse of		
typically low and subdued, rising landform		
Whilst the landform of the Unwooded Vales is		
effects.		
accommodate change without undue adverse		
landscape therefore have a moderate ability to		
landscape. The relevant characteristics of the		
maintain the perception of a 'well-treed'		
occurrence of semi-natural habitats and		
and around settlements to increase the		
appropriate tree planting that could be used in		
However, there is significant benefit with		

The landscape and visual effects for the Cable Route Corridor (Cottam 1 Site/Sites to Cottam Power Station) Receptors are set out within the Viewpoint Receptor Sheets at Appendix 8.3.2.3 [C6.3.8.2.3.] and Appendix 8.3.2.4 [C6.3.8.3.2.4] the Residential Overview Sheets at Appendix 8.3.3.1 [C6.3.8.3.3.1] the Transport Overview Sheets at Appendix 8.3.4.1 [C6.3.8.3.4.1] and the PRoW Overview Sheets at Appendix 8.3.5.1 [C6.3.8.3.5.1].

In-Combination Effects [Cumulative Sites]	Cumulative Effects [Cumulative Developments]
In Summary	In Summary
The In-combination effects upon LCA – 4a of the Cable Route Corridor (Cottam 1 Site to Cottam 2 Site)	The Cumulative Effects upon LCA – 4a of the Scheme with the other Cumu
with the other Cumulative Sites (Cottam 1, 2 and 3a and 3b) is Minor at year 1 of operation and	operation and Negligible at year 15 with mitigation. This is due to the limit
Negligible at year 15 with mitigation. This is due to the limited impact upon the LCA as a result of the	nature of the Scheme, together with the existing landscape character asso
nature of the Scheme, the segregated nature of the Sites; together with the existing landscape character associated with the fabric of the landscape of the Sites and Study Area. The effects upon landscape	Sites and Study Area. The effects upon landscape character are reduced.
character are reduced.	<u>Fabric of the Landscape</u>
	There would not be the removal of or changes in individual elements or fe
Fabric of the Landscape	area.
There would not be the removal of or changes in individual elements or features of the landscape within	
the character area.	There would be the introduction of new elements and features comprising
	1 Site/Sites to the Cottam 2 Site, heading in a north south direction.
There would be the introduction of new elements and features comprising the Cable Route Corridor	
between the Cottam 1 Site/Sites and the Cottam 2 Site, heading across the character area in a north	<u>Aesthetic Aspects of the Landscape</u>
south direction.	Refer to Figure 8.15.2.1 [C6.4.8.15.2.1] which shows that within the Cable
	cumulative developments would not be experienced across the majority of
Aesthetic Aspects of the Landscape	distance, the intervening woodlands, hedgerows, and tree cover between
Refer to Figure 8.15.1.2 [C6.4.8.15.1.2] which shows that with the Cottam 2 Site, cumulative visibility with the Cottam 1 Site/Sites and Cottam 3a and 3b Sites would not be experienced across the entirety of	built form would also curtail cumulative visibility.
the 2km study area. This is due to the distance, the intervening woodlands, hedgerows, and tree cover	There are local patches of cumulative visibility which may be focus of likely
between the Site/Sites. The intervening settlements and built form would also curtail cumulative	Corridor and Gate Burton Energy Park, Tillbridge Solar and West Burton S
visibility.	further detail within the following figures:

Environmental Statement Landscape and Visual Impact Assessment Appendix 8.2.2.2: Regional Overview Tables - Not Significant [Reference: EN010133/APP/C6.3.8.2.2.2.6] January 2023

Not Applicable

mulative Developments is Minor at year 1 of mited impact upon the LCA as a result of the ssociated with the fabric of the landscape of the

features of the landscape within the character

sing the Cable Route Corridor between the Cottam

le Route Corridor, cumulative visibility with the ty of the 5km study area. This is due to the en the Site/Sites. The intervening settlements and

kely significant effects, between the Cable Route Solar Park. This cumulative visibility is set out in

oments Augmented ZTV [C6.4.8.15.2.6]





There are local partner of intervisibility between the Cottam 2 Site and with the Cottam 3a and 3b Site set for a Yourhope Betch and withorge Figure 8.13.2 Cottam 1.2 a and 3b Tillholders Site Site and Yourhope Betch and Workshope Betch and Workshope The Land Usa, Topography and Watercourse, Communications and infrastructure, Settlements, Industry, Commerce and Lateure, Nationally and Lacibly Designated Landscope, Schedulad Woodlands and Natural Designations would not be affected by these minor parchies of marketill comparing the: • Commerce and Lateure, Nationally and Lacibly Designated Landscope, Schedulad Woodlands and Natural Designations would not be affected by these minor parchies of marketilly. The Land Usa, Topography and Watercourse, Communications and Infrastructure. Settlements, Industry, Commerce and Lateure, Nationally and Lacibly Designated Landscopes, Schedulad Woodlands and Natural Designations would not be affected by these minor parches of intervisibility. The Land Usa, Topography and Watercourse, Communications and Infrastructure. Settlements, Industry, Commerce and Lateure, Nationally and Lacibly Designated Landscopes, Schedulad Woodlands and Natural Designations would not be affected by these minor patches of intervisibility. The Land Usa, Topography and Watercourse, Communications and Infrastructure. Settlements, Industry, Commerce and Lateure, Nationally and Lacibly Designated Landscopes, Schedulad Woodlands and Natural Designations would note affected by these minor patches of intervisibility. Users of Linker course, especially forgative or other rights of way, or transport router, may potentially experience the assthell coparts or other rights of way, or transport router, may potentially experience the assthell copartice fresheses (GS.33.3.21) Appendit	SOLAR PROJECT		
Area 4a.		 extending from the: South boundary of the Cottam 2 Site, starting at the eastern edge of Corringham and reaching as far as Yawthorpe Beck and Yawthorpe The Land Use, Topography and Watercourses, Communications and Infrastructure, Settlements, Industry, Commerce and Leisure, Nationally and Locally Designated Landscapes, Scheduled Monuments, Listed Buildings, Conservation Areas, Registered Parks and Gardens and Ancient Woodlands and Natural Designations would not be affected by these minor patches of intervisibility. There is a local patch of intervisibility between the Cottam 2 Site and with the Cottam 3b Site, comprising the: Southeast of the River Eau, extending as far as Huckerby Farm and Huckerby Bungalows. The Land Use, Topography and Watercourses, Communications and Infrastructure, Settlements, Industry, Commerce and Leisure, Nationally and Locally Designated Landscape. Scheduled Monuments, Listed Buildings, Conservation Areas, Registered Parks and Gardens and Ancient Woodlands and Natural Designations would not be affected by these minor patches of intervisibility There are local patches of intervisibility between All Sites comprising the: North of the Bonsdale Farm at Plinam, extending across the landscape to the north of the medieval village of Dunstall as far as the medieval village of Southorpe The Land Use, Topography and Watercourses, Communications and Infrastructure, Settlements, Industry, Commerce and Leisure, Nationally and Locally Designated Landscapes, Scheduled Monuments, Listed Buildings, Conservation Areas, Registered Parks and Gardens and Ancient Woodlands and Natural Designations would not be affected by these minor patches of intervisibility. Users of linear routes, especially footpaths or other rights of way, or transport routes,	Figure 8.15.2.9 Cottam 1, 2, 3a and 3b West Burton <u>Overall Landscape Character of the Unwooded Vales</u> Overall, the character of the Unwooded Vales is sha strong sense of rural tranquility. In contrast, the low landscape comprising an arable land use within a s to west and a more strategic road network north to ability to accommodate change without undue adv
	Magnitude		Construction Low

ge Solar Cumulative Developments Augmented ZTV [C6.4.8.15.2.8] urton Cumulative Developments Augmented ZTV [C6.4.8.15.2.9]

s shaped by the strong agricultural presence, with wide areas retaining a e low levels of woodland cover create a relatively open and expansive n a scattered pattern of settlement, linked by a series of minor roads east th to south. These relevant characteristics of the landscape have some adverse effects. The minor patches of cumulative visibility for the Cottam 1 of the landscape within the Unwooded Vales Character Area.



	Operation (Year 1): Low	Operation (Year 1): Low
	Operation (Year 1): with only Embedded Mitigation: Low	Operation (Year 1): with only Embedded Mitigation Low
	Operation (Year 15): Very Low	Operation (Year 15): Very Low
	Decommissioning: Very Low	Decommissioning: Very Low
	Construction: Adverse & Short Term	Construction: Adverse & Short Term
Type of	Operation (Year 1): Adverse & Long Term	Operation (Year 1): Adverse & Long Term
	Operation (Year 1): with only Embedded Mitigation: Neutral & Long Term	Operation (Year 1): with only Embedded Mitigation: Neutral & Long Term
Effect	Operation (Year 15): Neutral & Long Term	Operation (Year 15): Neutral & Long Term
	Decommissioning: Neutral & Short Term	Decommissioning: Neutral & Short Term
	Construction: Minor Not Significant	Construction: Minor Not Significant
Significance	Operation (Year 1): Minor Not Significant	Operation (Year 1): Minor Not Significant
-	Operation (Year 1): with only Embedded Mitigation: Minor Not Significant	Operation (Year 1): with only Embedded Mitigation: Minor Not Significa
of Effect	Operation (Year 15): Negligible Not Significant	Operation (Year 15): Negligible Not Significant
	Decommissioning: Negligible Not Significant	Decommissioning: Negligible Not Significant

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Landscape Receptor - Regional Scale Landscape Character - 4a: Unwooded Vales - Cable Route Corridor (Cottam 2 Site to Cottam 3a and 3b Sites)

Receptor Baseline:

Within Cottam 2 Site to Cottam 3 Site, at a regional scale, landscape character is assessed within the East Midlands Regional Landscape Character Assessment as forming part of RLCT Profile: 4a Unwooded Vales, which is shown on Figure 8.5 [C6.4.8.5]. Unwooded Vales extend into the area/areas identified for the Cable Route Corridor and 0.5km from the outer boundary.

Key Features:

The landscape mainly comprises of productive arable and pastoral farmland, but there are areas of cereal and vegetable cropping where hedgerow removal has created some very large fields under single crop. Most of the Unwooded Vales retain a deeply rural and tranquil character, with farms and small nucleated villages located throughout areas of productive farmland, linked by narrow winding lanes and roads. Watercourses are often bordered by a narrow alluvial floodplain that wind through the landscape along shallow valleys, appearing little more than gentle folds in the landscape. This pattern of drainage is particularly evident along the course of the River Till between the settlements of Corringham, Pilham and Blyton. This area boasts an extensive network of tributaries of the River Till that are only discernable by tracing alder and willow trees, rusty pastures, and belts of riparian habitat across the landscape. There are very few concentrations of woodland cover limited to only Yawthorpe Fox Covert and Blyborough Covert which reflects the overall tendency for limited woodland cover across the area.

Character Context:

This landscape character type offers expansive long-distance views from higher ground at the margin of the Vales that gives a sense of visual containment. Within this landscape character type there is limited woodland cover which is a heavy contrast to Wooded Vales landscape character type that is often seen close to Unwooded Vales. There are very few localized concentrations of woodland. The landscape type hosts sparse small villages such as Pilham, Aisby and Yawthorpe and dispersed farms all linked together with rural lanes. Key characteristics of the Unwooded Vales is that it is an extensive, low lying rural landscape underlain by Triassic and Jurassic mudstone and clays and widespread superficial deposits that generally give rise to low, gently undulating landform which add to the intimacy of the landscape. Occasionally, these hills and ridges rise out of the Vales such as areas to the west of Corringham, which rises to 30m AOD above the surrounding area and is the site of windmills. These ridges also mark the watersheds between watercourses since the landscape character type also hosts complex drainage patterns (River Till) of watercourses that flow within the shallow undulations often flanked by pasture and riparian habitats.

Cottam 2 Site to Cottam 3a and 3b Sites is primarily located within RLCT 4a: Unwooded Vales. The land area is found to the north of the A631 (Corringham Road) and in the context of the settlements of Coringham, Aisby and Pilham.

RLCT 4a: Unwooded Vales landscape character type is the primary host to the area/areas identified for the Cable Route Corridor and 0.5km from the outer boundary of Cottam 2 Site to Cottam 3a and 3b Sites

RLCT 4a is considered to form part of the immediate landscape context for the Cottam 2 Site to Cottam 3a and 3b Sites Cable Route Corridor.

Environmental Statement Landscape and Visual Impact Assessment Appendix 8.2.2.2: Regional Overview Tables - Not Significant [Reference: EN010133/APP/C6.3.8.2.2.2.7] January 2023



Receptor Value or Receptor Value or Receptor Sensitivity Entropy In terms of forces for change. the Unwooded Sensitivity Embedded Mitigation would be taken in activity or capture views across the landscape. Embedded Mitigation would be taken in activity or capture views across the landscape. (Apartize: The roads and activity in the lands cape has been in groutural intensification and barge form pasture is particularly evident acrouping that smalle in the lass of hedges, and consequently, and increase in field size. The inteed by more lands cape fracture stronging that smaller field sizes continue with de smaller field sizes continue with de smaller field sizes continue with de smaller field sizes contained would include the following small and transpart of the set and would include the following small and transpart of the set and would include the following small and transpart of the set and mainimum of 3m from smaller would be taken in situed by more lands. Overall in, the sacet and information small and transpart of the set and activity within the area to the small band transpart of the set and activity within the area to the small band transpart of the stranspart of the lands. Overall in, the sacet and inform of the degrow small band transpart and transpart of the stranspart of the sacet and informs and small band transpart of the sacet and add to the setting and growth. Panels to be set a blow with the same across the and sacet as site to site boundaries. Site boundaries. Site boundaries. Site boundaries. Overall, the anits to a plan new tree planting around key settements, woodand does not the stranspart to the setting and growth to the fieldowoundary ference to this southeless at containment a				
Values aims to protect existing rural landscapecombine to give a subtle grain to the landscape. The interruptions at the bridge crossing provide local points of interest and the opportunity to capture views across the landscapewaterourses combine to give a subtle grain to the landscape and the opportunity to capture views across the landscapeaccount at the construction. operation subtle grain to the landscape and the opportunity to capture views across the landscape.account at the construction. operationCulture: The landscape shows evidence of historic settlements with farms include by minor lanes and roads. There are Roman roads such as Tilliforige Lane indication important landscape feature such as the River Tilliforige Lane indication.Waterourses combine to give a subtle grain grain to the landscape.account at the construction. operation subtle grain grain to the landscape.decomsting subtle grain grain the decomsting trading subtle grain grain the landscape.decomsting subtle grain grain the decomsting trading subtle grain grain grain the landscape.decomsting subtle grain grain grain the decomsting trading subtle grain grain grain grain grain trading subtle grain gra	Receptor susceptibility to change	Value of Receptor	Sensitivity	Embedded Mitigation
Some ability to accommodate it without under adverse effects, taking account of the existing character and quality of the landscape, and/or achievement of relevant planning policies and strategies. The aims for the Unwooded Vales should be to plan new tree planting around key settlements and other suitable locations. Trees should be typically grouped in small plantations/copses or as individual trees within hedgerows. The creation of new hedgerows and permanent pasture along watercourses is also a priority,	Vales aims to protect existing rural landscape features, in particular the restoration of hedgerows since the most widespread change has been in agricultural intensification and the change from pastoral to arable cropping that has resulted in the loss of hedges, and consequently, and increase in field size. The loss of pasture is particularly evident around settlements, where grazing animals and smaller field sizes contribute to the setting and structure of several villages. Many of the rural villages have not seen widespread expansion but development pressures continue with the demand for housing, commerce and industry creating visual intrusion. Overall, the susceptibility of the Unwooded Vales is conditioned by managing growth, ensuring development is appropriate in terms of type, scale, and location. The flat, open landscape is also a key consideration and whilst the aim is to plan new tree planting around key settlements, woodland does not form a significant component of this landscape, and in considering its open and expansive character, extensive new woodland planting would be generally inappropriate. The landscape receptor is moderately susceptible to the proposed development, and a moderate ability to accommodate the specific proposed change, because the relevant characteristics of the landscape have some ability to accommodate it without undue adverse effects, taking account of the existing character and quality of the landscape, and/or achievement of relevant planning policies and strategies. The aims for the Unwooded Vales should be to plan new tree planting around key settlements and other suitable locations. Trees should be typically grouped in small plantations/copses or as individual trees within hedgerows. The creation of new hedgerows and permanent	combine to give a subtle grain to the landscape. The interruptions at the bridge crossing provide local points of interest and the opportunity to capture views across the landscape. <i>Cultural:</i> The landscape shows evidence of historic settlement with farms and nucleated villages and small hamlets such as Aisby, Corringham and Pilham. The landscape surrounding these settlements retain a deeply rural and tranquil character with farms linked by minor lanes and roads. There are Roman roads such as Tillbridge Lane indicating that these low-lying areas provided convenient routes through the hills and wetlands. <i>Natural:</i> The extensive expanses of semi-natural habitat, rivers and streams are an important landscape feature such as the River Till where the course can be observed by tracing sinuous belts of riparian habit and riverside trees, particularly within the area to the south of Ingham Road. Overall, in such a managed agricultural environment, networks of hedgerows and hedgerow trees gain significance in offering a refuge for birds and insects. <i>Recreation and Enjoyment:</i> The Unwooded Vales are valued for recreation which is often focused on the locations where panoramic views are possible from elevated locations such as from rising land at the edges of the Vales. <i>Local Distinctiveness and Sense of Place:</i> The landscape has a 'strong sense of place' with major landform features flanking the lower lying areas creating broad scale visual containment along the ridgeline to the southeast at Cammeringham, Ingham and Fillingham. Wide panoramic views are also possible from the low hills and ridges that form watersheds between watercourses. This contrasts with the lower lying areas where intact hedgerows and belts of riverside trees truncate views. <i>Health and Wellbeing:</i> The Unwooded Vales provide a very limited network of PRoW leading to the dependence on the more direct arterial routes that run east to west across the area linked by a series of narrow straight lanes.	 watercourses combine to give a subtle grain to the landscape. The interruptions at the bridge crossing provide local points of interest and the opportunity to capture views across the landscape. <u>Quality</u>: The landscape shows evidence of historic settlement with farms and nucleated villages and small hamlets such as Aisby, Corringham and Pilham. The landscape surrounding these settlements retain a deeply rural and tranquil character. <u>Value</u>: Whilst the landform of the Unwooded Vales is typically low and subdued, rising landform often provides locations where glimpse of neighboring elevated landscape is often sufficient to provide a sense of place and add to the recreation and enjoyment of the area. <u>Capacity:</u> The most widespread change has been in agricultural intensification and the change from pastoral to arable cropping that has resulted in the loss of hedges, and consequently, and increase in field 	 (Year 1 and Year 15) and decommissioning stages of the Scheme. This Embedded Mitigation is also referred to as primary mitigation and would include the following measures: Panels to be set a minimum of 3m from Site boundaries. Site boundary fencing to be set back 5m from adjacent existing hedgerows to allow for proposed thickening and growth. Existing hedges are to be allowed to grow out and will be managed to a height of 5m. Hedgerow trees will be encouraged to grow out to add further thickening and growth to the field boundaries with the addition of new hedgerow trees as appropriate, randomly spaced along the length of existing hedges. Lighting will be limited to downlights within substations and battery banks only and used when maintenance or security is required. Lighting will be PIR operated and will be calibrated to vehicle and personnel movements. All visible lighting would be 50W, installed at a maximum height of 4m with cowls fitted to prevent light spillage. Lighting required within panelled areas will be manually operated. There will be no



	-	
increasing the occurrence of semi- natural		
habitats. Although the remaining hedgerow		
network in generally strong, there is		
nevertheless evidence of decline in several		
areas, with gaps and few hedgerow trees.		
However, there is significant benefit with		
appropriate tree planting that could be used in		
and around settlements to increase the		
occurrence of semi-natural habitats and		
maintain the perception of a 'well-treed'		
landscape. The relevant characteristics of the		
landscape therefore have a moderate ability to		
accommodate change without undue adverse		
effects.		
Whilst the landform of the Unwooded Vales is		
typically low and subdued, rising landform		
often provides locations where glimpse of		
neighboring elevated lands is often sufficient		
to provide a sense of place and add to the		
recreation and enjoyment of the area.		
Typically, these locations occur around Thorpe		
le Fallows and Coates.		
Medium	Medium	Medium

Landscape Receptors – Cable Route Corridor (Cottam 1 Site/Sites to Cottam 2 Site)

The landscape and visual effects for the Cable Route Corridor (Cottam 1 Site/Sites to Cottam Power Station) Receptors are set out within the Viewpoint Receptor Sheets at Appendix 8.3.2.3 [C6.3.8.2.3.] and Appendix 8.3.2.4 [C6.3.8.3.2.4] the Residential Overview Sheets at Appendix 8.3.3.1 [C6.3.8.3.3.1] the Transport Overview Sheets at Appendix 8.3.4.1 [C6.3.8.3.4.1] and the PRoW Overview Sheets at Appendix 8.3.5.1 [C6.3.8.3.5.1].

In-Combination Effects [Cumulative Sites]	Cumulative Effects [Cumulative Developments]
In Summary	In Summary
The In-combination effects upon LCA – 4a of the Cable Route Corridor (Cottam 2 Site to Cottam 3a and 3b Sites) with the other Cumulative Sites (Cottam 1, 2 and 3a and 3b) is Minor at year 1 of operation and Negligible at year 15 with mitigation. This is due to the limited impact upon the LCA as a result of the nature of the Scheme, the segregated nature of the Sites; together with the existing landscape character associated with the fabric of the landscape of the Sites and Study AreaThe effects upon landscape character are reduced.	The Cumulative Effects upon LCA – 4a of the Scheme with the other C and Negligible at year 15 with mitigation. This is due to the limited imp together with the existing landscape character associated with the fab effects upon landscape character are reduced.
	Fabric of the Landscape
<u>Fabric of the Landscape</u>	There would not be the removal of or changes in individual elements
There would not be the removal of or changes in individual elements or features of the landscape within	
the character area.	There would be the introduction of new elements and features comp
	Cottam 2 and Cottam 3a and 3b Sites, extending across the character
There would be the introduction of new elements and features comprising the Cable Route Corridor	
connecting between the Cottam 2 Cottam 3a and 3b Sites, extending across the character area in a north	Aesthetic Aspects of the Landscape
south direction.	Refer to Figure 8.15.2.2 [C6.4.8.15.2.2] and 8.15.2.3 [C6.4.8.15.2.3] whe visibility with the cumulative developments would not be experienced
Aesthetic Aspects of the Landscape	

Environmental Statement Landscape and Visual Impact Assessment Appendix 8.2.2.2: Regional Overview Tables – Not Significant [Reference: EN010133/APP/C6.3.8.2.2.2.7] January 2023

Not Applicable

Cumulative Developments is Minor at year 1 of operation pact upon the LCA as a result of the nature of the Scheme, pric of the landscape of the Sites and Study Area. The

or features of the landscape within the character area.

rising the Cable Route Corridor connecting between the area in a north south direction.

nich shows that with the Cable Route Corridor, cumulative l across the majority of the 5km study area. This is due to



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	Refer to Figure 8.15.1.2 [C6.4.8.15.1.2] which shows that within the Cable Route Corridor, cumulative visibility with the Cottam 2 and Cottam 3a and 3b Sites would be experienced across the majority of the	the distance, the intervening woodlands, hedgerows, and tree cover bet built form would also curtail cumulative visibility.
	0.5km study area. This cumulative visibility is unlikely to be experienced however due to the distance, the intervening woodlands, hedgerows and tree cover between the Cable Route Corridor and the Site/Sites. The intervening settlements of Aisby and Pilham and other built form associated with the isolated dwellings and farmsteads would also curtail cumulative visibility.	There are local patches of cumulative visibility which may be focus of like and Tillbridge Solar. This cumulative visibility is set out in further detail
	There are very minor patches of cumulative intervisibility where All Sites would be theoretically visible:	Figure 8.15.2.8 Cottam 1, 2, 3a and 3b Tillbridge Solar Cumulative Deve
	North of the Bonsdale Farm at Pilham, extending across the landscape to the north of the medieval village of Dunstall as far as the medieval village of Southorpe.	<u>Overall Landscape Character of the Unwooded Vales</u> Overall, the character of the Unwooded Vales is shaped by the strong ag sense of rural tranquility. In contrast, the low levels of woodland cover of
	Users of linear routes, especially footpaths or other rights of way, or transport routes, may potentially	comprising an arable land use within a scattered pattern of settlement,
	experience the aesthetic aspects of the cumulative sites revealed in succession as a series of sequential views. For further details refer to the following detailed visual receptor sheets:	more strategic road network north to south. These relevant characteris change without undue adverse effects. The minor patches of cumulative overall character of the landscape within the Unwooded Vales Characte
	Appendix 8.3.2.2 Individual Viewpoint Receptor Sheets [C6.3.8.3.2.2]Appendix 8.3.2.3 Individual Viewpoint Receptor Sheets [C6.3.8.3.2.3]Appendix 8.3.2.4 Individual Viewpoint Receptor Sheets [C6.3.8.3.2.4]	
	Appendix 8.3.3.2 Individual Residential Receptor Sheets [C6.3.8.3.3.2] Appendix 8.3.3.3 Individual Residential Receptor Sheets [C6.3.8.3.3.3]	
	Appendix 8.3.4.2 Individual Transport Receptor Sheets [C6.3.8.3.4.2] Appendix 8.3.4.3 Individual Transport Receptor Sheets [C6.3.8.3.4.3]	
	Appendix 8.3.5.2 Individual PRoW Receptor Sheets [C6.3.8.3.5.2] Appendix 8.3.5.3 Individual PRoW Receptor Sheets [C6.3.8.3.4.3]	
	<u>Overall Landscape Character of the Unwooded Vales</u> Overall, the character of the Unwooded Vales is shaped by the strong agricultural presence, with wide areas retaining a strong sense of rural tranquility. In contrast, the low levels of woodland cover create a relatively open and expansive landscape comprising an arable land use within a scattered pattern of settlement, linked by a series of minor roads east to west and a more strategic road network north to south. These relevant characteristics of the landscape have some ability to accommodate change without undue adverse effects. The cumulative visibility for the Cable Route Corridor (Cottam 2 to Cottam 3a and 3b) would not alter the overall character of the landscape within the Unwooded Vales Character Area 4a.	
	Construction: Low	Construction: Low
Magnitude	Operation (Year 1): Low Operation (Year 1): with only Embedded Mitigation: Low Operation (Year 15): Very Low Decommissioning: Very Low	Operation (Year 1): Low Operation (Year 1): with only Embedded Mitigation: Low Operation (Year 15): Very Low Decommissioning: Very Low
Type of Effect	Construction: Adverse & Short Term Operation (Year 1): Adverse & Long Term Operation (Year 1): with only Embedded Mitigation: Neutral & Long Term Operation (Year 15): Neutral & Long Term Decommissioning: Neutral & Short Term	Construction: Adverse & Short Term Operation (Year 1): Adverse & Long Term Operation (Year 1): with only Embedded Mitigation: Neutral & Long Ter Operation (Year 15): Neutral & Long Term Decommissioning: Neutral & Short Term
Significance of Effect	Construction: Minor Not Significant Operation (Year 1): Minor Not Significant Operation (Year 1): with only Embedded Mitigation: Minor Not Significant Operation (Year 15): Negligible Not Significant Decommissioning: Negligible Not Significant	Construction: Minor Not Significant Operation (Year 1): Minor Not Significant Operation (Year 1): with only Embedded Mitigation: Minor Not Signific Operation (Year 15): Negligible Not Significant Decommissioning: Negligible Not Significant

Environmental Statement Landscape and Visual Impact Assessment Appendix 8.2.2.2: Regional Overview Tables – Not Significant [Reference: EN010133/APP/C6.3.8.2.2.2.7] January 2023

between the Site/Sites. The intervening settlements and

likely significant effects, between the Cable Route Corridor il within the following figures:

velopments Augmented ZTV [C6.4.8.15.2.8]

agricultural presence, with wide areas retaining a strong create a relatively open and expansive landscape t, linked by a series of minor roads east to west and a ristics of the landscape have some ability to accommodate tive visibility for the Cottam 1 Site/Sites would not alter the ter Area.

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Landscape Receptor - Regional Scale Landscape Character - 3a: Floodplain Valleys - Cable Route Corridor (Cottam 1 Site/Sites to Cottam Power Station)

Receptor Baseline:

Within Cottam Power Station to the Cottam 1 Site/Sites, at a regional scale, landscape character is assessed within the East Midlands Regional Landscape Character Assessment as forming part of RLCT Profile: 3a Floodplain Valleys, which is shown on Figure 8.5 [C6.4.8.5]. Floodplain Valleys extend into the area/areas identified for the Cable Route Corridor and 0.5km from the outer boundary. The Floodplain Valleys mainly occur to the west of a group of settlements that extend south from Gainsborough and include Lea, Knaith, Gate Burton, Marton, Brampton and Torksey.

Key Features:

The land within the Floodplain Valleys is only a very small parcel of land that is generally sloping towards the west and the river Trent, with levels ranging from approximately 10m AOD to the eastern edge of the character area and falling to approximately 2m AOD at the edge of the river Trent corridor. The Floodplain Valleys comprises of permanent pasture on riverside meadows and arable fields on the drier gravel terraces. Key characteristics of the Floodplain Valleys are deep alluvium and gravel deposits that mask underlying bedrock geology to create wide, flat alluvial floodplains surrounded by rising landform of adjacent Landscape Character Types. Hedgerow and riverside trees are also an important component of the landscape within this character type where Alder, Willow and Poplar are typical riverside trees and there are swathes of riverine woodland lining the river corridor, particularly the sharp 'U' bend in the river at Trent Port. Sewage treatment works and power stations are common close to larger settlements that fringe the floodplains with the nearest being Cottam Power Station to the southwest of the Cottam 1 Site/Sites. Most of the East Midlands region's major towns are located adjacent to the floodplains and have a strong but localized influence on their character. In other places, the floodplains constitute some of the most remote and peaceful terrestrial lowland areas in the East Midlands. The landscape around Marton shows the influence of settlement through the presence of a strategic road network, which exerts a strong influence on local character. In contrast, there are also areas where the open, unsettled character of the landscape is easily recognizable, creating a distinct 'sense of place'.

Character Context:

Cottam Power Station to the Cottam 1 Site/Sites is mainly located within RLCT 4a: Unwooded Vales, apart from the area to the west of the A156 (Lincoln Road) which falls within RLCT 3a: Floodplain Valleys. Whilst the floodplains themselves are generally devoid of settlement, the rivers and neighboring gravel terraces have been a focus for settlement for several thousands of years. The land within the Floodplain Valleys borders areas defined as 'Built Up Area' which is associated with the settlements of Marton and Torksey. This landscape character type that are located adjacent to floodplains where the bordering settlement on higher ground exerts a strong but localized influence on their character. This landscape character type has limited woodland cover; however, steep riverside bluffs, areas close to settlement or on a tight bend in the river are notable for a higher level of vegetation cover. This is typically evident around the settlements of Marton, Trent Port, Cottam and Torksey. Historically, the floodplains would have shared common land use characteristics with a predominance of permanent pasture on riverside meadows and arable fields on drier gravel terraces and this is evident in the landscape around Marton where there is a mixture of pasture and arable land use adjacent to the river corridor.

RLCT 3a: Floodplain Valleys landscape character type is host to the area/areas identified for the Cable Route Corridor and 0.5km from the outer boundary of the Cottam Power Station to the Cottam 1 Site/Sites.

RLCT 3a is considered to form part of the immediate landscape context for the Cottam Power Station to the Cottam 1 Site/Sites.

Environmental Statement Landscape and Visual Impact Assessment Appendix 8.2.2.2: Regional Overview Tables - Not Significant [Reference: EN010133/APP/C6.3.8.2.2.2.8] January 2023



Receptor susception into the character Value or iteration of creating and the construction. Sensitivity Character Sensitivity Character Cha				
ValuesValuesValuesColumnColum	Receptor susceptibility to change	Value of Receptor	Sensitivity	Embedded Mitigation
specific proposed change, because the relevant characteristics of the landscape have some ability to accommodate it without undue adverse effects, taking account of the existing character and quality of the landscape, and/or achievement of relevant planning policies and strategies.and its flood plain.Lighting required within panelled areas of be manually operated. There will be no lighting on perimeter fencing.The aim of the Floodplain Valleys should be to plant small-scale woodlands and linear riverineand its flood plain.Lighting required within panelled areas of be manually operated. There will be no lighting on perimeter fencing.	In terms of forces for change, the Floodplain Valleys aims to protect the open and unsettled character of the landscape from inappropriate development and that tree planting around settlement fringes can help with integration and help contribute to the overall perception of a well treed landscape. The changes from flood risk and engineered solutions are also changing the landscape, but there is potential for landscape restoration projects to assist with mitigation of this change. The potential for river landscape to change is also a key consideration, but there is potential to introduce positive landscape interventions such as biodiversity and nature conservation initiatives. Overall , the susceptibility of the Floodplain Valleys is conditioned by several key forces for change that have the potential to shape the future of the landscape. These include the impact of settlement on the edges of the river floodplain, the interventions associated with flood risk, the shifting of river channels, sand and gravel extraction and power and energy infrastructure. There are however also significant benefits to be gained from a range of landscape and biodiversity interventions. The landscape receptor is moderately susceptible to the proposed development, and a moderate ability to accommodate the specific proposed change, because the relevant characteristics of the landscape have some ability to accommodate it without undue adverse effects, taking account of the existing character and quality of the landscape, and/or achievement of relevant planning policies and strategies. The aim of the Floodplain Valleys should be to plant small-scale woodlands and linear riverine belts of planting or associated with lakes and	 <u>Scenic</u>: The Floodplain Valleys appeal to the visual senses in that vast stretches of the floodplain retain an intact and traditional character, despite the intrusion from sand and gravel extraction and power and energy infrastructure. <u>Cultural</u>: The landscape shows evidence of archaeology and built heritage particularly where there are road crossings over the river or views to farms and villages on drier, more elevated land. Marton is typical of the many settlements in the floodplain that are linear, stretching out along roads parallel to the main river channel. <u>Natural</u>: There are extensive expanses of semi-natural habitat along the river corridor including permanent grazing land interspersed with meandering river channels fringed by riparian habitats and riverside trees. Several former mineral sites are designated as Sites of Special Scientific Interest (SSSI). <u>Recreation and Enjoyment</u>: The Floodplain Valleys are valued for recreation and whilst there is a marked contrast between areas that remote, other areas close to settlements such Marton and Gate Burton have access to the floodplain landscape including core paths such as the Trent Valley Way. <u>Local Distinctiveness and Sense of Place</u>: The landscape has a 'strong sense of place' in that field patterns are largely geometric with the pattern breaking down in some places to create large areas of farmland. <u>Health and Wellbeing</u>: The floodplain landscape provides facilities that are well-used and valued by local communities and visitors including for informal recreation and nature, notably for overwintering birds. <u>Important Spatial Function</u>: The Floodplain Valleys are host to numerous gateways established at strategic river crossings where settlement is typically located at the edge of the floodplain with riverside settlements. Marton is typically agateway settlement with historic origins including the Grade I Listed Church of St Margaret of Antioch. The Grade	Character:There would generally be described as unique where vast stretches of floodplain retain an intact and traditional character.Quality:Areas have a positive landscape character with elements that would have a medium tolerance to change such as the unsettled character of the landscape that is competing with the impact of settlement on the edges of the floodplain.Value:The floodplain landscape provides facilities that are well-used and valued by local communities and visitors including for informal recreation and nature, notably for overwintering birds.Capacity:The remote areas have some vulnerability to unsympathetic development, but most landscape features are commonplace that	 (Year 1 and Year 15) and decommissioning stages of the Scheme. This Embedded Mitigation is also referred to as primary mitigation and would include the following measures: Panels to be set a minimum of 3m from Site boundaries. Site boundary fencing to be set back 5m from adjacent existing hedgerows to allow for proposed thickening and growth. Existing hedges are to be allowed to grow out and will be managed to a height of 5m. Hedgerow trees will be encouraged to grow out to add further thickening and growth to the field boundaries with the addition of new hedgerow trees as appropriate, randomly spaced along the length of existing hedges. Lighting will be limited to downlights within substations and battery banks only and used when maintenance or security is required. Lighting will be PIR operated and will be calibrated to vehicle and personnel movements. All visible lighting would be 50W, installed at a maximum height of 4m with cowls fitted to prevent light spillage. Lighting required within panelled areas will be manually operated. There will be no lighting on perimeter fencing. The landscape effects with only the Embedded Mitigation taken into account equate to those effects set out for the operation stage (Year 1) and this includes secondary mitigation which will have been carried out but will have had limited physical or landscape character impact at



Medium	Medium	Medium
l Listed Torksey Castle.		
Listed Torksey Lock and Footbridge and Grade		
associations at Torksey, including the Grade II		
locks and sluices. There are also strong cultural		
canalized sections of rivers and associated		
Historic sites include mill sites and races and		
villages is also a key consideration.		
distance views from surrounding towns and		
biodiversity benefits. The impact on long		
there is an opportunity to maximize		
landscape, but in producing restoration plans		
extraction is also a recognised feature of the		
The visual intrusion from sand and gravel		

Landscape Receptors - Cable Route Corridor (Cottam 1 Site/Sitesto Cottam Power Station)

The landscape and visual effects for the Cable Route Corridor (Cottam 1 Site/Sites to Cottam Power Station) Receptors are set out within the Viewpoint Receptor Sheets at Appendix 8.3.2.3 [C6.3.8.2.3.] and Appendix 8.3.2.4 [C6.3.8.3.2.4] the Residential Overview Sheets at Appendix 8.3.3.1 [C6.3.8.3.3.1] the Transport Overview Sheets at Appendix 8.3.4.1 [C6.3.8.3.4.1] and the PRoW Overview Sheets at Appendix 8.3.5.1 [C6.3.8.3.5.1].

In-Combination Effects [Cumulative Sites]	Cumulative Effects [Cumulative Developments]
In Summary The In-combination effects upon LCA – 3a of the Cable Route Corridor (Cottam 1 Site to Cottam Power Station) with the other Cumulative Sites (Cottam 1, 2 and 3a and 3b) is Negligible at year 1 of operation and Negligible at year 15 with mitigation. This is due to the limited impact upon the LCA as a result of the nature of the Scheme, the segregated nature of the Sites; together with the existing landscape character associated with the fabric of the landscape of the Sites and Study Area. The effects upon landscape character are unchanged.	<u>In Summary</u> The Cumulative Effects upon LCA – 3a of the Scheme with the other Cum and Negligible at year 15 with mitigation. This is due to the limited impac together with the existing landscape character associated with the fabric upon landscape character are unchanged.
	<i>Fabric of the Landscape</i> There would not be the removal of or changes in individual elements or
<u>Fabric of the Landscape</u> There would not be the removal of or changes in individual elements or features of the landscape within the character area.	There would be the introduction of new elements and features comprisi Station (CPS) and the Cottam 1 Site/Sites, heading north as a link from the west direction.
There would be the introduction of new elements and features comprising the Cable Route Corridor between Cottam Power Station (CPS) and the Cottam 1 Site/Sites extending across the character area in an east west direction and then heading south to link into the Cottam Power Station.	<u>Aesthetic Aspects of the Landscape</u> Refer to Figure 8.15.2.1 [C6.4.8.15.2.1] which shows that within the Cable developments would not be experienced across the majority of the 5km
<u>Aesthetic Aspects of the Landscape</u> Refer to Figure 8.15.1.1 [C6.4.8.15.1.1] which shows that within the Cable Route Corridor (CPS to Cottam 1 Site/Sites), cumulative visibility with the Cottam 1 Site/Sites, Cottam 2, and Cottam 3a and 3b Sites	woodlands, hedgerows, and tree cover between the Site/Sites. The interview unulative visibility.
would not be experienced across the majority of the 0.5km study area. This is due to the distance, the intervening woodlands, hedgerows, and tree cover between the Site/Sites. The intervening settlements and built form would also curtail cumulative visibility between these Site/Sites. There are very minor patches of cumulative intervisibility within the Cable Route Corridor.	There are local patches of cumulative visibility which may be focus of like and Gate Burton Energy Park, Tillbridge Solar and West Burton Solar Par within the following figures:
Users of linear routes, especially footpaths or other rights of way, or transport routes, may potentially experience the aesthetic aspects of the cumulative sites revealed in succession as a series of sequential views. For further details refer to the following detailed visual receptor sheets:	Figure 8.15.2.6 Cottam 1, 2, 3a and 3b Gate Burton Cumulative Develop Figure 8.15.2.8 Cottam 1, 2, 3a and 3b Tillbridge Solar Cumulative Develop Figure 8.15.2.9 Cottam 1, 2, 3a and 3b West Burton Cumulative Develop
Appendix 8.3.2.2 Individual Viewpoint Receptor Sheets [C6.3.8.3.2.2]	Overall Landscape Character of the Floodplain Valleys

Environmental Statement Landscape and Visual Impact Assessment Appendix 8.2.2.2: Regional Overview Tables - Not Significant [Reference: EN010133/APP/C6.3.8.2.2.2.8] January 2023

Not Applicable

umulative Developments is Negligible at year 1 of operation pact upon the LCA as a result of the nature of the Scheme, ric of the landscape of the Sites and Study Area. The effects

or features of the landscape within the character area.

ising the Cable Route Corridor between the Cottam Power the CPS then extending across the character area in an east

ble Route Corridor, cumulative visibility with the cumulative m study area. This is due to the distance, the intervening ervening settlements and built form would also curtail

likely significant effects, between the Cable Route Corridor Park. This cumulative visibility is set out in further detail

opments Augmented ZTV [C6.4.8.15.2.6] velopments Augmented ZTV [C6.4.8.15.2.8] opments Augmented ZTV [C6.4.8.15.2.9]



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	Appendix 8.3.2.3 Individual Viewpoint Receptor Sheets [C6.3.8.3.2.3]	Overall, the character of the Floodplain Valleys is shaped by is shaped by
	Appendix 8.3.2.4 Individual Viewpoint Receptor Sheets [C6.3.8.3.2.4]	with the impact of settlement on the edges of the river floodplain. The c
		crossing point are a key consideration in terms of the value of this lands
	Appendix 8.3.3.2 Individual Residential Receptor Sheets [C6.3.8.3.3.2]	landscape have some ability to accommodate change without undue ad
	Appendix 8.3.3.3 Individual Residential Receptor Sheets [C6.3.8.3.3.3]	visibility for the Cable Route Corridor would not alter the overall charact
		Area 3a.
	Appendix 8.3.4.2 Individual Transport Receptor Sheets [C6.3.8.3.4.2]	
	Appendix 8.3.4.3 Individual Transport Receptor Sheets [C6.3.8.3.4.3]	
	Appendix 8.3.5.2 Individual PRoW Receptor Sheets [C6.3.8.3.5.2]	
	Appendix 8.3.5.3 Individual PRoW Receptor Sheets [C6.3.8.3.4.3]	
	Overall Landscape Character of the Floodplain Valleys	
	Overall, the character of the Floodplain Valleys is shaped by is shaped by the unsettled character of a	
	landscape that is competing with the impact of settlement on the edges of the river floodplain. The	
	cultural associations linked to the river corridor as a historic crossing point are a key consideration in	
	terms of the value of this landscape character type. These relevant characteristics of the landscape have	
	some ability to accommodate change without undue adverse effects. The very minor patches of	
	cumulative visibility for the Cable Route Corridor would not alter the overall character of the landscape	
	within the Floodplain Valleys Character Area 3a.	
	Construction: Very Low	Construction: Very Low
	Operation (Year 1): Very Low	Operation (Year 1): Very Low
Magnitude	Operation (Year 1): with only Embedded Mitigation: Very Low	Operation (Year 1): with only Embedded Mitigation: Very Low
-	Operation (Year 15): Very Low	Operation (Year 15): Very Low
	Decommissioning: Very Low	Decommissioning: Very Low
	Construction: Adverse & Short Term	Construction: Adverse & Short Term
Type of	Operation (Year 1): Adverse & Long Term	Operation (Year 1): Adverse & Long Term
Effect	Operation (Year 1): with only Embedded Mitigation: Neutral & Long Term	Operation (Year 1): with only Embedded Mitigation: Neutral & Long Ter
Effect	Operation (Year 15): Neutral & Long Term	Operation (Year 15): Neutral & Long Term
	Decommissioning: Neutral & Short Term	Decommissioning: Neutral & Short Term
	Construction: Negligible Not Significant	Construction: Negligible Not Significant
Significance	Operation (Year 1): Negligible Not Significant	Operation (Year 1): Negligible Not Significant
of Effect	Operation (Year 1): with only Embedded Mitigation: Negligible Not Significant	Operation (Year 1): with only Embedded Mitigation: Negligible Not Sign
oreflect	Operation (Year 15): Negligible Not Significant	Operation (Year 15): Negligible Not Significant
	Decommissioning: Negligible Not Significant	Decommissioning: Negligible Not Significant

by the unsettled character of a landscape that is competing e cultural associations linked to the river corridor as a historic dscape character type. These relevant characteristics of the adverse effects. The very minor patches of cumulative acter of the landscape within the Floodplain Valleys Character

erm

ignificant



Landscape Receptor – Regional Scale Landscape Character – 4a: Unwooded Vales – Cable Route Corridor (Cottam Power Station to Cottam 1 Site)

Receptor Baseline:

Within Cottam Power Station (CPS) to Cottam 1 Site/Sites, at a regional scale, landscape character is assessed within the East Midlands Regional Landscape Character Assessment as forming part of RLCT Profile: 4a Unwooded Vales, which is shown on Figure 8.5 [C6.4.8.5]. Unwooded Vales extend into the area/areas identified for the Cable Route Corridor and 0.5km from the outer boundary.

Key Features:

The landscape mainly comprises of productive arable and pastoral farmland, but there are areas of cereal and vegetable cropping to the east of Willingham by Stow around Stone Pit Lane where hedgerow removal has created some very large fields under single crop. Most of the Unwooded Vales retain a deeply rural and tranquil character, with farms and small nucleated villages located throughout areas of productive farmland, linked by narrow winding lanes and roads. Watercourses are often bordered by a narrow alluvial floodplain that wind through the landscape along shallow valleys, appearing little more than gentle folds in the landscape. This pattern of drainage is particularly evident between the settlement of Coates and Normanby by Stow and Willingham by Stow to the west of the Cottam 1 Site/Sites. This area boasts an extensive network of field drains including tributaries of the River Till that are only discernable by tracing alder and willow trees, rusty pastures, and belts of riparian habitat across the landscape. There are localized concentrations of woodland cover between Coates and Willingham by Stow that include Normanby Gorse and New Plantation, despite the overall tendency for limited woodland cover across the area.

Character Context:

This landscape character type offers expansive long-distance views from higher ground at the margin of the Vales that gives a sense of visual containment. Within this landscape character type there is limited woodland cover which is a heavy contrast to Wooded Vales landscape character type that is often seen close to Unwooded Vales. There are however localized concentrations of woodland cover to the northeast of Thorpe le Fallows including Brattleby Thorns, Brattleby Gorse, Beck Spinney, Horse Covert and Poplar Wood. The landscape type hosts sparse small villages and dispersed farms all linked together with rural lanes. Key characteristics of the Unwooded Vales is that they are extensive, low lying rural landscape underlain by Triassic and Jurassic mudstone and clays and widespread superficial deposits that generally give rise to low, gently undulating landform which add to the intimacy of the landscape. Occasionally, these hills and ridges rise out of the Vales such as Thorpe le Fallows, which rises to 10m AOD above the surrounding area. These ridges also mark the watersheds between watercourses since the landscape character type also hosts complex drainage patterns (River Till) of watercourses that flow within the shallow undulations often flanked by pasture and riparian habitats.

Cottam Power Station to the Cottam 1 Site/Sites is mainly located within RLCT 4a: Unwooded Vales, apart from the area to the west of the A156 (Lincoln Road) which falls within RLCT 3a: Floodplain Valleys. The land area is found to the north and south of Ingham Road and in the context of the settlements of Coates, Thorpe in the Fallows, Sturton by Stow, Bransby, Kexby, Willingham by Stow, Normanby by Stow and Stow.

RLCT 4a: Unwooded Vales landscape character type is main host to the area/areas identified for the Cable Route Corridor and 0.5km from the outer boundary of the Cottam Power Station to Cottam 1 Site/Sites.

RLCT 4a is considered to form part of the immediate landscape context for the Cottam Power Station to Cottam 1 Site/Sites.

Environmental Statement Landscape and Visual Impact Assessment Appendix 8.2.2.2: Regional Overview Tables - Not Significant [Reference: EN010133/APP/C6.3.8.2.2.2.9] January 2023



Receptor susceptibility to change	Value of Receptor	Sensitivity	Embedded Mitigation
Acceptor susceptibility to change In terms of forces for change, the Unwooded Vales aims to protect existing rural landscape features, in particular the restoration of hedgerows since the most widespread change has been in agricultural intensification and the change from pastoral to arable cropping that has resulted in the loss of hedges, and consequently, increase in field size. The loss of pasture is particularly evident around settlements, where grazing animals and smaller field sizes contribute to the setting and structure of several villages. Many of the rural villages have not seen widespread expansion but development pressures continue with the demand for housing, commerce and industry creating visual intrusion. Dverall, the susceptibility of the Unwooded vales is conditioned by managing growth, ensuring development is appropriate in terms of type, scale, and location. The flat, open andscape is also a key consideration and whilst the aim is to plan new tree planting around key settlements, woodland does not form a significant component of this andscape, and in consideration of its open and expansive character, extensive new woodland planting would be inappropriate. The landscape receptor is moderately susceptible to the proposed development, and a moderate ability to accommodate the specific proposed change, because the relevant characteristics of the landscape have some ability to accommodate it without undue adverse effects, taking account of the existing character and quality of the landscape, and/or achievement of relevant planning policies and strategies. The aims for the Unwooded Vales should be to plan new tree planting around key settlements and other suitable locations. Trees should be typically grouped in small plantations/copses or as individual trees within hedgerows. The creation of new hedgerows and permanent basture along watercourses is also a priority,	Value of Receptor Scenic: The Unwooded Vales appeal to the visual senses where the roads and watercourses combine to give a subtle grain to the landscape. The interruptions at the bridge crossing provide local points of interest and the opportunity to capture views across the landscape to the higher landform fringing the Vales. Cultural: The landscape shows evidence of historic settlement with farms and nucleated villages and small hamlets such as Thorpe le Fallows and Coates. The landscape surrounding these settlements is shaped by farms linked by minor lanes and roads. Natural: The extensive expanses of semi-natural habitat, rivers and streams are an important landscape feature such as the River Till where the course can be observed by tracing sinuous belts of riparian habit and riverside trees, particularly within the area to the south of Ingham Road. Recreation and Enjoyment: The Unwooded Vales are valued for recreation where panoramic views are possible from elevated locations from rising land at the edges of the Vales. Whilst the landform of the Unwooded Vales is typically low and subdued, rising landform often provides locations where gimpses of neighboring elevated lands are often sufficient to provide a cense of place and add to the recreation and enjoyment of the area. Typically, these locations occur around Thorpe le Fallows and Coates. Local Distinctiveness and Sense of Place; The landscape has a 'strong sense of place' with major landform features flanking the lower lying areas valer intact hedgerows and belts of riverside trees truncate views. Health and Wellbeing: The Unwooded Vales provide a very limited network of PRoW leading to the dependence on the more direct arterial routes that run east to west across the area linked by a series of narrow straight lanes. <td>SensitivityCharacter: The roads and watercourses combine to give a subtle grain to the landscape. The interruptions at the bridge crossing provide local points of interest and the opportunity to capture views across the landscape.Quality: Agricultural intensification and the change from pastoral to arable cropping that has resulted in the loss of hedges, and consequently, increase in field size. The loss of pasture is evident around settlements. Overall, the networks of hedgerows and hedgerow trees gain significance in offering a refuge for birds and insects.Value: The landscape shows evidence of historic settlement with farms and nucleated villages and small hamlets such as Thorpe le Fallows and Coates. The landscape surrounding these settlements retain a deeply rural and tranquil character. There are Roman roads that pass across the area such as Tillbridge Lane indicating that these low-lying areas provided convenient routes through the hills and wetlands.Capacity: Some scope for landscape change since the landscape benefits from high levels of visual containment due to the local landform, hedgerows, and shelterbelts.</td> <td>Embedded Mitigation would be taken into account at the construction, operation (Year 1 and Year 15) and decommissioning stages of the Scheme. This Embedded Mitigation is also referred to as primary mitigation and would include the following measures: Panels to be set a minimum of 3m from Site boundaries. Site boundary fencing to be set back 5m from adjacent existing hedgerows to allow for proposed thickening and growth. Existing hedges are to be allowed to grow out and will be managed to a height of 5m Hedgerow trees will be encouraged to grow out to add further thickening and growth to the field boundaries with the addition of new hedgerow trees as appropriate, randomly spaced along the length of existing hedges. Lighting will be limited to downlights within substations and battery banks only and used when maintenance or security is required. Lighting will be PIR operated and will be calibrated to vehicle and personnel movements. All visible lighting would be 50W, installed at a maximum height of 4m with cowls fitted to prevent light spillage. Lighting required within panelled areas will be manually operated. There will be no lighting on perimeter fencing. The landscape effects set out for the operation stage (Year 1) and this includes secondary mitigation which will have been carried out but will have had limited physical or landscape character impact at this Embedded Mitigation stage.</td>	SensitivityCharacter: The roads and watercourses combine to give a subtle grain to the landscape. The interruptions at the bridge crossing provide local points of interest and the opportunity to capture views across the landscape.Quality: Agricultural intensification and the change from pastoral to arable cropping that has resulted in the loss of hedges, and consequently, increase in field size. The loss of pasture is evident around settlements. Overall, the networks of hedgerows and hedgerow trees gain significance in offering a refuge for birds and insects.Value: The landscape shows evidence of historic settlement with farms and nucleated villages and small hamlets such as Thorpe le Fallows and Coates. The landscape surrounding these settlements retain a deeply rural and tranquil character. There are Roman roads that pass across the area such as Tillbridge Lane indicating that these low-lying areas provided convenient routes through the hills and wetlands.Capacity: Some scope for landscape change since the landscape benefits from high levels of visual containment due to the local landform, hedgerows, and shelterbelts.	Embedded Mitigation would be taken into account at the construction, operation (Year 1 and Year 15) and decommissioning stages of the Scheme. This Embedded Mitigation is also referred to as primary mitigation and would include the following measures: Panels to be set a minimum of 3m from Site boundaries. Site boundary fencing to be set back 5m from adjacent existing hedgerows to allow for proposed thickening and growth. Existing hedges are to be allowed to grow out and will be managed to a height of 5m Hedgerow trees will be encouraged to grow out to add further thickening and growth to the field boundaries with the addition of new hedgerow trees as appropriate, randomly spaced along the length of existing hedges. Lighting will be limited to downlights within substations and battery banks only and used when maintenance or security is required. Lighting will be PIR operated and will be calibrated to vehicle and personnel movements. All visible lighting would be 50W, installed at a maximum height of 4m with cowls fitted to prevent light spillage. Lighting required within panelled areas will be manually operated. There will be no lighting on perimeter fencing. The landscape effects set out for the operation stage (Year 1) and this includes secondary mitigation which will have been carried out but will have had limited physical or landscape character impact at this Embedded Mitigation stage.



Medium	Medium	Medium
widespread change in the rural landscape.		
and change to arable cropping has stimulated		
In recent decades, the productivity of the land		
effects.		
accommodate change without undue adverse		
landscape therefore have a moderate ability to		
landscape. The relevant characteristics of the		
maintain the perception of a 'well-treed'		
and around settlements to increase the occurrence of semi-natural habitats and		
appropriate tree planting that could be used in		
However, there is significant benefit with		
development into the landscape.		
settlement fringes to help integrate new		
Design Statements, and tree planting around		
villages, specific mechanisms include Village		
For development associated with the rural		
areas, with gaps and rew nedgerow areas.		
areas, with gaps and few hedgerow trees.		
nevertheless evidence of decline in several		
hedgerow network is generally strong, there is		
natural habitats. Although the remaining		

Landscape Receptors – Cable Route Corridor (Cottam 1 Site/Sites to Cottam Power Station)

The landscape and visual effects for the Cable Route Corridor (Cottam 1 Site/Sites to Cottam Power Station) Receptors are set out within the Viewpoint Receptor Sheets at Appendix 8.3.2.3 [C6.3.8.2.3.] and Appendix 8.3.2.4 [C6.3.8.3.2.4] the Residential Overview Sheets at Appendix 8.3.3.1 [C6.3.8.3.3.1] the Transport Overview Sheets at Appendix 8.3.4.1 [C6.3.8.3.4.1] and the PRoW Overview Sheets at Appendix 8.3.5.1 [C6.3.8.3.5.1].

In-Combination Effects [Cumulative Sites]	Cumulative Effects [Cumulative Developments]
In Summary	In Summary
The In-combination effects upon LCA – 4a of the Cable Route Corridor (Cottam Power Station to Cottam 1 Site) with the other Cumulative Sites (Cottam 1, 2 and 3a and 3b) is Minor at year 1 of operation and Negligible at year 15 with mitigation. This is due to the limited impact upon the LCA as a result of the nature of the Scheme, the segregated nature of the Sites; together with the existing landscape character associated with the fabric of the landscape of the Sites and Study Area. The effects upon landscape character are reduced.	The Cumulative Effects upon LCA – 4a of the Scheme with the other Cu operation and Negligible at year 15 with mitigation. This is due to the li nature of the Scheme, together with the existing landscape character a Sites and Study Area. The effects upon landscape character are reduce
<i>Fabric of the Landscape</i> There would not be the removal of or changes in individual elements or features of the landscape within the character area.	<i>Fabric of the Landscape</i> There would not be the removal of or changes in individual elements o area.
There would be the introduction of new elements and features comprising the Cable Route Corridor between the Cottam Power Station (CPS) and the Cottam 1 Site/Sites, heading north as a link from the CPS then extending across the character area in an east west direction.	There would be the introduction of new elements and features comprise Cottam Power Station (CPS) and the Cottam 1 Site/Sites, heading northe the character area in an east west direction.
<u>Aesthetic Aspects of the Landscape</u>	<u>Aesthetic Aspects of the Landscape</u> Refer to Figure 8.15.2.1 [C6.4.8.15.2.1] which shows that within the Cab cumulative developments would not be experienced across the majori

Environmental Statement Landscape and Visual Impact Assessment Appendix 8.2.2.2: Regional Overview Tables – Not Significant [Reference: EN010133/APP/C6.3.8.2.2.2.9] January 2023

Not Applicable

Cumulative Developments is Minor at year 1 of e limited impact upon the LCA as a result of the r associated with the fabric of the landscape of the iced.

or features of the landscape within the character

prising the Cable Route Corridor between the rth as a link from the CPS then extending across

Cable Route Corridor, cumulative visibility with the ority of the 5km study area. This is due to the



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SOLAR PROJECT	 Refer to Figure 8.15.1.1 [C6.4.8.15.1.1] which shows that within the Cable Route Corridor, cumulative visibility with the Cottam 1 Site/Sites, Cottam 2, and Cottam 3a and 3b Sites would not be experienced across the majority of the 0.5km study area. This is due to the distance, the intervening woodlands, hedgerows, and tree cover between the Site/Sites. The intervening settlements and built form would also curtail cumulative visibility between these Site/Sites. There are very minor patches of cumulative intervisibility towards the southern part of the study area, comprising the area/s: west of Sturton by Stow, extending from Marton Road in the south as far as Normanby by Stow in the north. There are very minor patches of cumulative intervisibility towards the western part of the study area, comprising the area/s: northeast of Marton, to the south of Clay Lane. Users of linear routes, especially footpaths or other rights of way, or transport routes, may potentially experience the aesthetic aspects of the cumulative sites revealed in succession as a series of sequential views. For further details refer to the following detailed visual receptor sheets: Appendix 8.3.2.2 Individual Viewpoint Receptor Sheets [C6.3.8.3.2.2] Appendix 8.3.2.2 Individual Viewpoint Receptor Sheets [C6.3.8.3.2.2] Appendix 8.3.3.1 Individual Residential Receptor Sheets [C6.3.8.3.3.2] Appendix 8.3.3.2 Individual Residential Receptor Sheets [C6.3.8.3.3.2] Appendix 8.3.4.2 Individual Transport Receptor Sheets [C6.3.8.3.4.2] Appendix 8.3.5.2 Individual PRoW Receptor Sheets [C6.3.8.3.4.2] Appendix 8.3.5.2 Individual PRoW Receptor Sheets [C6.3.8.3.4.3] Appendix 8.3.5.2 Individual PROW Receptor Sheets [C6.3.8.3.4.3] Appendix 8.3.5.2 Individual PROW Receptor Sheets [C6.3.8.3.4.3] Appendix 8.3.5.3 Individual PROW Receptor Sheets [C6.3.8.3.4.3] Appendix 8.3.5.3 Ind	distance, the intervening woodlands, hedgerows, and tree cover betwee and built form would also curtail cumulative visibility. There are local patches of cumulative visibility which may be focus of lik Corridor and Gate Burton Energy Park, Tillbridge Solar and West Burtor in further detail within the following figures: Figure 8.15.2.6 Cottam 1, 2, 3a and 3b Gate Burton Cumulative Develop Figure 8.15.2.8 Cottam 1, 2, 3a and 3b Tillbridge Solar Cumulative Develop Figure 8.15.2.9 Cottam 1, 2, 3a and 3b West Burton Cumulative Develop Overall Landscape Character of the Unwooded Vales Overall, the character of the Unwooded Vales Overall, the character of the Unwooded Vales is shaped by the strong at a strong sense of rural tranquility. In contrast, the low levels of woodlar landscape comprising an arable land use within a scattered pattern of s east to west and a more strategic road network north to south. These r some ability to accommodate change without undue adverse effects. Ti Cottam 1 Site/Sites would not alter the overall character of the landscap
	relevant characteristics of the landscape have some ability to accommodate change without undue adverse effects. The cumulative visibility for the Cable Route Corridor (CPS to the Cottam 1 Site/Sites) would not alter the overall character of the landscape within the Unwooded Vales Character Area 4a. Construction: Low	Construction: Low
Magnitude	Operation (Year 1): Low Operation (Year 1): with only Embedded Mitigation: Low Operation (Year 15): Very Low Decommissioning: Very Low	Operation (Year 1): Low Operation (Year 1): with only Embedded Mitigation: Low Operation (Year 15): Very Low Decommissioning: Very Low
Type of Effect	Construction: Adverse & Short Term Operation (Year 1): Adverse & Long Term Operation (Year 1): with only Embedded Mitigation: Neutral & Long Term Operation (Year 15): Neutral & Long Term Decommissioning: Neutral & Short Term	Construction: Adverse & Short Term Operation (Year 1): Adverse & Long Term Operation (Year 1): with only Embedded Mitigation: Neutral & Long Ter Operation (Year 15): Neutral & Long Term Decommissioning: Neutral & Short Term
Significance of Effect	Construction: Minor Not Significant Operation (Year 1): without Mitigation Minor Not Significant Operation (Year 1): with only Embedded Mitigation: Minor Not Significant Operation (Year 1): Negligible Not Significant Decommissioning: Negligible Not Significant	Construction: Minor Not Significant Operation (Year 1): Minor Not Significant Operation (Year 1): with only Embedded Mitigation: Minor Not Signific Operation (Year 1): Negligible Not Significant Decommissioning: Negligible Not Significant

ween the Site/Sites. The intervening settlements

likely significant effects, between the Cable Route ton Solar Park. This cumulative visibility is set out

lopments Augmented ZTV [C6.4.8.15.2.6] evelopments Augmented ZTV [C6.4.8.15.2.8] elopments Augmented ZTV [C6.4.8.15.2.9]

agricultural presence, with wide areas retaining land cover create a relatively open and expansive f settlement, linked by a series of minor roads e relevant characteristics of the landscape have . The minor patches of cumulative visibility for the cape within the Unwooded Vales Character Area.

Term

ficant



Landscape Receptor – Land Use (Cottam 1 Site/Sites)

Receptor Baseline:

Within the Cottam 1 Site/Sites, at a regional scale, landscape character is assessed within the East Midlands Regional Landscape Character Assessment as forming part of RLCT Profile: 4a Unwooded Vales, which is shown on Figure 8.5 [C6.4.8.5].

The Site/Sites within Cottam 1 (2km Study Area) can be sub-divided into two distinct land areas:

- Cottam 1 North
- Cottam 1 South

Key Features:

The adjoining escarpment of the Lincolnshire Edge defines this low-lying landscape to the east, this is an important Land Use feature for both Cottam 1 North and South Sites.

Cottam 1 North:

The landscape mainly comprises a land use of open arable and pastoral farmland, but there are areas of cereal and vegetable cropping to the east of Willingham by Stow, particularly around Stone Pit Lane where hedgerow removal has created some very large fields under single crop. A collection of larger field systems are also found, further west, to the south of Willingham Road, which are mainly located to the east of Larch Plantation and New Plantation. These larger field systems are regular and geometric in pattern, some of which are divided by ditches and dykes. In contrast, there are smaller scale field systems to the east of Stow Road and Normanby Road where the landscape is more pastoral with thickly hedged fields, and small tributaries of the River Till form crossing points at the junction with the local lanes. There are fewer watercourses to the east of the area around Coates as this is where the landscape becomes more elevated towards the distinct Jurassic Limestone Scarp slope that runs north from Lincoln. Long, straight roads are mainly absent from this area, apart from Ingham Road, and many take a right angle turn or lead into smaller tracks where they reach their destination at isolated dwellings or farmsteads. Settlement pattern is nucleated, mainly comprising Willingham by Stow and Kexby to the west and Glentworth and Fillingham to the east.

Cottam 1 South:

The landscape mainly comprises of larger field systems that are regular and geometric in pattern, except where they are dissected by the meandering alignment of the River Till. A smaller number of fields are divided by ditches and dykes, relative to the Cottam 1 North Site, but are fields remain separated by hedgerows with trees. There are fewer minor tributaries of the River Till in this area, relative to the Cottam 1 North Site and the small number of drainage ditches that do feed into the River Till mainly follow a straight alignment running in an east to west direction. The landscape is also punctuated by small roads running in a predominantly east west orientation across the landscape. These long, straight roads are more abundant in this area, relative to the Cottam 1 North Site and many are bordered by isolated farmsteads and residential dwellings, often with mown grass verges that add elements of domestic character to these lanes. Settlement pattern to the east of the Cottam 1 South Site includes Ingham, Cammeringham and Brattleby. Woodland is mainly concentrated to the west of Cammeringham and Brattleby and includes geometric shaped shelterbelts and woodland plantations consisting of predominantly native species with large polpar specimens in shelterbelts.



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Receptor susceptibility to change	Value of Receptor	Sensitivity	Embedded Mitigation
In terms of forces for change for Cottam 1	Scenic: Agriculture is the dominant land use, with most of the land being used for growing	<u>Character:</u> The larger field	Embedded Mitigation would be taken into
Site/Sites Land Use, recent trends have shown	cereals, oilseeds, and other arable crops. The landscape reveals views of an open nature	systems are the key feature,	account at the construction, operation
that poor hedgerow condition is	beneath vast skies that are often extensive and uninterrupted.	especially where they form a	(Year 1 and Year 15) and decommissioning
commonplace across the area with		geometric and regular pattern	stages of the Scheme. This Embedded
hedgerows often excessively trimmed and	<u>Cultural:</u> A predominantly rural and sparsely settled area with small villages and dispersed farms	with thickly hedged fields.	Mitigation is also referred to as primary
gappy and that few surviving trees are in poor	and residential dwellings linked by long straight roads and a network of minor tracks which		mitigation and would include the following
condition. There has also been a steady	follow the geometric field patterns.	<u>Quality:</u> Although commonplace,	measures:
decline in permanent pasture and conversion		the field hedgerows are	
to arable uses. In terms of settlement, the	<u>Natural</u> : Very little semi-natural habitat remains across the area, apart from habitat associated	consistent, strong features and	Site boundary fencing to be set back 5m
road networks across the area have included	with the River Till and its tributaries, which provides a strong feature running through the	generally in good condition.	from adjacent existing hedgerows to allow
the construction of bridges, embankments,	landscape.		for proposed thickening and growth.
roundabouts, and associated infrastructure		<u>Value:</u> Wide panoramic views are	
has resulted in increased connectivity across	<u>Recreation and Enjoyment:</u> The public right of way (PRoW) network is limited apart from a few	possible, and the simple palette	Let existing hedges grow out and managed
the area adding to further noise and visual	north south routes that connect between the long straight roads running east to west across the	of land use and low-lying terrain	at 5m. Encourage hedgerow trees to grow
intrusion on the lowland areas that are	area.	gives visual unity and a strong	out within existing hedges to add further
located between these major routes, due to		sense of identity.	thickening and growth within the field
increased traffic movements.	Local Distinctiveness and Sense of Place: A regular pattern of medium to large fields are enclosed		boundaries.
	by hawthorn hedges and ditches dominate the landscape. A simple palette of land uses and low-	<u><i>Capacity:</i></u> The landscape has	
Overall, the susceptibility of the Land Use for	lying terrain gives visual unity and a strong sense of identity.	some scope for landscape	Lighting will be limited to downlights within
the Cottam 1 Site/Sites is conditioned by the		change since the features are	substations and battery banks only and
need to conserve rural settlement pattern	<u>Health and Wellbeing</u> : There is a strong sense of remoteness, due to the area being in expansive	generally commonplace and	used when maintenance or security is
and ensuring that new development is	agriculture with medium to large scale field systems. Access to these remote areas is mainly	could be readily replaced.	required. Lighting will be PIR operated and
complimentary to intrinsic local character.	confined to the long, straight roads since PRoW connections are limited across the area.		will be calibrated to vehicle and personnel
The aim is to ensure that new developments			movements. All visible lighting would be
are integrated well with adequate, well-	Important Spatial Function: The predominance of large-scale agriculture and limited settlement		50W, installed at a maximum height of 4m
designed, green infrastructure since the areas	and development provides an important spatial function centered within a landscape to the east		with cowls fitted to prevent light spillage.
of semi-natural habitat are very limited and	of the River Trent.		Lighting required within panelled areas will
fragmented. Hedgerow quality tends to be			be manually operated. There will be no
low – often tightly trimmed, gappy and	Overall, the value of the Land Use for the Cottam 1 Site/Sites is shaped by this being an		lighting on perimeter fencing.
species-poor. However, there are significant	extensive low-lying landscape with relatively limited woodland cover, where shelterbelts and		
opportunities to restore and manage	hedgerow trees gain greater visual significance as a result. As the area has been extensively		The landscape effects with only the
hedgerows, where they have been lost and	farmed over a long period, very little semi-natural habitat remains, and the agricultural		Embedded Mitigation taken into account
enhance tree cover. The relevant	intensification has diminished the 'sense of place' in parts. This has included drainage of flood		equate to those effects set out for the
characteristics of the landscape therefore	plains, conversion of pasture to arable, removal of hedgerows, loss of old farm buildings and		operation stage (Year 1) and this includes
have some ability to accommodate change	damage to historical remains.		secondary mitigation which will have been
without undue adverse effects given there is			carried out but will have had limited
scope to restore the habitats and landscape			physical or landscape character impact at
features that have been lost through			this Embedded Mitigation stage.
agricultural intensification.			
Medium (5km Study Area)	Medium (5km Study Area)	Medium	
Medium (Site/Sites)	Medium (Site/Sites)	Medium	



Construction	Operation (Year 1)	Operation (Year 15)	Decommissioning
Activities during site preparation /	Both the Cottam 1 North Site and Cottam 1 South Site are intensively	The effects at the Operational Phase at Year 15	A similar process to that of
enabling works, construction, and	managed arable landscapes with some varied features but predominantly a	without Mitigation equate to those effects at	construction stage, but with the
commissioning with effects such as	wide and exposed landscape to many parts. A gradual decline in permanent	the beginning of Year 1 before any secondary	Scheme being no longer operationa
-	pasture can be reversed. Field sizes and boundaries vary, and opportunities	mitigation has been applied. Mitigation	This is an assessment of the Site in
	exist to reinforce the character of both Sites.	embedded in the design will apply as will the	winter but assumes retention of
generation, site runoff, mud on roads,		growing out of the existing hedges.	existing vegetation and builds upor
	Consider without in such as planting, and such as directed in the tables into	growing out of the existing nedges.	proposed primary and secondary
machinery on site. At the early stages of	Secondary mitigation such as planting, and grass seeding would be taken into	With secondary mitigation such as planting and	mitigation that had been established
the construction stage, ground, and	account at this stage to include the following changes to the landscape:	grass seeding being taken into account at the	the future baseline. Effects are tho
lower-level activities such as the		• • •	
	<u>Cottam 1 North Site:</u>	operational stage (Year 15) the following	arising from activities for the durat
	Within the Cottam 1 North Site, the strong east/west road network and	changes to the landscape would occur and the	of the decommissioning to include
and associated infrastructure and	watercourse routes are key features that could be enhanced to strengthen the	effects are set out below.	traffic, noise and vibration from
inverters would predominantly be	overall character and to better define these elements across the landscape.		decommissioning activities, dust
screened by existing vegetation.	Existing woodland within the Site/Sites also offer the opportunity to enhance	Views to the north, south, east, and west of the	generation and site runoff.
	and improve the biodiversity to manage a layered woodland edge leading to	Cottam 1 Site/Sites will be screened in close-	
During the latter part of the construction	tussock and flower rich grassland mixes.	mid range proximity due to the new hedgerow	Following decommissioning, the la
stage, views would become available of		and shelterbelt planting and the enhancement	likely to be returned to arable
the elevated activities above the	Strong shelterbelt and hedge planting around existing properties including	of existing hedges which will be managed to a	production. The Site will however
hedgerows, but these would be limited	Turpin Farm will help to integrate these into the landscape as well as improve	height of 5m. These new and augmented	benefit from the significantly enha
and would not affect the integrity of the	strong green corridors and visually link areas of woodland.	hedgerows will provide a series of good quality	tree and hedgerow planting that h
waterways and local topography at all.		field boundaries both formally strengthening	been carried out and has matured
	Cottam 1 South Site:	the existing and historical field pattern and	create a much stronger and robus
Other works would be undertaken in	Within the Cottam 1 South Site, the strong rectilinear field pattern is a key	creating a multi-layered landscape. Scattered	landscape, retaining, and enhancir
connection with the construction	feature to be enhanced with new hedge planting where appropriate.	tree belts will follow the routes of existing	the overall character and providing
including fencing, gates, boundary	reactive to be enhanced with new nedge planting where appropriate.	watercourses, strengthening their visibility in	considerable biodiversity benefits
	Linear belts of scattered trees to the south and east of the Cottam 1 South Site	the wider landscape. Views of the longer	the years. Bird mitigation fields and
		distance, where hedgerows do not block these,	wetland grazing marshes are likely
	will also help to increase the level of tree cover locally and visually and	will be of a layered, well treed landscape with a	be retained and the potential may
and the first of the second	physically link to existing woodlands such as Thorpe Wood, Cammerinham	backdrop of some wooded vegetation in places	to retain grass margins to maintain
There would also be landscape and	Low Covert and Brattleby Gorse, through enhanced hedgerows.	on the horizon. Both new and existing	some varied land use and a high le
The second se		vegetation will have established and begun to	of biodiversity in the local area.
	Where hedgerows have been previously managed to create low, neat field		of blodiversity in the local area.
planting and the improvement of existing hedgerows to all boundaries of	boundaries, these are to be allowed to grow out and managed to a height of	mature, creating a much stronger structure to the landscape, and retaining and enhancing the	Without Secondary Mitigation hav
	5m with the addition of irregularly spaced hedgerow trees. This will have the	overall character of the area.	
the Site/Sites.	effect of varying the land use locally whilst open views across the landscape,	overall criaracter of the area.	been applied throughout the sche
These shout lived as not wetting a sticities	particularly from the east to the west still available where arable cultivation is		the only change to the views/lands
These short-lived construction activities	retained.	The proposed grassland will have established	following decommissioning would
would not adversely affect the land use.		and will have settled into its natural scheme	the existing hedgerows which will
	Shelterbelt planting adjacent to the watercourses running east/west will help	with some minor appropriate management of	been allowed to grow out and will
land use which will be beneficial to soils	to define these landscape elements within the wider landscape and create	differing regimes. The soil quality will be	been managed to a height of 5m. I
and watercourses, significantly	valuable and diverse habitats.	considerably improved through the lack of	assumed that these will be retained
increasing the biodiversity and helping		cultivation and the chemical run-off will be	
to capture carbon. The field boundaries	Within the Cottam 1 West Site, adjacent to the River Till, scattered riparian tree	reduced around the Site/Sites enhancing the	With Mitigation, the negative effect
and the associated tree cover would	belts will clearly define this feature across the broader landscape and will	water quality generally. There will be	the physical decommissioning will
remain intact and help with visual	provide valuable and varied biodiversity benefits with riparian habitats and	considerable biodiversity gains through the	balanced out by the long term
layering across the landscape and the	grassland mixes.	establishment of the varied grassland types and	landscape and visual effects of this
integration of the new panels.		regimes and a long-term increase in pollinator	mitigation.
	A greater mix of land use will also be attained through the creation of bird	species and bird and other species and	
	mitigation habitat fields to the east of the Site, creating valuable biodiversity	numbers locally.	
and of the wider area is able to	benefits for a large number of species.		
accommodate the changes that arise	of the second seco	Growth of existing and proposed vegetation is	
through the construction of the Site	Belts of native trees adjacent to properties and watercourses to the north,	assumed to be:	
	southeast and east of the Site will augment the tree cover locally and help to		



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integrity of all features will be retained	visually link areas of woodland across the landscape, whilst providing valuable	Woodland/trees and shelterbelts: 2.5m max at
and enhancement at ground level	biodiversity benefits and better defining these watercourses.	Year 1, 7.5m max at Year 15.
through initial grassland planting will		New hedgerows: 0.6m at Year 1 and 3.5m at
have beneficial effects from the outset.	New hedgerows will replace those lost to intensive agriculture whilst infilling	Year 15.
	with strengthen those existing which have been overmanaged.	
		Existing hedgerows: 0.9m at Year 1 and 5m at
	Varied grassland mixes will provide habitats for pollinator and pest regulating	Year 15.
	species with flower rich and tussock mixes around existing and proposed	
	hedgerows and shelterbelts. Tall herb mixes adjacent to watercourses will	Shrubs: 0.9m at Year 1 and 5m at Year 15.
	provide an open habitat for a wide variety of species whilst further defining	Overall, following mitigation at Year 15, the
	the riparian landscape.	Cottam 1 Site/Sites are able to accommodate
	the riparian lanuscape.	
		the proposed change without undue adverse
	Instead of the somewhat bland and monotypic arable landscape, the	effects and will achieve considerable beneficial
	development will create a series of interlinked habitats with strong field	effects in terms of varied land use
	boundaries dividing the Sites with an overall much greater level of tree cover.	improvements as well as improved carbon
	This will enhance the local character generally and integrate development into	capture and significantly increased biodiversity
	the landscape.	around the Site.
		New hedgerows will replace those lost to
	Large areas of varied grassland mixes across the Cottam 1 Site/Sites will	intensive agriculture whilst infilling with
	significantly enhance the landscape in physical terms with varied management	strengthen those existing which have been
	regimes ensuring that the biodiversity potential is maximised. Potential exists	overmanaged.
	for limited sheep grazing around the Site for short periods, comprising low	
	density grazing in line with conservation methods.	By Year 15, the proposed mitigation will have
		established and begun to mature. Existing
	The Scheme and its associated landscape mitigation will break up the over	vegetation will have grown out and will be
	intensified local arable landscape and significantly diversify the land-use in the	enhanced with additional tree species. The
	local area.	overall scene will be somewhat more intimate,
	A greater mix of land use will also be attained through the creating of bird	with tall hedges in places and trees dotted
	mitigation habitat fields to the east of the Site, creating valuable biodiversity	along roads, watercourse, and field boundaries.
	benefits for several species.	
		Historic field patterns will also have been
	Although new vegetation will be immature, existing hedgerows will have	restored where possible.
	begun to grow out at Year 1 and the varied grassland areas will have become	
	established, starting to create valuable habitats.	There will be a good mix of landscape elements
		locally and the use of grassland wildflower
	Overall, following mitigation at Year 1, the Cottam 1 Site/Sites is able to	mixes and some areas of low-level grazing will
	accommodate the proposed change without undue adverse effects and will	create a much wider mix of habitats whilst
	achieve some beneficial effects from the outset.	retaining or enhancing some panoramic views
		from the east.
	Between Years 1 and 15, the following beneficial effects will be achieved in	
	terms of Land Use:	Overall, following mitigation at Year 15, the
	- Grassland reversion	Cottam 1 North Site and Cottam 1 South Sites
	- A more varied landscape	are able to accommodate the proposed change
	- Improved management of exiting vegetation	without undue adverse effects and will achieve
	- Less intensively managed land	some positive effects. Changes to the land use
	- Soil improvements	would be seen as moderately beneficial in
	- Water improvements	landscape terms.
	- Potential animal grazing	
	- Reinstatement of historic field patterns	Overall , in terms of mitigation for the Cottam 1
	- Increased woodland/vegetation cover	Site/Sites, due to the predominance of medium
	- Bird mitigation fields	and large-scale agriculture, the aim is to
	- Significantly improved biodiversity	promote the enhancement of the landscape
	- Improved carbon retention/capture	include creating grass margins in fields and
	- Green energy production	restoring hedgerows. Other measures include
		the provision of more habitats for pollinator
	Adverse effects:	and pest-regulating species. Opportunities for
		and pase regulating species, opportunities for



Minor Not Significant

Beneficial & Long Term

Moderate Significant

Medium

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		 Panels and structures across landscape Increased hard standing areas Potential minor pollution around substations Loss of food production Increased tracks around Sites The effects at the Operational Phase at Year 15 without Embedded Mitigatio equate to those effects at the beginning of Year 1 before secondary mitigation has been applied. The Effects set out below include secondary mitigation which will have been carried out but will have had limited physical impact at this stage.	n
5km Study Area:			
Magnitude	Very Low	Low	Low
Level of Effect	Neutral & Short Term	Neutral & Long Term	Beneficial & Long Term

Minor Not Significant

Beneficial & Long Term

Minor Not Significant

Low

Landscape Receptor – Land Use (Cottam 1 Site)

Low

Significance of Effect

Significance of Effect

Magnitude

Level of Effect

Site/Sites and Cable Route Corridor:

Negligible Not Significant

Adverse & Short Term

Minor Not Significant

In-combination Effects [Cumulative Sites]	Cumulative Effects [Cumulative Developments]
In Summary	In Summary
The In-combination effects of the Cottam 1 Site with the other Cumulative Sites (Cottam 2, 3a and 3b) is	The Cumulative Effects of the Scheme with the other Cumulative Develo
Minor at year 1 of operation and Negligible at year 15 with mitigation. This is due to the limited impact as	Development and adverse, and adverse giving rise to likely Significant e
a result of the low-level nature of the Scheme together with the level of mitigation. There will be positive	be Minor at year 15 with the embedded and additional mitigation. This h
changes in land use such as the creation of extensive mixed grassland habitats and enhanced field	Scheme, together with the improvements to the new hedgerows giving i
boundaries that will help reinforce the pattern of the landscape. The existing landscape character associated with the fabric of the landscape of the Cumulative Sites and Study Area is predominantly	across the Sites and Study Area, all in helping reduce to reduce the cum
arable and the change to grassland with a significantly improved hedgerow structure would give rise to	Fabric of the Landscape
overall benefits to biodiversity as well as landscape character in the combination of all the Cumulative	There would not be the removal of or changes in individual elements or
Sites.	area.
Fabric of the Landscape	There would be the introduction of new elements and features comprisi
There would not be the removal of, or changes in individual land use elements or features of the	area within the character area
landscape within the Cottam 1 Site/Sites. Wide panoramic views are possible, and the simple palette of	
land use and low-lying terrain gives visual unity and a strong sense of identity. The larger field systems are	Aesthetic Aspects of the Landscape
the key feature, especially where they form a geometric and regular pattern with thickly hedged fields.	Refer to Figure 8.15.2.1 [C6.4.8.15.2.1] which shows that with the Cottan
	developments would not be experienced across the majority of the 5km

Environmental Statement Landscape and Visual Impact Assessment Appendix 8.2.3: Land Use Analysis and Evaluation [Reference: EN010133/APP/C6.3.8.2.3.1] Jan 2023

	Negligible Not Significant
	Neutral & Short Term
	Very Low
wetland	
OWS	
ats	

Very Low
Neutral & Short Term
Negligible Not Significant

elopments is Moderate with the Tillbridge t effects at year 1 of operation. The effects would is betterment is due to the low-level nature of the ng rise to the vegetative layering of the landscape imulative effects.

or features of the landscape within the character

rising the solar panel areas and the substation

tam 1 Site, cumulative visibility with the cumulative km study area. This is due to the distance, the



There would be the introduction of new elements and features comprising the solar panel areas, the substation area and Cable Route Corridor extending between the Cottam Power Station and the Cottam 1 Site/Sites and extending between the Cottam 1 Site/Sites and Cottam 2 Site (the 'Cable Route Corridor).

Aesthetic Aspects of the Landscape

Refer to **Figure 8.15.1.1 [C6.4.8.15.1.1]** which shows that with the Cottam 1 Site/Sites, cumulative visibility with the Cable Route Corridor, Cottam 2, and Cottam 3a and 3b Sites and the Cable Route Corridor would not be experienced across the majority of the 2km study area. This is due to the distance, the intervening woodlands, hedgerows, and tree cover between the Site/Sites. The intervening settlements and built form would also curtail cumulative visibility between these cumulative sites and the Cable Route Corridor.

There are very minor patches of cumulative intervisibility between the Cottam 1 Site/Sites and the Cottam 2 Site, located to the:

- east of Upton and to the south of Sturgate Airfield
- south of Kexby in the locality of Valley Farm
- east of Willingham by Stow in the locality of the residential property known as Carisbrooke
- east of Stow, just to the east of the property known as Tam Howes; and
- west of Sturton by Stow, extending from West Syke Lane as far as Normanby by Stow.

The land use features within these areas are focused around the settlements where the land use at their edges supports a good level of tree and woodland cover to help in curtailing visibility across these areas.

There are very minor patches of cumulative intervisibility between the Cottam 1 Site/Sites and the Cottam 2 and Cottam 3a Sites/Sites, located to the:

• northeast of Sturton by Stow, extending between Tillbridge Road and Ingham Road.

The land use features within these areas are focused around local undulations in landform found to each side of the River Till and where the presence of large-scale arable fields prevail. There is a particular concentration of cumulative visibility to the northeast of Willingham by Stow, but the local concentration of woodlands comprising Top Wood, Heaton's Wood, and Big Wood help to curtail visibility in this area.

There are very minor patches of cumulative intervisibility between the Cottam 1 Site/Sites, and the Cottam 2 and Cottam 3b Sites located to the:

• northeast of Sturton by Stow, extending between School Lane Farm and Ingham Road.

The land use features within these areas are focused around local undulations in landform found to each side of the River Till and where the presence of large-scale arable fields prevail. There is a particular concentration of cumulative visibility to the northeast of Willingham by Stow, but the local concentration of woodlands comprising Top Wood, Heaton's Wood, and Big Wood help to curtail visibility in this area.

There are local patches of intervisibility between All Sites comprising the landscape to the:

• east boundary of the Cottam 1 North Site, extending from Glentworth in the north as far as Ingham in the south.

The land use features within these areas are focused on the settlement pattern to the east that includes Ingham, Cammeringham and Brattleby. Woodland is mainly concentrated to the west of Cammeringham and Brattleby and includes geometric shaped shelterbelts and woodland plantations consisting of predominantly native species with large poplar specimens in shelterbelts. The woodlands and settlement help to curtail visibility in this area.

Users of linear routes, especially footpaths or other rights of way, or transport routes, may potentially experience the aesthetic aspects of the cumulative sites revealed in succession as a series of sequential views. For further details refer to the following detailed visual receptor sheets:

Appendix 8.3.2.2 Individual Viewpoint Receptor Sheets [C6.3.8.3.2.2] Appendix 8.3.2.3 Individual Viewpoint Receptor Sheets [C6.3.8.3.2.3] intervening woodlands, hedgerows, and tree cover between the Site/Sites. The intervening settlements and built form would also curtail cumulative visibility.

There are local patches of cumulative visibility which may be focus of likely significant effects, between the Cotton 1 Site/Sites and Gate Burton Energy Park, Tillbridge Solar and West Burton Solar Park. This cumulative visibility is set out in further detail within the following figures:

Figure 8.15.2.6 Cottam 1, 2, 3a and 3b Gate Burton Cumulative Developments Augmented ZTV **[C6.4.8.15.2.6].** This shows Gate Burton to the west of Cottam 1 North, where the intervening settlements of Kexby, Willingham by Stow and Stow lie between, where their presence will impair any associated landscape context with the Gate Burton Site.

Figure 8.15.2.8 Cottam 1, 2, 3a and 3b Tillbridge Solar Cumulative Developments Augmented ZTV **[C6.4.8.15.2.8].** This shows Tillbridge to the north of the Cottam 1 North Site, where their boundaries' are located directly adjacent to each other, just to the south of Kexby Road and to the west of the settlement of Fillingham. There are no intervening settlements, woodlands or major topography, such that the presence of Tillbridge Development with the Scheme would give rise to a direct and compounded relationship in terms of the landscape context. The presence of the Tillbridge Development would also add to coalescence between the Cottam 1 and the Cottam 2 Sites. The primary and secondary mitigation would however ensure that all existing features would be retained leading to an improvement at the operation stage (Year 15).

Figure 8.15.2.9 Cottam 1, 2, 3a and 3b West Burton Cumulative Developments Augmented ZTV **[C6.3.4.15.2.9].** This shows the West Burton Development located to the southwest of the Cottam 1 South Site where the intervening settlements of Stow, Sturton by Stow and Bransby lie between, where their presence will impair any associated landscape context with the West Burton Site.

The other Cumulative Developments at Bumble Bee Farm, Field Farm and High Marnham are separated from the Scheme by the intervening settlements of Gainsborough, Lea, Blyton and Willingham by Stow.

Overall Character of the Landscape and Land Use

Overall, the character of the landscape and the land use is shaped by the predominance of medium and large-scale agriculture. Although this land use is commonplace, the field hedgerows are consistent, strong features and generally in good condition and they play a major role in curtailing the cumulative visibility across the area. These relevant characteristics of the landscape and land use have some ability to accommodate change without undue adverse effects. The cumulative visibility for the Cottam 1 Site/Sites would not alter the overall character of the landscape and its land use features. Moreover, these features play a positive role in reducing the overall cumulative effects.



	Appendix 8.3.2.4 Individual Viewpoint Receptor Sheets [C6.3.8.3.2.4]	
	Appendix 8.3.3.2 Individual Residential Receptor Sheets [C6.3.8.3.3.2]	
	Appendix 8.3.3.3 Individual Residential Receptor Sheets [C6.3.8.3.3.3]	
	Appendix 8.3.4.2 Individual Transport Receptor Sheets [C6.3.8.3.4.2] Appendix 8.3.4.3 Individual Transport Receptor Sheets [C6.3.8.3.4.3]	
	Appendix 8.3.5.2 Individual PRoW Receptor Sheets [C6.3.8.3.5.2] Appendix 8.3.5.3 Individual PRoW Receptor Sheets [C6.3.8.3.4.3]	
	<u>Overall Character of the Landscape and Land Use</u> Overall, the character of the landscape and the land use is shaped by the predominance of medium and large-scale agriculture. Although this land use is commonplace, the field hedgerows are consistent, strong features and generally in good condition and they play a major role in curtailing the cumulative visibility across the area. These relevant characteristics of the landscape and land use have some ability to accommodate change without undue adverse effects. The cumulative visibility for the Cottam 1 Site/Sites would not alter the overall character of the landscape and its land use features. Moreover, these features play a positive role in reducing the overall cumulative effects.	
	The difference in effect between the addition of the Scheme to the cumulative baseline is low and very low for the Cumulative Sites because there are local patches of intensive cumulative change to a limited area of a landscape of medium sensitivity, affecting a few characteristics without altering the overall impression of its character.	
Magnitude	Construction: Low Operation (Year 1): Low Operation (Year 1) with only Embedded Mitigation: Low Operation (Year 15) Very Low Decommissioning: Very Low	Construction: Medium Operation (Year 1): Medium Operation (Year 1) with only Embedded Mitigation: Medium Operation (Year 15): Low Decommissioning: Low
Type of Effect	Construction: Adverse & Short Term Operation (Year 1): Adverse & Long Term Operation (Year 1) with only Embedded Mitigation: Adverse & Long Term Operation (Year 15): Beneficial & Long Term Decommissioning: Neutral & Short Term	Construction: Adverse & Short Term Operation (Year 1): Adverse & Long Term Operation (Year 1) with only Embedded Mitigation: Adverse & Long Ter Operation (Year 15): Neutral & Long Term Decommissioning: Neutral & Short Term
Significance of Effect	Construction: Minor Not Significant Operation (Year 1): Minor Not Significant Operation (Year 1) with only Embedded Mitigation: Minor Not Significant Operation (Year 15): Negligible Not Significant Decommissioning: Negligible Not Significant	Construction: Moderate Significant Operation (Year 1): Moderate Significant Operation (Year 1) with only Embedded Mitigation: Moderate Signific Operation (Year 15): Minor Not Significant Decommissioning: Minor Not Significant

* Potential exists to use targeted, low-density sheep grazing in appropriate areas of wildflower meadow under panelled areas for short periods once a suitable sward has

established. This may allow for diversification of grazing management. Grazing of tussock seeded areas may be appropriate to reduce the sward every three years. Careful monitoring is however required to prevent overgrazing with conservation grazing densities used.

Environmental Statement Landscape and Visual Impact Assessment Appendix 8.2.3: Land Use Analysis and Evaluation [Reference: EN010133/APP/C6.3.8.2.3.1] Jan 2023

Term

icant



Landscape Receptor – Land Use (Cottam 2 Site)

Receptor Baseline:

Within the Cottam 2 Site, at a regional scale, landscape character is assessed within the East Midlands Regional Landscape Character Assessment as forming part of RLCT Profile: 4a Unwooded Vales, which is shown on Figure 8.5 [C6.4.8.5].

The Cottam 2 Site (2km Study Area) consists primarily of arable land use with small to medium sized fields separated by hedgerows with some trees, and drainage ditches that feed into the wider drainage network of the River Till. The wider landscape is typified by similar arable fields, hedgerows, and watercourses, which is synonymous with the Site/Sites. Small woodlands are located to the northeast of the Site/Sites and are identified as coverts, which are broadly rectangular or angular and shaped by field pattern.

Key Features:

This is landscape with a gently undulating and low-lying landform where the landscape follows a north-south pattern due to the orientation of the underlying Triassic and Jurassic geology and this is an important Land Use Feature for the Cottam 2 Site.

The landscape mainly comprises of agricultural field parcels that follow the surrounding field patterns and consist of predominantly arable and grazing land use. A collection of larger field systems are also found further north towards Southorpe and further northeast towards Blyborough. The field pattern is more geometric and regular towards the west of the Site/Sites to the north of Corringham than fields to the east, which although regular in shape they are less geometric. Wharton Wood and Birch Wood are large areas of woodland to the west of the Site/Sites with Wharton being the largest of the two and part of which is ancient woodland. These woodland forms part of a wider structure of woodlands across the area. Woodlands to the east of the Site/Sites comprises Yawthorpe Fox Covert and woodland at Willoughton Grange. The hedgerows are generally uniform and have gaps in places with very few hedgerow trees and some small areas of scrub. Settlements surrounding the Cottam 2 Scheme include Corringham to the southwest with Aisby and Pilham to the northwest of the Cottam 2 Site. The small hamlet of Yawthorpe is also located to the east of the Cottam 2 Site. There are many more settlements within the 5km study area of the Cottam 2 Site, some of these include the eastern edge of Gainsborough, Blyton, Laughton, Scotton, Willoughton, Hemswell and Heapham. The River Till and its tributaries running through this area is the key features and the major corridor for wildlife supporting a variety of wetland habitats. The Site/Sites sit within a pattern of dispersed farms including Corringham Grange Farm, Ankcliffe Farm, Taskers Farm, Home Farm and Park Farm. There are typically low levels of woodland cover in this area with the majority of woodland occurring to the west of Corringham. Areas closer to the settlements of Corringham, Aisby and Yawthorpe have greater levels of woodland cover.



Receptor susceptibility to change	Value of Receptor	Sensitivity	Embedded Mitigation
In terms of forces for change for the Cottam 2 Site Land Use, recent trends have shown that hedgerow trees are scarce and limited to oak and ash, with willow along watercourses. The flowing tributaries of the River Till have formed small valleys which are barely evident due to the lack of riparian vegetation. The shift away from mixed farming has impacted upon areas of pasture and grassland habitats, which has had an impact upon local character and biodiversity. The watercourses are not readily distinguished in the landscape due to the lack of waterside trees and riparian habitats. Overall , the susceptibility of Land Use for the Cottam 2 Site is conditioned by the need to protect hedgerow trees and ensuring that new development is complimentary to individual trees and those along watercourses. The access network within the area also has poor connections, particularly to the water courses and river corridors where the majority of the health, recreation, geodiversity benefits need to be relinquished to enhance and promote opportunities. The relevant characteristics of the landscape therefore have some ability to accommodate change without undue adverse effects given there is scope to restore the woodland, hedgerow, and tree cover and to further open up recreation opportunities.	 Scenic., The Trent floodplain is the key feature of the area and the banks of the river in distant views contribute to the overarching sense of place and history. Cultural: There are many tranquil places for people to enjoy both for recreation and for local residents, but a reconnection with the river systems and their floodplains would help enhance this. Natural: Woodland cover is low and because of the history of the land for agriculture, the area has retained little semi-natural habitat. The hedgerows provide the main habitats for farmland species and are substitute woodland habitats that provide linkages across the landscape. Recreation and Enjoyment: Recreation is provided by numerous lanes since there is a limited public right of way (PRoW) network in the area. Cycling opportunities along the network of minor roads is a major recreational resource due to the quietness of these lanes. Local Distinctiveness and Sense of Place: This is a predominantly rural and sparsely settled area with small villages and dispersed farms. Health and Wellbeing: The tranquility of the area is a key feature due to the network of rural lanes, villages, and watercourses, however they are not always readily accessible to the public. Important Spatial Function: This area supports gently undulating and low-lying landform with low ridges dividing shallow, broad river valleys. The land dips sharply away to the broad low-lying vales of the River Till. Overall, the value of the Land Use for the Cottam 2 Site is shaped by an area of farmland where the hedgerow quality tends to be low due to the predominance of arable cropping. Areas of semi-natural habitat are also very limited and fragmented due to agricultural intensification. 	Character: The small to medium sized fields are separated by hedgerows with some trees, and drainage ditches. The landscape has a positive character which is re-enforced by small woodlands that are located to the northeast of the Site/Sites. Quality: The wider landscape is typified by arable fields, hedgerows, and watercourses, which is synonymous with the Site/Sites that are in moderate condition. <u>Value:</u> The value is experienced through the recreation that is provided by numerous lanes since there is a limited public right of way (PRoW) network in the area. Cycling opportunities along the network of minor roads is a recreational resource due to the quietness of these lanes. <u>Capacity:</u> The most widespread change has been in agricultural intensification and the change from pastoral to arable cropping that has resulted in the loss of hedges. The increase in field size affects the capacity of the landscape to absorb change, however the landscape features are commonplace and could be readily replaced.	Embedded Mitigation would be taken into account at the construction, operation (Year 1 and Year 15) and decommissioning stages of the Scheme. This Embedded Mitigation is also referred to as primary mitigation and would include the following measures: Panels to be set a minimum of 3m from Site boundaries. Panels to be set minimum of 20m from major watercourses and minimum of 8m from minor watercourses. Site boundary fencing to be set back 5m from adjacent existing hedgerows to allow for proposed thickening and growth. Let existing hedges grow out and managed at 5m. Encourage hedgerow trees to grow out within existing hedges to add further thickening and growth within the field boundaries. Lighting will be limited to downlights within substations and battery banks only and used when maintenance or security is required. Lighting will be PIR operated and will be calibrated to vehicle and personnel movements. All visible lighting would be 50W, installed at a maximum height of 4m with cowls fitted to prevent light spillage. Lighting required within panelled areas will be manually operated. There will be no lighting on perimeter fencing. The landscape effects with only the Embedded Mitigation taken into account equate to those effects set out for the operation stage (Year 1) and this includes secondary mitigation which will have been carried out but will have had limited physical or landscape character impact at this Embedded Mitigation stage.
Medium (5km Study Area)	Medium (5km Study Area)	Medium	Not Applicable



Medium (Site/Sites)

Medium (Site/Sites)

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Medium

Landscape Receptor - Land Use (Cottam 2 Site)

Construction	Operation (Year 1)	Operation (Year 15)	Decom
Activities during site preparation / enabling works	, The Cottam 2 Site forms part of a wider intensively	The effects at the Operational Phase at Year 15	A similar
construction, and commissioning with effects suc	n as managed arable landscape with some varied features	without Mitigation equate to those effects at the	with the
construction traffic, noise and vibration from	but predominantly a low-lying landform with small	beginning of Year 1 before any secondary mitigation	an asses
construction activities, dust generation, site runof	f, watercourses and ditches that are not evident within	has been applied. Mitigation embedded in the design	retentior
mud on roads, and the visual intrusion of plant ar		will apply as will the growing out of the existing	propose
machinery on site. At the early stages of the	man-made, creating some rectilinear field patterns.	hedges.	been est
construction stage, ground, and lower-level activit	ies The field pattern is relatively intact, with some loss of		those ari
such as the construction of the solar panel areas	and hedgerows to the southeast due to arable cultivation.	With secondary mitigation such as planting and grass	decomm
associated infrastructure and inverters would		seeding being taken into account at the operational	vibration
predominantly be screened by existing vegetation	. A number of woodlands lie around the Site but are not	stage (Year 15) the following changes to the landscape	generati
	impacted by the Cottam 2 Site or its Scheme. Small	would occur and the effects are set out below.	
During the latter part of the construction stage, vi	ews areas of rough ground exist around ponds, and two		Following
would become available of the elevated activities	properties are located within the Site. There is a lack	Views to the north, south, east, and west of the Cottam	returned
above the hedgerows, but these would be limited	and of hedgerow trees within field boundaries.	2 Site will be screened in close-mid range proximity	benefit f
would not affect the land use locally.		due to the new hedgerow and shelterbelt planting and	hedgero
,	Secondary mitigation such as planting, and grass	the enhancement of existing hedgerows which will be	matured
Other works would be undertaken in connection	vith seeding would be taken into account at this stage to	managed to a height of 5m. These new and	landscap
the construction including fencing, gates, bounda		augmented hedgerows will provide a series of good	characte
treatment and other means of enclosure and wor		quality field boundaries both formally strengthening	benefits
for the provision of security and monitoring meas		the existing and historical field pattern and creating a	wetland
such as CCTV and the laying down of internal trac	where neagerows have been previously managed to	multi-layered landscape. Scattered tree belts will also	the pote
There would also be landscape and biodiversity	allowed to grow out and managed to a height of 5m	follow the routes of existing watercourses,	maintain
mitigation works, including planting and the		strengthening their visibility in the wider landscape.	biodivers
improvement of existing hedgerows to all bounda	with the addition of irregularly spaced hedgerow trees	Views of the longer distance, where hedgerows do not	
of the Site/Sites creating a much broader mix of la	which are an important management objective. This	block these, will be of a layered, well treed landscape	Without
use locally, creating many associated beneficial ef	will have the effect of varying the land use locally	with a backdrop of some wooded vegetation in places	through
	whilst retaining open views deross the landscape,	on the horizon. Both new and existing vegetation will	views/lar
These short-lived construction activities would no	particularly from the east to the west. Open areas are	have established and begun to mature, creating a	the exist
adversely affect the land use. There would be a	still available where a able cultivation is retained	much stronger structure to the landscape, and	to grow of
change to the arable land use which will be benef	around the Cottam 2 Site. New hedgerows and	retaining and enhancing the overall character of the	5m. It is
to soils and watercourses, significantly increase	sheller beits will also help to strengthen the historie	area.	
biodiversity and help to capture carbon. The field	field pattern where these have been lost or degraded		With Mit
boundaries and the associated tree cover would	through arable intensification.	The proposed grassland will have established and will	decomm
remain intact and help with visual layering across		have settled into its natural scheme with some minor	term lan
landscape and the integration of the new panels.	To the cust, inpution species tree beits will strengthen	appropriate management of differing regimes. The soil	
indicate and the integration of the new parters.	the character locally by identifying the Yawthorpe Beck	quality will be considerably improved through the lack	
Overall, the land use both within the Site and of the	watercourse across the landscape setting and creating	of cultivation and the chemical run-off will be reduced	
wider area is able to accommodate the changes th		around the Site/Sites enhancing the water quality	
arise through the construction of the Site without		generally. There will be considerable biodiversity gains	
-			
undue adverse effects. The integrity of all features	instead of the somewhat bland and monotypic drable	through the establishment of the varied grassland	
be retained and enhancement at ground level thr	and scape, the scheme will bring for ward a sches of	types and regimes and a long-term increase in	
initial grassland planting will have beneficial effect	internitied habitats with strong field boundaries	pollinator species and bird and other species and	
from the outset.	defining the Cottam 2 Site with an overall much	numbers locally.	
	greater level of tree cover. This will enhance the local		
	character generally and integrate the Scheme into the	Growth of existing and proposed vegetation is	
	landscape.	assumed to be:	
	Large areas of varied grassland mixes across the	Woodland/trees and shelterbelts: 2.5m max at Year 1,	
	Cottam 2 Site will significantly enhance the landscape	7.5m max at Year 15.	

Not Applicable

ommissioning

the Scheme being no longer operational. This is sessment of the Site in winter but assumes tion of existing vegetation and builds upon the osed primary and secondary mitigation that had established as the future baseline. Effects are arising from activities for the duration of the mmissioning to include site traffic, noise and tion from decommissioning activities, dust ration and site runoff.

wing decommissioning, the land is likely to be ned to arable production. The Site will however fit from the significantly enhanced tree and erow planting that has been carried out and has ired to create a much stronger and robust scape, retaining, and enhancing the overall acter and providing considerable biodiversity fits over the years. Bird mitigation fields and and grazing marshes are likely to be retained and otential may exist to retain grass margins to tain some varied land use and a high level of versity in the local area.

out Secondary Mitigation having been applied ighout the scheme, the only change to the s/landscape following decommissioning would be xisting hedgerows which will have been allowed ow out and will have been managed to a height of t is assumed that these will be retained.

Mitigation, the negative effects of the physical mmissioning will be balanced out by the long landscape and visual effects of this mitigation.





Magnitude	Very Low	Low	Low	V
5km Study Ar				1
Solar Project		 in physical terms with varied management regimes ensuring that the biodiversity potential is maximised. Potential exists for limited sheep grazing around the Cottam 2 Site, comprising short periods of low density grazing in line with conservation methods. The Scheme and its associated landscape mitigation will break up the over intensified local arable landscape and significantly diversify the land-use in the local area. Although new vegetation will be immature, existing hedgerows will have begun to grow out at Year 1 and the varied grassland areas will have become established, starting to create valuable habitats. Overall, following mitigation at Year 1, the Cottam 2 Site is able to accommodate the proposed change without undue adverse effects and will achieve some beneficial effects from the outset. Between Years 1 and 15, the following beneficial effects will be achieved in terms of Land Use: Grassland reversion A more varied landscape Improved management of exiting vegetation Less intensively managed land Soil improvements Water improvements Increased woodland/vegetation cover Bird mitigation fields Significantly improved biodiversity Improved carbon retention/capture Green energy production Adverse effects: Panels and structures across landscape Increased hard standing areas Potential minor pollution around substations Loss of food production Increased tracks around Sites The effects at the Operational Phase at Year 15 without Embedded Mitigation equate to those effects at the beginning of Year 1 before secondary mitigation has been applied. The Effects set out below include secondary mitigation which will have been carried out but will have had limited physical impact at this stage. 	 New hedgerows: 0.6m at Year 1 and 3.5m at Year 15. Existing hedgerows: 0.9m at Year 1 and 5m at Year 15. Shrubs: 0.9m at Year 1 and 5m at Year 15. Overall, following mitigation at Year 15, the Cottam 2 Site is able to accommodate the proposed change without undue adverse effects and will achieve considerable beneficial effects in terms of varied land use improvements as well as improved carbon capture and significantly increased biodiversity around the Site. By Year 15, the proposed mitigation will have established and begun to mature. Existing vegetation will have grown out and will be enhanced with much needed additional tree species. The overall scene will be somewhat more intimate, with tall hedges in places and trees dotted along roads and field boundaries. Historic field patterns will also have been restored where possible. There will be a good mix of landscape elements locally and the use of grassland with varied management regimes, and flower rich, wildflower mixes with some areas of low-level grazing will create a much broader mix of habitats. Overall, following mitigation at Year 15, the Site is able to accommodate the proposed change without undue adverse effects and will achieve considerable beneficial effects. Changes to the land use would be seen as moderately beneficial in landscape terms. Overall, in terms of mitigation for the Cottam 2 Site, the main aim is to enhance the woodland and hedgerow network through the planting of tree belts, hedgerow trees and new hedgerows to benefit landscape character. Creating grass margins in arable fields is also a key priority, including increasing the amount of flower rich areas, hedgerows, and species rich grasslands. Planting new hedgerows to restore historic field patterns and create habitat linkages is also appropriate to counteract the threat to the landscape character and biodiversity from intensive agriculture. 	

Very Low



Level of	Neutral & Short Term	Beneficial & Long Term	Beneficial & Long Term	Neutra
Effect				
Significance	Negligible Not Significant	Minor Not Significant	Minor Not Significant	Neglig
of Effect				
Site/Sites and	d Cable Route Corridor:			
Magnitude	Low	Low	Medium	Very L
Level of	Adverse & Short Term	Beneficial & Long Term	Beneficial & Long Term	Neutra
Effect				
Significance	Minor Not Significant	Minor Not Significant	Moderate Significant	Neglig
of Effect				
-	Minor Not Significant	Minor Not Significant	Moderate Significant	Neg

Landscape Receptor – Land Use (Cottam 2 Site)

In-Combination Effects [Cumulative Sites]	Cumulative Effects [Cumulative Developments]
In Summary	In Summary
The In-combination effects of the Cottam 2 Site with the other Cumulative Sites (Cottam 1 and 3a and	The Cumulative Effects of the Scheme with the other Cumulative Developme
3b) is Minor at year 1 of operation and Negligible at year 15 with mitigation. This is due to the limited	Development, and adverse giving rise to likely Significant effects at year 1 of
impact as a result of the low-level nature of the Scheme together with the level of mitigation. There will	year 15 with the embedded and additional mitigation. This betterment is du
be positive changes in land use such as the creation of extensive mixed grassland habitats and	together with the improvements to the new hedgerows giving rise to the veg
enhanced field boundaries that will help reinforce the pattern of the landscape. The existing landscape	Sites and Study Area, all in helping to reduce the cumulative effects.
character associated with the fabric of the landscape of the Cumulative Sites and Study Area is	
predominantly arable and the change to grassland with a significantly improved hedgerow structure	Fabric of the Landscape
would give rise to overall benefits to biodiversity as well as landscape character in the combination of all	There would not be the removal of, or changes in individual land use element
the Cumulative Sites.	Cottam 2 Site. The wider landscape is typified by arable fields, hedgerows, a
	farmland where the hedgerow quality tends to be low due to the predomina
Fabric of the Landscape	habitat, trees and woodland cover are also very limited and fragmented due
There would not be the removal of, or changes in individual land use elements or features of the	
landscape within the Cottam 2 Site. The wider landscape is typified by arable fields, hedgerows, and	There would be the introduction of new elements and features comprising t
watercourses. The area shaped by farmland where the hedgerow quality tends to be low due to the	the Cable Route Corridor extending between the Cottam 1 Site/Sites and the
predominance of arable cropping. Areas of semi-natural habitat, trees and woodland cover are also very limited and fragmented due to agricultural intensification.	3a and 3b Sites (the 'Cable Route Corridor').
	Aesthetic Aspects of the Landscape
There would be the introduction of new elements and features comprising the solar panel areas, the	Refer to Figure 8.15.2.2 [C6.4.8.15.2.2] which shows that with the Cottam 2 S
substation area and the Cable Route Corridor extending between the Cottam 1 Site/Sites and the	developments would not be experienced across the majority of the 5km stu
Cottam 2 Site and the Cottam 2 and Cottam 3a and 3b Sites (the 'Cable Route Corridor).	intervening woodlands, hedgerows, and tree cover between the Site/Sites. T
	would also curtail cumulative visibility.
<u>Aesthetic Aspects of the Landscape</u>	
Refer to Figure 8.15.1.2 [C6.4.8.15.1.2] which shows that with the Cottam 2 Site, cumulative visibility	There are local patches of cumulative visibility which may be focus of likely s
with the Cottam 1 Site/Sites and Cottam 3a and 3b Sites would not be experienced across the entirety of	and Tillbridge Solar. This cumulative visibility is set out in further detail withi
the 2km study area. This is due to the distance, the intervening woodlands, hedgerows, and tree cover	
between the Site/Sites. The intervening settlements and built form would also curtail cumulative	Figure 8.15.2.6 Cottam 1, 2, 3a and 3b Gate Burton Cumulative Developmer
visibility.	Gate Burton to the southwest of Cottam 2, where the intervening settlemen
	Stow and Stow lie between, where their presence will impair any associated
There are local patches of intervisibility between the Cottam 2 Site and with the Cottam 3a and Cottam	
3b Sites extending from the:	Figure 8.15.2.8 Cottam 1, 2, 3a and 3b Tillbridge Solar Cumulative Developm
• South boundary of the Cottam 2 Site, starting at the eastern edge of Corringham and reaching	shows Tillbridge to the south of the Cottam 2 Site, where their boundaries a
as far as Yawthorpe Beck and Yawthorpe	with Corringham Road in between. There are no intervening settlements, an
West boundary of the Cottam 2 Site, extending as far as Pilham Lane	topography, such that the presence of Tillbridge Development with the Sche
• East boundary of the Cottam 2 Site, extending as far Yawthorpe and Yawthorpe Fox Covert	compounded relationship in terms of the landscape context. The presence of the context and the Cottam 2 Sites. The primary a
• Northwest boundary of the Cottam 2 Site, extending as far as the Cottam 3a and 3b Sites.	to coalescence between the Cottam 1 and the Cottam 2 Sites. The primary a
	ensure that all existing features would be retained leading to an improvement

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tral & Short Term

ligible **Not Significant**

Low

tral & Short Term

ligible **Not Significant**

nents is Moderate with the Tillbridge of operation. The effects would be Minor at due to the low-level nature of the Scheme, regetative layering of the landscape across the

ents or features of the landscape within the and watercourses. The area shaped by nance of arable cropping. Areas of semi-natural ue to agricultural intensification.

the solar panel areas, the substation area and he Cottam 2 Site and the Cottam 2 and Cottam

Site, cumulative visibility with the cumulative tudy area. This is due to the distance, the The intervening settlements and built form

significant effects, between the Cottam 2 Site thin the following figures:

ents Augmented ZTV [C6.4.8.15.2.6]. This shows ents of Heapham, Upton, Kexby, Willingham by ed landscape context with the Gate Burton Site.

oments Augmented ZTV [C6.4.8.15.2.8]. This are located in close proximity to each other, and limited presence of iwoodlands or major neme would give rise to a direct and e of the Tillbridge Development would also add and secondary mitigation would however ensure that all existing features would be retained leading to an improvement at the operation stage (Year 15).



Despite the intensive agricultural use and lack of hedgerow cover, there are local concentrations of woodland and tree cover at strategic locations between the cumulative sites, which help curtail intervisibility. Between the Cottam 3a and 3b Sites, the woodland and tree cover associated with the mainline railway and Grange Farm and Top Farm is a key land use feature that contributes to reduced visibility across the landscape.

There is a local patch of intervisibility between the Cottam 2 Site and with the Cottam 3b Site, comprising the:

- Northern-most tip of the Cottam 2 Site extending across the medieval village of Dunstall as far as the medieval village of Southorpe; and
- Southeast of the River Eau, extending as far as Huckerby Farm and Huckerby Bungalows.

The presence of former settlement such as Southorpe brings mature trees and woodland cover to the landscape setting of the cumulative sites, and this helps in providing separation and screening between them.

There are local patches of intervisibility between All Sites comprising the:

- North of the Bonsdale Farm at Pilham, extending across the landscape to the north of the medieval village of Dunstall as far as the medieval village of Southorpe
- West of the settlement of Corringham, extending from Staplegate House as far Windy Ridge on Pilham Lane
- West of Springthorpe, extending across the landscape as far as Harpswell Low Farm; and
- East of Yawthorpe, extending as far as Hemswell.

The intensive agricultural land use also contributes to the abundance of farmsteads and small holdings across this landscape, which also have associated large scale agricultural buildings, tree cover and shelterbelts such as those present at Bonsdale Farm. These features make a significant contribution in breaking down the visibility between the cumulative sites.

Users of linear routes, especially footpaths or other rights of way, or transport routes, may potentially experience the aesthetic aspects of the cumulative sites revealed in succession as a series of sequential views. For further details refer to the following detailed visual receptor sheets:

Appendix 8.3.2.2 Individual Viewpoint Receptor Sheets [C6.3.8.3.2.2] Appendix 8.3.2.3 Individual Viewpoint Receptor Sheets [C6.3.8.3.2.3] Appendix 8.3.2.4 Individual Viewpoint Receptor Sheets [C6.3.8.3.2.4]

Appendix 8.3.3.2 Individual Residential Receptor Sheets [C6.3.8.3.3.2] Appendix 8.3.3.3 Individual Residential Receptor Sheets [C6.3.8.3.3.3]

Appendix 8.3.4.2 Individual Transport Receptor Sheets [C6.3.8.3.4.2] Appendix 8.3.4.3 Individual Transport Receptor Sheets [C6.3.8.3.4.3]

Appendix 8.3.5.2 Individual PRoW Receptor Sheets [C6.3.8.3.5.2] Appendix 8.3.5.3 Individual PRoW Receptor Sheets [C6.3.8.3.4.3]

Overall Character of the Landscape and Land Use

Overall, the character of the landscape and the land use is shaped by the lack of a strong hedgerow framework, but the presence of farmsteads and their associated large-scale agricultural buildings with associated woodland and tree cover make up for their absence in providing enclosure and intimacy to open areas. These relevant characteristics of the landscape and land use have some ability to accommodate change without undue adverse effects. The cumulative visibility for the Cottam 2 Site would not alter the overall character of the landscape and its land use features. Moreover, these features play a positive role in reducing the overall cumulative effects.

Figure 8.15.2.9 Cottam 1, 2, 3a and 3b West Burton Cumulative Developments Augmented ZTV [C6.3.4.15.2.9]. This shows the West Burton Development located to the southwest of the Cottam 2 Site where the intervening settlements of Stow, Sturton by Stow and Bransby lie between, and where their presence will impair any associated landscape context with the West Burton Site.

The other Cumulative Developments at Bumble Bee Farm, Field Farm and High Marnham are separated from the Scheme by the intervening settlements of Gainsborough, Lea, Blyton and Corringham.

Overall Character of the Landscape and Land Use

Overall, the character of the landscape and the land use is shaped by the lack of a strong hedgerow framework, but the presence of farmsteads and their associated large-scale agricultural buildings with associated woodland and tree cover make up for their absence in providing enclosure and intimacy to open areas. These relevant characteristics of the landscape and land use have some ability to accommodate change without undue adverse effects. The cumulative visibility for the Cottam 2 Site would not alter the overall character of the landscape and its land use features. Moreover, these features play a positive role in reducing the overall cumulative effects.



	The difference in effect between the addition of the Scheme to the cumulative baseline is low and very	
	low for the Cumulative Sites because there are local patches of intensive cumulative change to a limited	
	area of a landscape of medium sensitivity, affecting a few characteristics without altering the overall	
	impression of its character.	
	Construction: Low	Construction: Medium
	Operation (Year 1): Low	Operation (Year 1): Medium
Magnitude	Operation (Year 1) with only Embedded Mitigation: Low	Operation (Year 1) with only Embedded Mitigation: Medium
•	Operation (Year 15): Very Low	Operation (Year 15) Mitigation: Low
	Decommissioning: Very Low	Decommissioning: Low
	Construction: Adverse & Short Term	Construction: Adverse & Short Term
Type of	Operation (Year 1): Adverse & Long Term	Operation (Year 1): Adverse & Long Term
••	Operation (Year 1) with only Embedded Mitigation: Adverse & Long Term	Operation (Year 1) with only Embedded Mitigation: Adverse & Long Terr
Effect	Operation (Year 15): Beneficial & Long Term	Operation (Year 15): Neutral & Long Term
	Decommissioning: Neutral & Short Term	Decommissioning: Neutral & Short Term
	Construction: Minor Not Significant	Construction: Moderate Significant
Significanco	Operation (Year 1): Minor Not Significant	Operation (Year 1): Moderate Significant
Significance of Effect	Operation (Year 1) with only Embedded Mitigation:Minor Not Significant	Operation (Year 1) with only Embedded Mitigation: Moderate Significar
	Operation (Year 15): Negligible Not Significant	Operation (Year 15): Minor Not Significant
	Decommissioning: Negligible Not Significant	Decommissioning: Minor Not Significant

* Potential exists to use targeted, low-density sheep grazing in appropriate areas of wildflower meadow under paneled areas for short periods once a suitable sward has established. This may allow for diversification of grazing management. Grazing of tussock seeded areas may be appropriate to reduce the sward every three years. Careful monitoring is however required to prevent overgrazing with conservation grazing densities used.

Environmental Statement Landscape and Visual Impact Assessment Appendix 8.2.3: Land Use Analysis and Evaluation [Reference: EN010133/APP/C6.3.8.2.3.2] Jan 2023

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Landscape Receptor – Land Use (Cottam 3a and 3b Sites)

Receptor Baseline:

Within the Cottam 3a and 3b Sites, at a regional scale, landscape character is assessed within the East Midlands Regional Landscape Character Assessment as forming part of RLCT Profile: 4a Unwooded Vales, which is shown on Figure 8.5 [C6.4.8.5].

The sites within Cottam 3 (2km Study Area) can be sub-divided into two distinct land areas.

- Cottam 3a •
- Cottam 3b •

Key Features:

There is open agricultural land with small pockets of woodland with Laughton Woods to the northwest running the west into Laughton Common and Owlet Plantation and this forms an important Land Use feature for both Cottam 3a and 3b Site.

Cottam 3a:

The landscape mainly comprises predominantly of open fields with hedged boundaries and structures associated with the former airfield and currently is used for motor racing and carting. The site boundaries are enclosed to the south, east and west by hedgerows with trees, and drainage ditches leading to Northorpe Beck in the northeast. The wider landscape comprises of open arable and pastoral farmland, since the soils support the cultivation of cereals, oilseeds, root crops and potatoes. Farmsteads of large buildings are common to this landscape including buildings at Blenheim Farm to the east and Hall Farm to the north. Hedgerow removal has created some very large fields under single crop and this sense of openness is exaggerated by the tightly clipped hedges, particularly along Kirton Road. A collection of larger field systems is found, further east, to the east of Grange Farm around Northorpe. These larger field systems are highly irregular in pattern and tend to follow the Edge or Cliff where it rises towards the east. Some of the fields are divided by ditches and dykes. In stark contrast, there are smaller scale field systems to the southeast of Kirton Road and to the west of the A159 (Laughton Road) where the landscape falls towards Laughton Highland Drain and where the farmland is more pastoral with thickly hedged fields. Small tributaries of Laughton Highland Drain form crossing points at the junction with the public right of way (PRoW) network. There are significantly fewer watercourses to the east of the A159 (Laughton Road) around Blyton Grange as this is where the landscape becomes more elevated towards the distinct Jurassic Limestone Scarp slope that runs north from Lincoln. Long, straight roads are common in this area, apart from Ingham Road, but some take a right angle turn or lead into smaller tracks to follow the precedent of the Edge or Cliff. Settlement pattern is nucleated, mainly comprising Blyton and Wharton to the west and Kirton in Lindsey, Grayingham and Blyborough to the east. Isolated dwellings or farmsteads are also a key feature of this landscape.

Cottam 3b:

The landscape mainly comprises of agricultural land with small pockets of settlements and villages breaking up the landscape such as Pilham and Aisby. The site boundaries are enclosed to the south, east and west by hedgerows with trees and drainage ditches and the mainline railway strongly defines the boundary to the north. There are a very few woodlands in the immediate landscape that helps to retain inspirational long views towards the south and east towards Yawthorpe and Aisby. Views towards the west are curtailed by the settlement of Blyton and woodlands south of Wharton, including Wharton Wood and Birch Wood. To the southeast of the Cottam 3b Site near Aisby and Yawthorpe, the landscape mainly comprises larger field systems that are irregular in pattern, especially where they are dissected by the meandering alignment of the tributaries of the River Till. Fields are occasionally geometric in pattern where they follow the strong formal road network such as Pilham Lane, the fields are divided by ditches and dykes, and also remain separated by hedgerows with trees. There are more minor tributaries of the River Till in this area, relative to the Cottam 3a North Site and the small number of drainage ditches that do feed into the tributaries mainly follow a sinuous alignment running in all directions. The landscape is also punctuated by small roads running in a predominantly east west or north south direction across the landscape. These long, straight roads are more abundant in this area, relative to the Cottam 3a Site and many are bordered by isolated farmsteads and residential dwellings, often with very narrow grass verges and high hedgerows that add elements of intimacy to these lanes. Settlement pattern to the east of Cottam 3b includes the Medieval villages of Southorpe, Dunstall with Gilby village to the south. To the west of the Cottam 3b Site, the settlements of Blyton and Pilham are strong features in the landscape where the church spires are captured in views across the area. Small pockets of woodland are mainly concentrated to the east of the Cottam 3b Site and includes geometric shaped shelterbelts and also woodland plantations consisting of predominantly native species at Yawthorpe Fox Covert and Blyborough Covert.



SOLAR PROJECT			
Receptor susceptibility to change	Value of Receptor	Sensitivity	Embedded Mitigation
	Value of Receptor Scenic: The long views out to the west towards the Cliff and the small villages of local sandstone are the main contributors to the scenic quality of the landscape. Cultural: Evidence of Roman influence through roads, tracks, and Medieval settlement of abandoned villages at Southorpe, Dunstall and Gilby. Natural: The grass verges are often a feature of lang straight roads and these offer key biodiversity corridors across the landscape along with the wetland habitats associated with the tightly woven tributaries of the River Till. Recreation and Enjoyment: The area is lacking in public right of way (PRoW) connections, but the local roads provide senses of escapism and inspiration where they offer long views towards the Cliff, as well as long distance views to Lincoln Cathedral. Local Distinctiveness and Sense of Place: A sense of place is provided by the large-scale landscape with its west facing scarp known as the 'Cliff'. Health and Wellbeing: This is evident through the strong sense of tranquility associated with the Cliff top, long views and distant woodlands and heathlands on the horizon. Important Spatial Function:: The exposed landscape of the limestone plateau is occasionally broken by small plantation woodlands often sheltering dispersed farmsteads and large-scale agricultural buildings. Overall, the value of Land Use for the Cottam 3a and 3b Sites is shaped by an arable landscape with a strong influence of former airfields adapted for alternative uses. These airfields occupy the higher plateau of the limestone cliff and are visible in long views across the area. There are a range of habitats, but they are mainly centered on the fine network of tributaries of Northorpe Beck. <td>SensitivityCharacter: The landscape mainly comprises predominantly of open fields with hedged boundaries and also land and structures associated with the former airfield that is currently is used for motor racing and carting.Quality: Some of the areas have a positive character but includes parts that that have been subject to alteration and degradation such as the former airfield.Value: The area is lacking in public right of way (PRoW) connections, but the local roads provide senses of escapism and inspiration where they offer long views towards the Cliff, as well as long distance views to Lincoln Cathedral.Capacity: The landscape benefits from high levels of visual containment due to the local landform, hedgerows, and shelter belts and this helps tolerance for landscape change.</td> <td>Embedded Mitigation Embedded Mitigation would be taken into account at the construction, operation (Year 1 and Year 15) and decommissioning stages of the Scheme. This Embedded Mitigation is also referred to as primary mitigation and would include the following measures: Panels to be set a minimum of 3m from Site boundaries. Panels to be set minimum of 20m from major watercourses and minimum of 8m from minor watercourses. Site boundary fencing to be set back 5m from adjacent existing hedgerows to allow for proposed thickening and growth. Let existing hedges grow out and managed at 5m. Encourage hedgerow trees to grow out within existing hedges to add further thickening and growth within the field boundaries. Lighting will be limited to downlights within substations and battery banks only and used when maintenance or security is required. Lighting will be PIR operated and will be calibrated to vehicle and personnel movements. All visible lighting would be 50W, installed at a maximum height of 4m with cowls fitted to prevent light spillage. Lighting required within panelled areas will be manually operated. There will be no lighting on perimeter fencing. The landscape effects set out for the operation stage (Year 1) and this includes</td>	SensitivityCharacter: The landscape mainly comprises predominantly of open fields with hedged boundaries and also land and structures associated with the former airfield that is currently is used for motor racing and carting.Quality: Some of the areas have a positive character but includes parts that that have been subject to alteration and degradation such as the former airfield.Value: The area is lacking in public right of way (PRoW) connections, but the local roads provide senses of escapism and inspiration where they offer long views towards the Cliff, as well as long distance views to Lincoln Cathedral.Capacity: The landscape benefits from high levels of visual containment due to the local landform, hedgerows, and shelter belts and this helps tolerance for landscape change.	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All visible lighting would be 50W, installed at a maximum height of 4m with cowls fitted to prevent light spillage. Lighting required within panelled areas will be manually operated. There will be no lighting on perimeter fencing. The landscape effects set out for the operation stage (Year 1) and this includes
			secondary mitigation which will have been carried out but will have had limited physical or landscape character impact at this Embedded Mitigation stage
Medium (5km Study Area)	Medium (5km Study Area)	Medium	
Medium (Site/Sites)	Medium to Low (Site/Sites)	Medium	



Construction	Operation (Year 1)	Operation (Year 15)	Decoi
Activities during site preparation / enabling works,	Both the Cottam 3a and 3b Sites form part of a wider	The effects at the Operational Phase at Year 15	A simila
construction, and commissioning with effects such as	intensively managed arable landscape with some	without Mitigation equate to those effects at the	the Sch
construction traffic, noise and vibration from	varied features but predominantly a wide and exposed	beginning of Year 1 before any secondary mitigation	assessm
construction activities, dust generation, site runoff,	landscape to many parts including around the remnant airfield locations.	has been applied. Mitigation embedded in the design	of existi
mud on roads, and the visual intrusion of plant and machinery on site. At the early stages of the	air neid locations.	will apply as will the growing out of the existing hedges.	primary establis
construction stage, ground, and lower-level activities		lieuges.	arising f
such as the construction of the solar panel areas and	Secondary mitigation such as planting, and grass	With secondary mitigation such as planting and grass	decomn
associated infrastructure and inverters would	seeding would be taken into account at this stage to include the following changes to the landscape:	seeding being taken into account at the operational	vibratio
predominantly be screened by existing vegetation.	include the following changes to the landscape.	stage (Year 15) the following changes to the landscape	generati
predominancy be servened by existing vegetation.		would occur and the effects are set out below.	generati
During the latter part of the construction stage, views	Where hedgerows have been previously managed to		Followin
would become available of the elevated activities	create low, neat field boundaries, these are to be	Views to the north, south, east and west of the Cottam	returned
above the hedgerows, but these would be limited and	allowed to grow out and managed to a height of 5m with the addition of irregularly spaced hedgerow trees.	3a and 3b Site/Sites will be screened in close-mid range	benefit f
would not affect the integrity of the waterways and	This will have the effect of varying the land use locally	proximity due to the new hedgerow and shelterbelt	hedgero
local topography at all.	whilst open views across the landscape, particularly	planting and the enhancement of existing hedges	matured
	from the east to the west still available where arable	which will be managed to a height of 5m. These new	landscap
Other works would be undertaken in connection with	cultivation is retained.	and augmented hedgerows will provide a series of	characte
the construction including fencing, gates, boundary		good quality field boundaries both formally	benefits
treatment and other means of enclosure and works for	Strong shelterbelt and hedge planting around existing	strengthening the existing and historical field pattern	wetland
the provision of security and monitoring measures	properties will help to integrate these into the	and creating a multi-layered landscape. Scattered tree	the pote
such as CCTV and the laying down of internal tracks.	landscape.	belts will follow the routes of existing watercourses,	maintair
There would also be landscape and biodiversity		strengthening their visibility in the wider landscape.	biodiver
mitigation works, including planting and the	A greater mix of land use will also be attained through	Views of the longer distance, where hedgerows do not	
improvement of existing hedgerows to all boundaries	the creation of bird mitigation habitat fields to the east	block these, will be of a layered, well treed landscape	Without
of the Site/Sites. There may be very minor removal of	of the Site, creating valuable biodiversity benefits for a	with a backdrop of some wooded vegetation in places	through
sections of hedgerow around access roads for visibility	large number of species.	on the horizon. Both new and existing vegetation will	views/la
purposes.		have established and begun to mature, creating a	the exist
	Instead of the somewhat bland and monotypic arable	much stronger structure to the landscape, and	to grow
These short-lived construction activities would not	landscape, the Scheme will create a series of	retaining and enhancing the overall character of the	5m. lt is
adversely affect the land use. There would be a	interlinked habitats with strong field boundaries	area.	
change to the arable land use which will be beneficial	dividing the Sites with an overall much greater level of	The second exception of will be used to the block of an else will	With Mi
to soils and watercourses, significantly increase biodiversity and help to capture carbon. The field	tree cover. This will enhance the local character	The proposed grassland will have established and will have settled into its natural scheme with some minor	decomm term lan
boundaries and the associated tree cover would	generally and integrate the panel areas into the	appropriate management of differing regimes. The soil	terman
remain intact and help with visual layering across the	landscape.	quality will be considerably improved through the lack	
landscape and the integration of the new panels.		of cultivation and the chemical run-off will be reduced	
and scape and the integration of the new particip.	Large areas of varied grassland mixes across the	around the Site/Sites enhancing the water quality	
Overall, the land use both within the Site and of the	Cottam 3a and 3b Site/Sites will significantly enhance	generally. There will be considerable biodiversity gains	
wider area is able to accommodate the changes that	the landscape in physical terms with varied	through the establishment of the varied grassland	
arise through the construction of the Site without	management regimes ensuring that the biodiversity	types and regimes and a long-term increase in	
undue adverse effects. The integrity of all features will	potential is maximised. Potential exists for limited	pollinator species and bird and other species and	
be retained and enhancement at ground level through	sheep grazing around the Site for short periods,	numbers locally.	
initial grassland planting will have beneficial effects	comprising low density grazing in line with conservation methods.		
from the outset.	conservation methods.	Growth of existing and proposed vegetation is	
	The Scheme and its associated landscape mitigation	assumed to be:	
	The Scheme and its associated landscape mitigation will break up the over intensified local arable		
	landscape and significantly diversify the land-use in the	Woodland/trees and shelterbelts: 2.5m max at Year 1,	
	local area.	7.5m max at Year 15.	
		New hedgerows: 0.6m at Year 1 and 3.5m at Year 15.	1

mmissioning

lar process to that of construction stage, but with heme being no longer operational. This is an sment of the Site in winter but assumes retention sting vegetation and builds upon the proposed ry and secondary mitigation that had been ished as the future baseline. Effects are those g from activities for the duration of the missioning to include site traffic, noise and ion from decommissioning activities, dust ation and site runoff.

ing decommissioning, the land is likely to be ned to arable production. The Site will however fit from the significantly enhanced tree and row planting that has been carried out and has ed to create a much stronger and robust cape, retaining, and enhancing the overall cter and providing considerable biodiversity its over the years. Bird mitigation fields and nd grazing marshes are likely to be retained and otential may exist to retain grass margins to ain some varied land use and a high level of ersity in the local area.

out Secondary Mitigation having been applied ghout the scheme, the only change to the landscape following decommissioning would be isting hedgerows which will have been allowed w out and will have been managed to a height of is assumed that these will be retained.

Mitigation, the negative effects of the physical nmissioning will be balanced out by the longandscape and visual effects of this mitigation.



			Ľ
		Although new vegetation will be immature, existing hedgerows will have begun to grow out at Year 1 and the varied grassland areas will have become established, starting to create valuable habitats. Overall, following mitigation at Year 1, the Cottam 3a and 3b Sites are able to accommodate the proposed change without undue adverse effects and will achieve some beneficial effects from the outset. Between Years 1 and 15, the following beneficial effects will be achieved in terms of Land Use: Grassland reversion A more varied landscape Improved management of exiting vegetation Less intensively managed land Soil improvements Water improvements Notential animal grazing Reinstatement of historic field patterns Increased woodland/vegetation cover Bird mitigation fields Significantly improved biodiversity Improved carbon retention/capture Green energy production Adverse effects: Panels and structures across landscape Increased hard standing areas Potential minor pollution around substations Loss of food production Loss of food production Increased tracks around Sites The effects at the Operational Phase at Year 15 without Embedded Mitigation equate to those effects at the beginning of Year 1 before secondary mitigation has been applied. The Effects set out below include secondary mitigation which will have been carried out but will have had limited physical impact at this stage.	 Existing hedgerows: 0.9m at Year 1 and 5m at Year 15. Shrubs: 0.9m at Year 1 and 5m at Year 15. Overall, following mitigation at Year 15, the Cottam 3a and 3b Site/Sites are able to accommodate the proposed change without undue adverse effects and will achieve considerable beneficial effects in terms of varied land use improvements as well as improved carbon capture and significantly increased biodiversity around the Site. By Year 15, the proposed mitigation will have established and begun to mature. Existing vegetation will have grown out and will be enhanced with much needed additional tree species. The overall scene will be somewhat more intimate, with tall hedges in places and trees dotted along roads and field boundaries. Historic field patterns will also have been restored where possible. There will be a good mix of landscape elements locally and the use of grassland with varied management regimes, and flower rich, wildflower mixes with some areas of low-level grazing will create a much broader mix of habitats. Overall, following mitigation at Year 15, the Cottam 3a and 3b Sites are able to accommodate the proposed change without undue adverse effects and will achieve considerable beneficial effects. Changes to the land use would be seen as moderately beneficial in landscape terms. Overall, in terms of mitigation for the Cottam 3a and 3b Sites, the aim is to increase woodland cover where possible whilst retaining long, panoramic views out over adjoining low-lying land, especially from the Edge and towards the Cliff to the east. The intensive arable farming where possible to provide a wider variety of habitats. Hedgerows are tightly managed and should
			allowed to fill out with planting to fill the gaps.
5km Study Ar			
Magnitude	Very Low	Low	Low
Adverse & Short Term	Neutral & Short Term	Beneficial & Long Term	Beneficial & Long Term
Negligible Not Significant	Negligible Not Significant	Minor Not Significant	Minor Not Significant

Very Low

Neutral & Short Term

Negligible Not Significant



Site/Sites and	d Cable Route Corridor:			
Magnitude	Low	Low	Medium	Very L
Level of	Adverse & Short Term	Beneficial & Long Term	Beneficial & Long Term	Neutra
Effect				
Significance	Minor Not Significant	Minor Not Significant	Moderate Significant	Neglig
of Effect				

In-Combination Effects [Cumulative Sites]	Cumulative Effects [Cumulative Developments]
In Summary	In Summary
The In-combination effects of the Cottam 3a and 3b Sites with the other Cumulative Sites (Cottam 1 and	The Cumulative Effects of the Scheme with the other Cumulative Devel
2) is Minor at year 1 of operation and Negligible at year 15 with mitigation. This is due to the limited	Development, and adverse giving rise to likely Significant effects at year
impact as a result of the low-level nature of the Scheme together with the level of mitigation. There will	year 15 with the embedded and additional mitigation. This betterment
be positive changes in land use such as the creation of extensive mixed grassland habitats and	together with the improvements to the new hedgerows giving rise to the
enhanced field boundaries that will help reinforce the pattern of the landscape. The existing landscape	Sites and Study Area, all in helping to reduce the cumulative effects.
character associated with the fabric of the landscape of the Cumulative Sites and Study Area is	
predominantly arable and the change to grassland with a significantly improved hedgerow structure	Fabric of the Landscape
would give rise to overall benefits to biodiversity as well as landscape character in the combination of al	
the Cumulative Sites.	Cottam 3a and 3b Sites. The wider landscape is typified by the long stra
	verges to support habitat networks, and many are through routes. The
<u>Fabric of the Landscape</u>	connections, but the local roads provide senses of escapism and inspire
There would not be the removal of, or changes in individual land use elements or features of the	
landscape within the Cottam 3a and 3b Sites. The wider landscape is typified by the long straight roads	There would be the introduction of new elements and features compri-
cross the area, but few have wide verges to support habitat networks, and many are through routes.	Cable Route Corridor extending between the Cottam 1 Site/Sites and the
The area is lacking in public right of way (PRoW) connections, but the local roads provide senses of	and 3b Sites (the 'Cable Route Corridor').
escapism and inspiration where they offer long views.	
	Aesthetic Aspects of the Landscape
There would be the introduction of new elements and features comprising the solar panel areas, the	Refer to Figure 8.15.1.3 [C6.4.8.15.1.3] which shows that with the Cott
substation area and Cable Route Corridor extending between the Cottam 1 Site/Sites and the Cottam 2	cumulative developments would not be experienced across the majori
Site and the Cottam 2 and Cottam 3a and 3b Sites (the 'Cable Route Corridor).	distance, the intervening woodlands, hedgerows, and tree cover betwee
	built form would also curtail cumulative visibility between these Site/Si
<u>Aesthetic Aspects of the Landscape</u>	
Refer to Figure 8.15.1.3 [C6.4.8.15.1.3] which shows that with the Cottam 3a Site, cumulative visibility	There are local patches of cumulative visibility which may be focus of li
with the Cottam 1 Site/Sites, Cottam 2 Site and Cottam 3b Site would not be experienced across the	and Tillbridge Solar. This cumulative visibility is set out in further detail
majority of the 2km study area. This is due to the distance, the intervening woodlands, hedgerows, and	
tree cover between the Site/Sites. The intervening settlements and built form would also curtail	Figure 8.15.2.6 Cottam 1, 2, 3a and 3b Gate Burton Cumulative Develo
cumulative visibility between these Site/Sites.	Gate Burton to the south west of Cottam 3a and 3b, where the interve
	Willingham by Stow and Stow lie between, where their presence will in
There are local patches of intervisibility between the Cottam 3a and 3b Sites, extending from the:	Gate Burton Site.
• Northeast boundary of the Cottam 3a Site, defined to the west by the Green Respect Burial	
Park and Park House Farm, and reaching as far as Northorpe in the east	Figure 8.15.2.8 Cottam 1, 2, 3a and 3b Tillbridge Solar Cumulative Dev
• East boundary of Cottam 3a Site, and stopping short of Cold Harbour Farm; and	shows Tillbridge to the south of the Cottam 3a and 3b Site, where the
• North boundary of the Cottam 3b Site, extending for a short distance as far as Grange Farm	Development are located in close proximity to each other, with Corring
and Top Farm.	settlements, and limited presence of woodlands or major topography,
•	with the Cottam 2 Site would give rise to a direct and compounded rel
Despite the concentration of straight roads that cut bluntly across the open arable landscape, there are	presence of the Tillbridge Development with the Cottam 3a and 3b Site
concentrations of alternative land use such as the Green Respect Burial Park that bring diversity to the	
landscape and support woodland cover. These alternative landscape features help to close down	Figure 8.15.2.9 Cottam 1, 2, 3a and 3b West Burton Cumulative Develo
visibility across the landscape.	shows the West Burton Development located to the southwest of the

Low

tral & Short Term

ligible Not Significant

pments is Moderate with the Tillbridge ¹ 1 of operation. The effects would be Minor at due to the low-level nature of the Scheme, e vegetative layering of the landscape across the

ments or features of the landscape within the ght roads cross the area, but few have wide rea is lacking in public right of way (PRoW) tion where they offer long views.

ng the solar panel areas, the substation area and e Cottam 2 Site and the Cottam 2 and Cottam 3a

n 3a and 3b Sites, cumulative visibility with the of the 5km study area. This is due to the the Site/Sites. The intervening settlements and s.

ely significant effects, between the Cottam 3a Site ithin the following figures:

ments Augmented ZTV [C6.4.8.15.2.6]. This shows ng settlements of Heapham, Upton, Kexby, air any associated landscape context with the

opments Augmented ZTV [C6.4.8.15.2.8]. This undaries of the Cottam 2 and the Tillbridge am Road in between. There are no intervening uch that the presence of Tillbridge Development ionship in terms of the landscape context. The would not be perceived in the same context

ments Augmented ZTV [C6.3.4.15.2.9]. This ttam 2 Site where the intervening settlements of



SOLAR PROJECT		
	 There are local patches of intervisibility between the Cottam 3a, 3b and Cottam 2 Sites, extending from the: South boundary of the Cottam 3b Site, bordered by Pilham to the west and the medieval settlement of Dunstall to the east, and reaching as far as Springthorpe in the south South boundary of the Cottam 3b Site, bordered by the eastern edge of Blyton to the west, reaching Grange Farm and stopping short of the mainline railway; and North boundary of the Cottam 3b Site, following the alignment of the A159 (Lughton Road) and stopping short to the west of the Green Respect Burial Park. This section of the landscape is showing higher concentrations of cumulative visibility and land use is mainly arable with a limited presence of settlement. The natural features however, such as the meandering watercourses and smaller scale field systems bring a tighter grain and added layers to the landscape, which helps curtail views across the area. There is a local patch of intervisibility between All Sites, located to the: East of the Cottam 3b Site and north of the Bonsdale Farm at Pilham, extending across the landscape to the north of the medieval village of Dunstall as far as the medieval village of Southorpe. The exposed landscape to the east of Cottam 3b Site is occasionally broken by small plantation woodlands often sheltering dispersed farmsteads and large-scale agricultural buildings such as those at Huckerby Farm and Huckerby Bungalows which bring screening and enclosure. Users of linear routes, especially footpaths or other rights of way, or transport routes, may potentially experience the aesthetic aspects of the cumulative sites revealed in succession as a series of sequential views. For further details refer to the following detailed visual receptor sheets: Appendix 8.3.2.2 Individual Viewpoint Receptor Sheets [C6.3.8.3.2.2] Appendix 8.3.3.1 Individual Viewpoint Receptor Sheets [C6.3.8.3.2.4] A	Stow, Sturton by Stow and Bransby lie between, and where their presen- with the West Burton Site. The other Cumulative Developments at Bumble Bee Farm, Field Farm ar by the intervening settlements of Gainsborough, Lea and Blyton. <i>Overall Character of the Landscape and Land Use</i> Overall, the character of the landscape and the land use is shaped an ar- airfields and dispersed farmsteads. Small pockets of settlements and vill and Aisby. These relevant characteristics of the landscape have some ab adverse effects. The cumulative visibility for the Cottam 3a and 3b Sites and its land use features. Moreover, these features play a positive role i
Magnituda	low for the Cumulative Sites because there are local patches of intensive cumulative change to a limited area of a landscape of medium sensitivity, affecting a few characteristics without altering the overall impression of its character. Construction: Low Operation (Year 1): Low	Construction: Medium Operation (Year 1): Medium
Magnitude	Operation (Year 1) with only Embedded Mitigation: Low Operation (Year 15): Very Low	Operation (Year 1) with only Embedded Mitigation: Medium Operation (Year 15) with Mitigation: Low

ce will impair any associated landscape context

nd High Marnham are separated from the Scheme

able landscape with a strong influence of former lages breaking up the landscape such as Pilham pility to accommodate change without undue would not alter the character of the landscape in reducing the overall cumulative effects.



	Decommissioning: Very Low	Decommissioning: Low
Type of Effect	Construction: Adverse & Short Term Operation (Year 1): Adverse & Long Term Operation (Year 1) with only Embedded Mitigation: Adverse & Long Term Operation (Year 15): Beneficial & Long Term Decommissioning: Neutral & Short Term	Construction: Adverse & Short Term Operation (Year 1): Adverse & Long Term Operation (Year 1) with only Embedded Mitigation: Adverse & Long Term Operation (Year 15): Neutral & Long Term Decommissioning: Neutral & Short Term
Significance of Effect	Construction: Minor Not Significant Operation (Year 1): Minor Not Significant Operation (Year 1) with only Embedded Mitigation: Minor Not Significant Operation (Year 15): Negligible Not Significant Decommissioning: Negligible Not Significant	Construction: Moderate Significant Operation (Year 1): Moderate Significant Operation (Year 1) with only Embedded Mitigation: Moderate Significan Operation (Year 15): Minor Not Significant Decommissioning: Minor Not Significant

* Potential exists to use targeted, low-density sheep grazing in appropriate areas of wildflower meadow under panelled areas for short periods once a suitable sward has established. This may allow for diversification of grazing management. Grazing of tussock seeded areas may be appropriate to reduce the sward every three years. Careful monitoring is however required to prevent overgrazing with conservation grazing densities used.

Environmental Statement Landscape and Visual Impact Assessment Appendix 8.2.3.3: Land Use Analysis and Evaluation [Reference: EN010133/APP/C6.3.8.2.3.3] Jan 2023

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Landscape Receptor - Topography and Watercourses (Cottam 1 Site/Sites)

Receptor Baseline:

Within the Cottam 1 Site/Sites, at a regional scale, landscape character is assessed within the East Midlands Regional Landscape Character Assessment as forming part of RLCT Profile: 4a Unwooded Vales, which is shown on Figure 8.5 [C6.4.8.5]. Unwooded Vales extends across the majority of the 2km and 5km Study Area apart from the eastern most edge where it shares a boundary with RLCT Profile: 6a Limestone Scarps and Dipslopes. The western extent of the 5km Study Area is also host to a small part of RLCT Profile 3a: Floodplain Valleys and RLCT Profile: 4b Wooded Vales.

The Site/Sites within Cottam 1 (2km Study Area) can be sub-divided into two distinct land areas:

- Cottam 1 North
- Cottam 1 South

Key Features:

The landscape is characterized by a low-lying terrain, centered on the River Trent with a notable topographical feature that lies to the east where the landform rises to create a distinctive sloping ridge forming a prominent. landform. This landform is described as the 'Edge', the 'Cliff' or the 'Lincolnshire Edge' and along it there is a linear line of small villages. The powerful River Trent and its flood plain provide a strong feature running through the landscape. The River Till is also a key watercourse, and its upper reaches drain the land to the east of Gainsborough and is ultimately a tributary of the River Witham. The middle section of the River Till is embanked between Saxilby in the south and as far as Sturton by Stow in the north, as the water level is higher than that of the surrounding land. At the lower stretches near Lincoln, the River Till is canalised where it joins with Foss dyke.

Cottam 1 North:

The landscape is generally flat or gently sloping, with levels ranging from approximately 10m AOD to the west of the area where the River Till passes to the east of Willingham by Stow and Normanby by Stow. The landform then rises to approximately 15m AOD towards the eastern edge of Coates, and then continues to rise towards Ingham and Middle Street, which reaches 65m AOD. The landform also rises to 15m AOD towards the southwest around the settlement of Stow where it then falls towards the east at the River Till and Squire's Bridge. The River Till drops below the 10m AOD contour in the west to reach Willingham by Stow, where it skirts the eastern fringe of the village passing under two bridges at Fillingham Lane and Cot Garth Lane. To the south of the village the Till is joined by another tributary before skirting Normanby by Stow to the east via the woodland at Normanby Gorse. The Till then turns southeast towards Coates before passing under Squire's Bridge at Ingham Road, where it is joined by a further tributary which drains the area to the northeast of Ingham Road via a series of drainage ditches managed by the Upper Witham internal drainage board (IDB).

Cottam 1 South:

The landscape is generally flat or gently sloping, with levels ranging from approximately 10m AOD to the west of the area where the River Till passes to the east of Stow Pasture and Sturton by Stow. The landform then rises to approximately 15m AOD towards the western edge of Cammeringham at Blackthorn Hill, and then continues to rise towards Ermine Street and Scampton Airfield, which reaches 60m AOD. The landform also rises to 15m AOD towards the SW around the settlement of Sturton by Stow where it then falls towards the east at the River Till around Thorpe Bridge on Thorpe Road and Till Bridge the A1500 (Tillbridge Road). The River Till drops below the 10m AOD contour where it is enclosed by raised embankments between Thorpe Bridge and Tillbridge. The River Till passes to the southeast of Sturton by Stow, to the west of Thorpe le Fallows and via Moor Farm and Tillbridge Farm the A1500 (Tillbridge Lane), once the course of a Roman road, at Tillbridge. The River Till is enclosed by earth embankments on both sides of the channel to increase its capacity and to prevent flood water from inundating the surrounding land.



 Site/Sites (Topography and Watercourses), with some scope for change to landscape character they provide are important features. <i>Liturate</i>: The dominance of the River Treit is a key feature in contrast. <i>Liturate</i>: The dominance of the River Treit is a key feature in contrast. <i>Liturate</i>: The dominance of the River Treit is a key feature in contrast. <i>Liturate</i>: The dominance of the River Treit is a key feature in contrast. <i>Liturate</i>: The dominance of the River Trill as it meanders slowly across it flood plans. The most social with the prosence of the River Till and its associated with the River Till and its associated with the River Till and its associated flood plans. <i>Netarati, seve super teasternes</i>. <i>Netaration and Epigrameti.</i> The River Till and its associated flood plans are important role in the area. <i>Netaration and Epigrameti.</i> The River Till and its associated flood plans are important role in the area. <i>Netaration and Metificate plans are important role in the area.</i> <i>Netaration and Metificate plants are important role in the area.</i> <i>Netaration and Scope super teasten seve (or teaster seve (orivers), and their flood plans are</i>	Receptor susceptibility to change	Value of Receptor	Sensitivity	Embedded M
Vedium (5km Study Area) Medium (5km Study Area) Medium	In terms of forces for change for the Cottam 1 Site/Sites (Topography and Watercourses), recent trends have shown that there are issues with water quality on much of the River Till, caused by run-off from agricultural land, physical modification of the river channel, and discharges from sewage treatment works. The flood plains are distinctive features, however, the rivers themselves, such as the River Till are not visually prominent in the wider landscape and are often hidden from view by levees. Overall , the susceptibility of the Topography and Watercourses for the Cottam 1 Site/Sites is conditioned by the watercourses where they flow largely unnoticed through the landscape marked only by a fringe of scattered trees and riparian vegetation. However, there is an opportunity to reconnect the rivers with their flood plains and restore and create a mosaic of wetland and flood plain habitats including grazing marsh, pastures, fens, reedbeds, wet woodland and eutrophic standing waters. The relevant characteristics of the landscape therefore have some ability to accommodate change without undue adverse effects given there is scope to manage the link and extend existing habitats and make more space for the natural development of the watercourses and their associated topographical features.	 and the landscape character they provide are important features. <u>Cultural</u>: The dominance of the River Trent is a key feature in contrast to the presence of the River Till as it meanders slowly across it flood plain. <u>Natural</u>: Very little semi-natural habitat remains across the area, apart from habitat associated with the River Till and its tributaries, which provides a strong feature running through the landscape. <u>Recreation and Enjoyment</u>: The River Till and its associated flood plains play an important role in the area for their recreational importance and in underpinning the character of the area. <u>Local Distinctiveness and Sense of Place</u>: A simple palette of low-lying terrain gives visual unity and a strong sense of identity to the landscape. <u>Health and Wellbeing</u>: Access within and connecting to the river corridors and their flood plains are important for biodiversity, geodiversity, recreation, and health benefits. <u>Important Spatial Function</u>: The landform is low-lying with smooth low ridges that divide the shallow broad river valleys (vales) and their flood plains. Overall, the value of Topography and Watercourses for the Cottam 1 Site/Sites is shaped by the intensive farming that has diminished the 'sense of place' in parts including the drainage of flood plains. The River Trent, the River Till and its network of tributaries, valleys, 	with some scope for change to landscape character. Enhancing the visibility of streams, dykes and other watercourses in the landscape would bring forward some positive benefits. <u>Quality:</u> The most widespread change has been in agricultural intensification, where the change from pastoral to arable cropping has resulted in loss of hedges, and consequently increase in field sizes. The topography and watercourse therefore have a key role to play in helping to define the quality of the landscape. <u>Value:</u> The River Till and its associated flood plains play an important role in the area for their recreational importance and in underpinning the character of the area. <u>Capacity:</u> Features are evident, but they are locally commonplace. Some features make a minimal contribution to landscape character and scope for mitigation would therefore help to reinforce their prominence in the landscape. The landform is low-lying with smooth low ridges that divide the shallow broad river valleys (vales) and their flood plains and planting to reinforce this	construction, or decommission Mitigation is a would include Panels to be see and minimum Site boundary existing hedge growth. Panels to be see Wildflower me panels to be see Wildflower me panels. Scattered tree these features adjacent to wa quality. Lighting will be battery banks required. Light to vehicle and would be 50W cowls fitted to panelled areas lighting on per The landscape taken into acco operation stag mitigation which
Medium to Low (Site/Sites) Medium to Low (Site/Sites) Medium	Medium (5km Study Area)	Medium (5km Study Area)	Medium	

Mitigation

litigation would be taken into account at the operation (Year 1 and Year 15) and oning stages of the Scheme. This Embedded also referred to as primary mitigation and le the following measures:

set a minimum of 3m from Site boundaries.

set minimum of 20m from major watercourses m of 8m from minor watercourses.

ry fencing to be set back 5m from adjacent gerows to allow for proposed thickening and

set a minimum of 3m from Site boundaries.

neadow mix to be sown beneath proposed

e belts adjacent to watercourses to better define es within the landscape. Open grass buffers vaterways for biodiversity and improved water

be limited to downlights within substations and s only and used when maintenance or security is hting will be PIR operated and will be calibrated d personnel movements. All visible lighting W, installed at a maximum height of 4m with to prevent light spillage. Lighting required within as will be manually operated. There will be no erimeter fencing.

be effects **with only** the Embedded Mitigation count equate to those effects set out for the age (Year 1) and this includes secondary hich will have been carried out but will have had ical or landscape character impact at this litigation stage.



Construction	Operation (Year 1)	Operation (Year 15)
construction, and commissioning with effects such as construction traffic, noise and vibration from construction activities, dust generation, site runoff, mud on roads, and the visual intrusion of plant and machinery on site. At the early stages of the construction stage, ground and lower-level activities such as the construction of the solar panel areas and	This generally flat, low-lying Site at the Cottam 1 Site/Sites is part of the shallow broad river valleys locally and would benefit from the protection of minor waterways associated with the Trent and Till rivers as well as the man-made diches and dykes. Secondary mitigation such as planting, and grass seeding would be taken into account at this stage to include the following changes to the landscape:	The effects at the Operational Phase at Year 15 without Mitigation equate to those effects at the beginning of Year 1 before any secondary mitigation has been applied. Mitigation embedded in the design will apply as will the growing out of the existing hedges. With secondary mitigation such as planting and grass seeding being taken into account at the operational stage (Year 15) the following changes to the landscape would occur and the effects are set out below.
During the latter part of the construction stage, views would become available of the elevated activities above the hedgerows, but these would be limited and would not affect the integrity of the waterways and local topography at all. Other works would be undertaken in connection with the construction including fencing, gates, boundary treatment and other means of enclosure and works for the provision of security and monitoring measures such as CCTV and the laying down of internal tracks. There would also be landscape and biodiversity mitigation works, including planting and the improvement of existing hedgerows to all boundaries of the Site/Sites. These short-lived construction activities would not adversely affect the land use. There would be a change to the arable land use which will be beneficial to soils and watercourses, significantly increase biodiversity and help to capture carbon. The field boundaries and the associated tree cover would remain intact and help with visual layering across the landscape and the integration of the new panels.	Cottam 1 North A watercourse to the northeast of the Site is to be planted with a belt of riparian species trees in order to increase the presence of the watercourse across the local landscape where this currently does not feature prominently. An additional belt of trees is to be provided further west along a linear ditch/dyke. Two long, informal watercourses run east/west across the Site and will be planted with riparian shelterbelt trees and shrubs to enhance the visual appearance of these features, significantly improved the biodiversity around them and further define them within the wider landscape. A further watercourse along the eastern boundary of the Site will provide additional tree cover and biodiversity benefits. Cottam 1 South This Site contains more linear water features which will benefit from significant enhancement through additional planting of scattered tree belts, and tall herb mix grassland buffers. Existing hedgerows will be improved through management and the introduction of native hedgerow trees. To the west of the Cottam 1 Site/Sites, adjacent to the River Till, areas of floodplain meadow will be reinstated, creating a mosaic of wetland habitats along the river corridor with some grazing marsh, fens, and wet woodlands. Tree belts will be set back from the	Views to the north, south, east and west of the Cottam 1 Site/Sites will be screened in the close-mid proximity due to the new hedgerow and shelterbelt planting and the enhancement of existing hedges which will be managed to a height of 5m. These new and augmented hedgerows will provide a series of good quality field boundaries both formally strengthening the existing and historical field pattern and creating a multi-layered landscape. Scattered tree belts will follow the routes of existing watercourses, strengthening their visibility in the wider landscape. Views of the longer distance, where hedgerows do not block these, will be of a layered, well treed landscape with a backdrop of some wooded vegetation in places on the horizon. Both new and existing vegetation will have established and begun to mature, creating a much stronger structure to the landscape, and retaining and enhancing the overall character of the area. The proposed grassland will have established and will have settled into its natural scheme with some minor appropriate management of differing regimes. The soil quality will be considerably improved through the lack of cultivation and the chemical run-off will be reduced around the Site(s) enhancing the water quality generally. There will be considerable biodiversity gains through the establishment of the varied grassland types and regimes and a long-term increase in pollinator species and bird and other species and numbers locally.
initial grassland planting will have beneficial effects from the outset.	river corridor by a wide buffer of tall herb mix grassland to retain the open nature of the waterway and increase biodiversity. These new riparian species trees and vegetation along the river corridors and their tributaries will increase the visual presence of the watercourse within the wider landscape as well as attenuating flood risk. Wide grassland margins will restore, enhance, or create river edge habitats for increased and protected biodiversity.	Growth of existing and proposed vegetation is assumed to be: Woodland/trees and shelterbelts: 2.5m max at Year 1, 7.5m max at Year 15. New hedgerows: 0.6m at Year 1 and 3.5m at Year 15. Existing hedgerows: 0.9m at Year 1 and 5m at Year 15.

mmissioning

ilar process to that of construction stage, but with theme being no longer operational. This is an sment of the Site in winter but assumes retention sting vegetation and builds upon the proposed ry and secondary mitigation that had been lished as the future baseline. Effects are those from activities for the duration of the missioning to include site traffic, noise and ion from decommissioning activities, dust ation and site runoff.

ving decommissioning, the land is likely to be ned to arable production. The Site will however it from the significantly enhanced tree and erow planting that has been carried out and has red to create a much stronger and robust cape, retaining, and enhancing the overall cter and providing considerable biodiversity its over the years. Bird mitigation fields and nd grazing marshes are likely to be retained and otential may exist to retain grass margins to ain some varied land use and a high level of versity in the local area.

but Secondary Mitigation having been applied ghout the scheme, the only change to the landscape following decommissioning would be kisting hedgerows which will have been allowed to out and will have been managed to a height of is assumed that these will be retained.

Mitigation, the negative effects of the physical nmissioning will be balanced out by the long term cape and visual effects of this mitigation.



Magnitude	Very Low	Low	Low	Very
5km Study A	rea:			·
5km Study A	rea:	 Soil improvements Soil improvements Water quality improvements Increased visibility/definition of watercourses across the landscape. Increased woodland/vegetation cover Increased riparian species vegetation Significantly improved biodiversity Improved carbon retention/capture Overwintering opportunities within wetland Adverse effects (mitigated): Panels and structures across landscape Increased hard standing areas - water runoff management required Potential minor pollution around substations The effects at the Operational Phase at Year 15 without Embedded Mitigation equate to those effects at the beginning of Year 1 before secondary mitigation has been applied. The Effects set out below include secondary mitigation which will have been carried out but will have had limited physical impact at this stage.		
		Between Years 1 and 15, the following beneficial effects will be achieved in terms of Topography and Watercourses: - Grassland reversion around watercourses - A more varied landscape - Improved management of exiting vegetation - Less intensively managed land around		
		Overall, following mitigation at Year 1, the Site is able to accommodate the proposed change without undue adverse effects and will achieve some beneficial effects from the outset.	The aim is to protect belts of waterside trees and riparian habitats to distinguish watercourses. The planting of trees and replacing lost hedgerows in flood plains to improve landscape character and attenuate flood flows is also promoted.	
		Overall, the structural condition of the soils and water quality locally will be greatly improved through the reversion of intensively managed arable land to mixed grassland, and carbon capture can be increased.	Site/Sites, due to the quality of the river systems in England, the aim is to improve water quality, availability, and flow. Other initiatives look to enhance the river systems and their floodplains for their ecological importance and contribution to biodiversity.	
		Long views from 'The Ridge' to the east will be retained and enhanced through strengthening of the overall character with increased tree, shelterbelt and boundary hedge planting helping to define the existing watercourses as well as the historical field patterns that would be enhanced where appropriate.	effects in terms of soil and water improvements as well as improved carbon capture and significantly increased biodiversity around the Site. Changes to the land use would be seen as moderately beneficial in landscape terms. Overall , in terms of mitigation for the Cottam 1	
		enhancing and protecting the existing native species for nature conservation, will reduce fertilizer and spray run-off improving water quality.	Overall, following mitigation at Year 15, the Site is able to accommodate the proposed change without undue adverse effects and will achieve considerable beneficial	

ery Low



Level of	Neutral & Short Term	Beneficial & Long Term	Beneficial & Long Term	Neut	
Effect					
Significance	Negligible Not Significant	Minor Not Significant	Minor Not Significant	Negli	
of Effect					
Site/Sites and	Site/Sites and Cable Route Corridor				
Magnitude	Very Low	Low	Medium	Very	
Level of	Neutral & Short Term	Beneficial & Long Term	Beneficial & Long Term	Neut	
Effect					
Significance	Negligible Not Significant	Minor Not Significant	Moderate Significant	Negli	
of Effect					

In-Combination Effects [Cumulative Sites]	Cumulative Effects [Cumulative Developments]
In Summary The In-combination effects of the Cottam 1 Site with the other Cumulative Sites (Cottam 2 and 3a and 3b) is Minor at year 1 of operation and Negligible at year 15 with mitigation. This is due to the limited impact as a result of the low-level nature of the Scheme together with the quantum of mitigation. There will be positive changes in the watercourses due to the scope for more grassland and scattered trees along their margins. The panels would be set back 20m minimum from major watercourses and this would allow scope for these scattered tree belts to follow the route and enable more visibility in the landscape. The existing landscape character associated with the fabric of the watercourses of the Cumulative Sites and Study Area is predominantly arable along their margins and the change to grassland with scattered trees and a significantly improved hedgerow structure would give rise to overall benefits to biodiversity as well as landscape character in the combination of all the Cumulative Sites.	In Summary The Cumulative Effects of the Scheme with the other Cumulative Development and adverse, and adverse giving rise to likely Significant effects be Minor at year 15 with the embedded and additional mitigation. This bese Scheme, together with the improvements to the margins of the watercour the vegetative layering of the landscape across the Sites and Study Area, a effects. Eabric of the Landscape There would not be the removal of or changes in individual elements or fearea.
<i>Fabric of the Landscape</i> There would not be the removal of, or changes in individual topography and watercourse elements or features of the landscape within the Cottam 1 Site/Sites. Wide panoramic views are possible, and the simple palette of land use and low-lying terrain gives visual unity and a strong sense of identity. The larger field systems are the key feature, especially where they form a geometric and regular pattern with thickly hedged fields.	There would be the introduction of new elements and features comprising within the character area <u>Aesthetic Aspects of the Landscape</u> Refer to Figure 8.15.2.1 [C6.4.8.15.2.1] which shows that with the Cottam a cumulative developments would not be experienced across the majority of distance, the intervening woodlands, hedgerows, and tree cover between built form would also curtail cumulative visibility.
There would be the introduction of new elements and features comprising the solar panel areas, the substation area and Cable Route Corridor extending between the Cottam Power Station and the Cottam 1 Site/Sites and extending between the Cottam 1 Site/Sites and the Cottam 2 Site (the 'Cable Route Corridor').	There are local patches of cumulative visibility which may be focus of likely Site/Sites and Gate Burton Energy Park, Tillbridge Solar and West Burton S further detail within the following figures:
<u>Aesthetic Aspects of the Landscape</u> Refer to Figure 8.15.1.1 [C6.4.8.15.1.1] which shows that with the Cottam 1 Site/Sites, cumulative visibility with the Cable Route Corridor, Cottam 2,and Cottam 3a and 3b Sites and the Cable Route Corridor would not be experienced across the majority of the 2km study area. This is due to the distance, the intervening woodlands, hedgerows, and tree cover between the Site/Sites. The intervening settlements and built form would also curtail cumulative visibility between these cumulative sites and the Cable Route Corridor.	 Figure 8.15.2.6 Cottam 1, 2, 3a and 3b Gate Burton Cumulative Developm Gate Burton to the west of Cottam 1 North, where the intervening settlem between, where their presence will impair any associated landscape control. Figure 8.15.2.8 Cottam 1, 2, 3a and 3b Tillbridge Solar Cumulative Develop shows Tillbridge to the north of the Cottam 1 North Site, where their boun other, just to the south of Kexby Road and to the west of the settlement of settlements, woodlands or major topography, such that the presence of Tigive rise to a direct and compounded relationship in terms of the landscape

utral & Short Term

gligible **Not Significant**

y Low

utral & Short Term

gligible **Not Significant**

opments is Moderate with the Tillbridge effects at year 1 of operation. The effects would betterment is due to the low-level nature of the ourses with scattered tree planting, giving rise to , all in helping reduce to reduce the cumulative

features of the landscape within the character

ing the solar panel areas and the substation area

m 1 Site/Sites, cumulative visibility with the y of the 5km study area. This is due to the en the Site/Sites. The intervening settlements and

kely significant effects, between the Cotton 1 n Solar Park. This cumulative visibility is set out in

oments Augmented ZTV [C6.4.8.15.2.6]. This shows ements of Kexby, Willingham by Stow and Stow lie ontext with the Gate Burton Site.

lopments Augmented ZTV [C6.4.8.15.2.8]. This undaries are located directly adjacent to each of Fillingham. There are no intervening Tillbridge Development with the Scheme would cape context of the watercourses. The presence of



There are very minor patches of cumulative intervisibility between the Cottam 1 Site/Sites and Cottam 2 the Tillbridge Development would also add to coalescence between the Cottam 1 and the Cottam 2 Sites. The primary and Site, located to the: secondary mitigation would however ensure that all existing features would be retained leading to an improvement at the • east of Upton and to the south of Sturgate Airfield operation stage (Year 15) of the watercousres across the Sites and Study Area. south of Kexby in the locality of Valley Farm • east of Willingham by Stow in the locality of the residential property known as Carisbrooke Figure 8.15.2.9 Cottam 1, 2, 3a and 3b West Burton Cumulative Developments Augmented ZTV [C6.3.4.15.2.9]. This • east of Stow, just to the east of the property known as Tam Howes; and shows the West Burton Development located to the southwest of the Cottam 1 South Site where the intervening west of Sturton by Stow, extending from West Syke Lane as far as Normanby by Stow. settlements of Stow, Sturton by Stow and Bransby lie between, where their presence will impair any associated landscape context with the West Burton Site. The topography and watercourse features within these areas are focused around the habitat associated with the River Till and its tributaries, which provides a strong feature running through the landscape to The other Cumulative Developments at Bumble Bee Farm, Field Farm and High Marnham are separated from the Scheme help in curtailing visibility across these areas. by the intervening settlements of Gainsborough, Lea, Blyton and Willingham by Stow. There are very minor patches of cumulative intervisibility between the Cottam 1 Site/Sites, Cottam 2, and Cottam 3a Sites, located to the: northeast of Sturton by Stow, extending between Tillbridge Road and Ingham Road. The topography and watercourse features within these areas are focused around the change from pastoral to arable cropping which has resulted in loss of hedges, and consequently increase in field sizes. Those surviving small scale fields The topography and watercourse features within these areas are focused around the change from around settlements such as Sturton by Stow are influenced by the meandering watercourses and therefore have a key pastoral to arable cropping which has resulted in loss of hedges, and consequently increase in field role to play in helping to define the quality of the landscape and reducing visibility across the area. sizes. Those surviving small scale fields around settlements such as Sturton by Stow are influenced by the meandering watercourses and therefore have a key role to play in helping to define the quality of Overall Landscape Character of the Topography and Watercourses the landscape and reducing visibility across the area. Overall, the character of the landscape and the topography and watercourses is shaped by the predominance of medium and large-scale agriculture. Although this land use is commonplace, the linear water features and their tree cover are There are local patches of intervisibility between All Sites comprising the landscape to the: consistent features and can play a major role in curtailing the cumulative visibility across the area. These relevant east boundary of the Cottam 1 North Site, extending from Glentworth in the north as far as characteristics of the landscape and land use have some ability to accommodate change without undue adverse effects. The cumulative visibility for the Cottam 1 Site/Sites would not alter the overall character of the landscape and its Ingham in the south. topography and watercourse features. Moreover, these features play a positive role in reducing the overall cumulative The topography and watercourse features within these areas are influenced by the intensive farming effects. that has diminished the 'sense of place' in parts including the drainage of flood plains and impact on the riparian vegetation and other habitats. Where watercourses survive, their associated vegetation helps to curtail visibility in this area. Public access is also limited to these features. Users of linear routes, especially footpaths or other rights of way, or transport routes, may potentially experience the aesthetic aspects of the cumulative sites revealed in succession as a series of sequential views. For further details refer to the following detailed visual receptor sheets: Appendix 8.3.2.2 Individual Viewpoint Receptor Sheets [C6.3.8.3.2.2] Appendix 8.3.2.3 Individual Viewpoint Receptor Sheets [C6.3.8.3.2.3] Appendix 8.3.2.4 Individual Viewpoint Receptor Sheets [C6.3.8.3.2.4] Appendix 8.3.3.2 Individual Residential Receptor Sheets [C6.3.8.3.3.2] Appendix 8.3.3.3 Individual Residential Receptor Sheets [C6.3.8.3.3.3] Appendix 8.3.4.2 Individual Transport Receptor Sheets [C6.3.8.3.4.2] Appendix 8.3.4.3 Individual Transport Receptor Sheets [C6.3.8.3.4.3] Appendix 8.3.5.2 Individual PRoW Receptor Sheets [C6.3.8.3.5.2] Appendix 8.3.5.3 Individual PRoW Receptor Sheets [C6.3.8.3.4.3] Overall Landscape Character of the Topography and Watercourses Overall, the character of the landscape and the topography and watercourses is shaped by the predominance of medium and large-scale agriculture. Although this land use is commonplace, the linear water features and their tree cover are consistent features and can play a major role in curtailing the cumulative visibility across the area. These relevant characteristics of the landscape and land use have some ability to accommodate change without undue adverse effects. The cumulative visibility for the Cottam 1 Site/Sites would not alter the overall character of the landscape and its topography and watercourse features. Moreover, these features play a positive role in reducing the overall cumulative effects.



		1
	The difference in effect between the addition of the Scheme to the cumulative baseline is low for the	
	Cumulative Sites because there are minor patches of small cumulative change to a limited area of	
	medium sensitivity, affecting some characteristics without altering the overall impression of its	
	character.	
	Construction: Low	Construction: Medium
	Operation (Year 1): Low	Operation (Year 1): Medium
Magnitude	Operation (Year 1) with only Embedded Mitigation: Low	Operation (Year 1) with only Embedded Mitigation: Medium
•	Operation (Year 15): Very Low	Operation (Year 15): Low
	Decommissioning: Very Low	Decommissioning: Low
	Construction: Adverse & Short Term	Construction: Adverse & Short Term
Type of	Operation (Year 1): Adverse & Long Term	Operation (Year 1): Adverse & Long Term
	Operation (Year 1) with only Embedded Mitigation: Adverse & Long Term	Operation (Year 1) with only Embedded Mitigation: Adverse & Long Term
Effect	Operation (Year 15): Beneficial & Long Term	Operation (Year 15): Beneficial & Long Term
	Decommissioning: Neutral & Short Term	Decommissioning: Neutral & Short Term
	Construction: Minor Not Significant	Construction: Moderate Significant
Significance of Effect	Operation (Year 1): Minor Not Significant	Operation (Year 1): Moderate Significant
	Operation (Year 1) with only Embedded Mitigation: Minor Not Significant	Operation (Year 1) with only Embedded Mitigation: ModerateSignificant
	Operation (Year 15): Negligible Not Significant	Operation (Year 15): Minor Not Significant
	Decommissioning: Negligible Not Significant	Decommissioning: Minor Not Significant

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Landscape Receptor – Topography and Watercourses (Cottam 2 Site)

Receptor Baseline:

Within the Cottam 2 Site, at a regional scale, landscape character is assessed within the East Midlands Regional Landscape Character Assessment as forming part of RLCT Profile: 4a Unwooded Vales, which is shown on Figure 8.5 [C6.4.8.5]. Unwooded Vales extends across the entirety of the 2km Study Area and then extends into the 5km Study Area where at its eastern most edge it shares a boundary with RLCT Profile: 6a Limestone Scarps and Dipslopes. The western extent of the 5km Study Area is also host to a large part of RLCT Profile: 4b Wooded Vales.

Key Features:

The landscape is characterized by a low-lying terrain, centred on the River Trent with a notable topographical feature that lies to the east where the landform rises to create a distinctive sloping ridge forming a prominent landform. This landform is described as the 'Edge', the 'Cliff' or the 'Lincolnshire Edge' and along it there is a linear line of small villages. The powerful River Trent and its flood plain provide a strong feature running through the landscape. The River Till is also a key watercourse, and its upper reaches drain the land to the east of Gainsborough and is ultimately a tributary of the River Witham. The middle section of the River Till is embanked between Saxilby in the south as far as Sturton by Stow in the north, as the water level is higher than that of the surrounding land. At the lower stretches near Lincoln, the River Till is canalised where it joins with Foss dyke.

The Site within Cottam 2 (2km Study Area) consists primarily of a landscape that is generally flat, with levels of approximately 20m AOD across most parts. The landscape rises to approximately 25m AOD at the small hamlet of Yawthorpe to the northeast of Yawthopre Beck. The landscape also rises to 25m AOD in the south around Springthorpe Grange, and to the south of Harpswell Lane at Harpswell Grange. This river system forms part of a gently undulating and low-lying landform in the main, with low ridges dividing shallow, broad river valleys, vales, and flood plains. Ditches feed into the wider drainage network of the River Till which flows into the Foss dyke, and Corringham Beck also forms a larger watercourse that bounds the landscape to the northwest. Drainage ditches feed into the wider drainage network of the River Till and are a feature of the area. To the north of the area is Aisby Beck and Yawthorpe Beck. The River Till rises as a series of streams close to the 20m AOD contour just to the east of Corringham. Its course heads south, passing under a bridge near Heapham Windmill, then flowing to the west of the village. Many tributaries pass across the landscape, and some are fed by field drains which often follow a north south direction. The landform becomes more rolling and the landscape more enclosed by hedgerows and trees towards the west around Corringham. In contrast, towards the east, the landscape takes on a flatter landform.



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Receptor susceptibility to change	Value of Receptor	Sensitivity	Embedded Mitigation	
In terms of forces for change for the Cottam 2 Site (Topography and Watercourses), recent trends have shown that there is pressure for built development in villages within commuting distance of Lincoln and the most sensitive parts of the landscape are the minor steams and their associated riparian vegetation. Overall , the susceptibility of the Topography and Watercourses for the Cottam 2 Site is conditioned by the need to retain buffer zones along rivers and streams to enhance their nature conservation value and reduce fertilizer/pesticide runoff from arable land. However, there is an opportunity for new tree/scrub planting (goat willow, hawthorn, alder, and alder buckthorn) along rivers, streams and ditches to increase their visual presence in the landscape. The relevant characteristics of the landscape therefore have some ability to accommodate change without undue adverse effects given there is scope to restore/enhance/create river habitats and river margins including some naturalisation of some of the watercourses.	Scenic: The area supports an extensive network of rivers, dykes and ditches, which have little visual presence in the landscape since they are contained by high flood banks and lack significant riparian vegetation. Cultural: Parts of the landscape have remained unchanged, and this is particularly noticeable for some of the rural lanes where hedgerows are bordered by traditional meadowlands and the lanes leading down to the riverside as former connections for ferrymen and cattle across the River Trent still survive. Natural: The watercourses have been hugely modified for flood management and navigational purposes. The vast majority of the natural flood plain is now separated from these watercourses by large flood embankments. In most areas the watercourses form a deep wide channel with little in-stream habitat. Recreation and Enjoyment: The public right of way (PRoW) network is limited with many areas that are hard to access, making it difficult for people to enjoy the landscape. Local Distinctiveness and Sense of Place: The landscape supports a peaceful, undisturbed rural character where the meandering river channels (although not highly visible) hold remnant patches of riparian vegetation. Health and Wellbeing: The landscape has retained a relatively remote and undeveloped character, but when promoting access, the right balance between conserving the rural character and access for recreation needs to be considered. Important Spatial Function: The watercourses for the Cottam 2 Site is shaped by a low-lying flat agricultural landscape characterised by large areas of former River Meadow lands that have now been converted to arable land. This arable land encroaches down to the river channels in some areas, disrupting the unity of the watercourses.	Character: This is shaped by the low hills and ridges that form watersheds between watercourses. This contrasts with the lower lying areas where intact hedgerows and belts of riverside trees truncate views.Quality: The vast majority of the natural flood plain is now separated from these watercourses by large flood embankments. In most areas the watercourses form a deep wide channel with little in- stream habitat.Value: Whilst the landform of the Unwooded Vales is typically low and subdued, slightly rising landform between watercourses often provides locations where glimpses of neighboring elevated lands are often sufficient to provide a sense of place and add to the recreation and enjoyment of the area.Capacity: Features are locally commonplace and in moderate condition. Although the remaining hedgerow network is generally strong, there is nevertheless evidence of decline in several areas, with gaps and few hedgerow trees.	Embedded Mitigation would be taken into account at the construction, operation (Year 1 and Year 15) and decommissioning stages of the Scheme. This Embedded Mitigation is also referred to as primary mitigation and would include the following measures: Panels to be set a minimum of 3m from Site boundaries. Panels to be set minimum of 20m from major watercourses and minimum of 8m from minor watercourses. Site boundary fencing to be set back 5m from adjacent existing hedgerows to allow for proposed thickening and growth. Existing hedges are to be allowed to grow out and will be managed to a height of 5m. Hedgerow trees will be encouraged to grow out to add further thickening and growth to the field boundaries with the addition of new hedgerow trees as appropriate, randomly spaced along the length of existing hedges. Lighting will be limited to downlights within substations and battery banks only and used when maintenance or security is required. Lighting will be PIR operated and will be calibrated to vehicle and personnel movements. All visible lighting would be 50W, installed at a maximum height of 4m with cowls fitted to prevent light spillage. Lighting required within panelled areas will be manually operated. There will be no lighting on perimeter fencing. The landscape effects with only the Embedded Mitigation taken into account equate to those effects set out for the operation stage (Year 1) and this includes secondary mitigation which will have been carried out but will have had limited physical or landscape character impact at	
Medium (5km Study Area)	Medium (5km Study Area)	Medium	this Embedded Mitigation stage.	



Medium to Low (Site/Sites)

Medium to Low (Site/Sites)

Environmental Statement Landscape and Visual Impact Assessment Appendix 8.2.4.2: Topo Analysis & Evaluation [Reference: EN010133/APP/C6.3.8.2.4.2] Jan 2023

Medium

Landscape Receptor - Topography and Watercourses (Cottam 2 Site)

Construction	Operation (Year 1)	Operation (Year 15)	Decor
Construction Activities during site preparation / enabling works, construction, and commissioning with effects such as construction traffic, noise and vibration from construction activities, dust generation, site runoff, mud on roads, and the visual intrusion of plant and machinery on site. At the early stages of the construction stage, ground, and lower-level activities such as the construction of the solar panel areas and associated infrastructure and inverters would be screened by existing vegetation. During the latter part of the construction stage, views would become available of the elevated activities above the hedgerows, but these would be limited and would not affect the integrity of the waterways and local topography at all.	Operation (Year 1) This generally flat, low-lying Site at Cottam 2 is part of the shallow broad river valleys locally and would benefit from the protection of minor waterways associated with the Trent and Till rivers as well as the man-made diches and dykes. Secondary mitigation such as planting, and grass seeding would be taken into account at this stage to include the following changes to the landscape: Wildflower meadow mix to be sown beneath proposed panels. Scattered tree belts adjacent to watercourses to better define these features within the landscape. Open grass buffers adjacent to waterways for biodiversity and	The effects at the Operational Phase at Year 15 without Mitigation equate to those effects at the beginning of Year 1 before any secondary mitigation has been applied. Mitigation embedded in the design will apply as will the growing out of the existing hedges. With secondary mitigation such as planting and grass seeding being taken into account at the operational stage (Year 15) the following changes to the landscape would occur and the effects are set out below. Views to the north, south, east, and west of the Site will be screened in the close-mid range through the new hedgerow and shelterbelt planting and the enhancement of existing hedges which will be	A simila the Sch assessr of exist primary establis arising decomr vibratio generat Followin returne benefit hedger mature
Other works would be undertaken in connection with the construction including fencing, gates, boundary treatment and other means of enclosure and works for the provision of security and monitoring measures such as CCTV and the laying down of internal tracks. There would also be landscape and biodiversity mitigation works, including planting and the improvement of existing hedgerows to all boundaries of the Site/Sites. These short-lived construction activities would not affect the watercourses or topography of the area	improved water quality. Scattered tree belts running adjacent to the watercourse to the east of the Site will sit back beyond a grassland buffer of a tall herb mixture, enhancing and protecting the existing native species for nature conservation and reduce fertilizer and spray run-off improving water quality. These belts will create strong green corridors across the landscape which will link to adjacent copses and field boundary hedgerows. Across the Site, linear ditches and dykes which are currently abutted by vegetation will be enhanced to	managed to a height of 5m. These new and augmented hedgerows will provide a series of good quality hedgerows both formally strengthening the existing and historical field pattern and creating a multi-layered landscape. Scattered tree belts will follow the routes of existing watercourses, strengthening their visibility in the wider landscape. Views of the longer distance, where hedgerows do not block these, will be of a layered, well treed landscape with a backdrop of some wooded vegetation in places on the horizon. Both new and existing vegetation will have established and begun to mature, creating a much stronger structure to the landscape, and retaining and enhancing the	landsca charact benefit: wetland the pot maintai biodive Withou through views/la the exis to grow
 although there may be some limited run-off. There would be a change to the arable land use which will be beneficial to soils and watercourses, but the field boundaries and the associated tree cover would remain intact and help with layering and the integration of the new panels. There would not be a fundamental change to the surroundings to the views and settings of these landscape receptors, Overall, the topography and watercourses are able to accommodate the changes that arise through the construction of the Site without undue adverse effects. The integrity of all features will be retained and enhancement at ground level through initial grassland planting will have beneficial effects from the outset. 	further delineate the field boundaries and minor watercourses as well as adding to the green corridors and biodiversity value. These new riparian species trees and vegetation along the rivers will increase the visual presence of the watercourse within the wider landscape as well as attenuating flood risk. Wide grassland margins will restore, enhance, or create river edge habitats for increased and protected biodiversity. Long views from 'The Ridge' to the east will be retained and enhanced through strengthening of the overall character with increased tree and boundary hedge planting, enhancing the historical field patterns that	overall character of the area. The proposed grassland will have established and will have settled into its natural scheme with some minor appropriate management of differing regimes. The soil quality will be considerably improved through the lack of cultivation and the chemical run-off will be reduced around the Site(s) enhancing the water quality generally. There will be considerable biodiversity gains through the establishment of the varied grassland types and regimes and a long-term increase in pollinator species and bird and other species and numbers locally. Growth of existing and proposed vegetation is	5m. It is With M decomr term lat
	Although new vegetation will be immature, existing hedgerows will have begun to grow out at Year 1 and grassland will be well established.	assumed to be: Woodland/trees and shelterbelts: 2.5m max at Year 1, 7.5m max at Year 15. New hedgerows: 0.6m at Year 1 and 3.5m at Year 15.	

commissioning

nilar process to that of construction stage, but with Scheme being no longer operational. This is an essment of the Site in winter but assumes retention kisting vegetation and builds upon the proposed hary and secondary mitigation that had been blished as the future baseline. Effects are those ng from activities for the duration of the commissioning to include site traffic, noise and ation from decommissioning activities, dust eration and site runoff.

owing decommissioning, the land is likely to be rned to arable production. The Site will however efit from the significantly enhanced tree and gerow planting that has been carried out and has ured to create a much stronger and robust scape, retaining, and enhancing the overall acter and providing considerable biodiversity efits over the years. Bird mitigation fields and and grazing marshes are likely to be retained and botential may exist to retain grass margins to ntain some varied land use and a high level of iversity in the local area.

nout Secondary Mitigation having been applied ughout the scheme, the only change to the rs/landscape following decommissioning would be existing hedgerows which will have been allowed row out and will have been managed to a height of It is assumed that these will be retained.

• Mitigation, the negative effects of the physical ommissioning will be balanced out by the long a landscape and visual effects of this mitigation.



ery Low



Level of	Neutral & Short Term	Beneficial & Long Term	Beneficial & Long Term	Neutr
Effect				
Significance	Negligible Not Significant	Minor Not Significant	Minor-Moderate Not Significant	Neglig
of Effect				
Site/Sites and	d Cable Route Corridor:			
Magnitude	Very Low	Low	Medium	Very L
Level of	Neutral & Short Term	Beneficial & Long Term	Beneficial & Long Term	Neutra
Effect				
Significance	Negligible Not Significant	Minor Not Significant	Moderate Significant	Neglig
of Effect				

In-Combination Effects [Cumulative Sites]	Cumulative Effects [Cumulative Developments]
<u>In Summary</u> The In-combination effects of the Cottam 2 Site with the other Cumulative Sites (Cottam 1 and 3a and 3b) is Minor at year 1 of operation and Negligible at year 15 with mitigation. This is due to the limited impact as a result of the low-level nature of the Scheme together with the quantum of mitigation. There will be positive changes in the watercourses due to the scope for more grassland and scattered trees along their margins. The panels would be set back 20m minimum from major watercourses and this would allow scope for these scattered tree belts to follow the route and enable more visibility in the landscape. The existing landscape character associated with the fabric of the watercourses of the	In Summary The Cumulative Effects of the Scheme with the other Cumulative Developmen Development and adverse, giving rise to likely Significant effects at year 1 or year 15 with the embedded and additional mitigation. This betterment is du together with the improvements to the margins of the watercourses with sca vegetative layering of the landscape across the Sites and Study Area, all in her effects.
Cumulative Sites and Study Area is predominantly arable along their margins and the change to grassland with scattered trees and a significantly improved hedgerow structure would give rise to overall benefits to biodiversity as well as landscape character in the combination of all the Cumulative Sites.	<i>Fabric of the Landscape</i> There would not be the removal of, or changes in individual topography or w landscape within the Cottam 2 Site. The wider landscape is typified by a low- by large areas of former River Meadow lands that have now been converted down to the river channels in some areas, disrupting the unity of the waterco
<u>Fabric of the Landscape</u> There would not be the removal of, or changes in individual topography or watercourse elements or features of the landscape within the Cottam 2 Site. The wider landscape is typified by a low-lying flat agricultural landscape characterised by large areas of former River Meadow lands that have now been converted to arable land. This arable land encroaches down to the river channels in some areas,	There would be the introduction of new elements and features comprising the the Cable Route Corridor extending between the Cottam 1 Site/Sites and the 3a and 3b Sites (the 'Cable Route Corridor').
disrupting the unity of the watercourses. There would be the introduction of new elements and features comprising the solar panel areas, the substation area and the Cable Route Corridor extending between the Cottam 1 Site/Sites and the Cottam 2 Site and the Cottam 2 and Cottam 3a and 3b Sites (the 'Cable Route Corridor').	Aesthetic Aspects of the Landscape Refer to Figure 8.15.2.2 [C6.4.8.15.2.2] which shows that with the Cottam 2 S developments would not be experienced across the majority of the 5km stude intervening woodlands, hedgerows, and tree cover between the Site/Sites. The would also curtail cumulative visibility.
<u>Aesthetic Aspects of the Landscape</u> Refer to Figure 8.15.1.2 [C6.4.8.15.1.2] which shows that with the Cottam 2 Site, cumulative visibility	There are local patches of cumulative visibility which may be focus of likely si and Tillbridge Solar. This cumulative visibility is set out in further detail within
with the Cottam 1 Site/Sites and Cottam 3a and 3b Sites would not be experienced across the entirety of the 2km study area. This is due to the distance, the intervening woodlands, hedgerows, and tree cover between the Site/Sites. The intervening settlements and built form would also curtail cumulative visibility.	Figure 8.15.2.6 Cottam 1, 2, 3a and 3b Gate Burton Cumulative Developmen Gate Burton to the west of Cottam 2, where the intervening settlements of K between, where their presence will impair any associated landscape context
 There are local patches of intervisibility between the Cottam 2 Site and with the 3a and Cottam 3b Sites extending from the: South boundary of the Cottam 2 Site, starting at the eastern edge of Corringham and reaching as far as Yawthorpe Beck and the settlement of Yawthorpe West boundary of the Cottam 2 Site, extending as far as Pilham Lane East boundary of the Cottam 2 Site, extending as far Yawthorpe Fox Covert 	Figure 8.15.2.8 Cottam 1, 2, 3a and 3b Tillbridge Solar Cumulative Developm shows Tillbridge to the south of the Cottam 2 Site, where their boundaries ar to the south of Kexby Road and to the west of the settlement of Fillingham. T woodlands or major topography, such that the presence of Tillbridge Develo direct and compounded relationship in terms of the landscape context of the Tillbridge Development would also add to coalescence between the Cottam

itral & Short Term

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ligible Not Significant

ments is Moderate with the Tillbridge of operation. The effects would be Minor at due to the low-level nature of the Scheme, scattered tree planting, giving rise to the helping reduce to reduce the cumulative

r watercourse elements or features of the w-lying flat agricultural landscape characterised ed to arable land. This arable land encroaches rcourses.

g the solar panel areas, the substation area and he Cottam 2 Site and the Cottam 2 and Cottam

Site, cumulative visibility with the cumulative tudy area. This is due to the distance, the The intervening settlements and built form

significant effects, between the Cottam 2 Site hin the following figures:

ents Augmented ZTV [C6.4.8.15.2.6]. This shows f Kexby, Willingham by Stow and Stow lie ext with the Gate Burton Site.

oments Augmented ZTV [C6.4.8.15.2.8]. This are located directly adjacent to each other, just . There are no intervening settlements, elopment with the Scheme would give rise to a the watercourses. The presence of the am 1 and the Cottam 2 Sites. The primary and



Northwest boundary of the Cottam 2 Site/Sites, extending as far as the Cottam 3a and 3b Sites.

Aisby Beck is located to the north of the Cottam 2 Site. These local becks feed into the wider drainage network of the River Till which flows into the Foss Dyke, and Corringham Beck also forms a larger watercourse that bounds the landscape to the northwest of Cottam 2 Site. These watercourses are key features that contribute to reduced visibility across the landscape.

There is a local patch of intervisibility between the Cottam 2 Site and with the Cottam 3b Site, comprising the:

- Northern-most tip of the Cottam 2 Site extending across the medieval village of Dunstall as far as the medieval village of Southorpe and Yawthorpe; and
- Southeast of the River Eau, extending as far as Huckerby Farm and Huckerby Bungalows.

The landscape rises to approximately 25m AOD at the small hamlet of Yawthorpe to the northeast of Yawthopre Beck. The landscape also rises to 25m AOD in the south around Springthorpe Grange, and to the south of Harpswell Lane at Harpswell Grange. This river system forms part of a gently undulating and low-lying landform in the main, with low ridges dividing shallow, broad river valleys, vales, and flood plains. These local undulations provide a deceptive contribution to a reduction in visibility across the landscape.

There are local patches of intervisibility between All Sites comprising the:

- North of the Bonsdale Farm at Pilham, extending across the landscape to the north of the medieval village of Dunstall as far as the medieval village of Southorpe
- West of the settlement of Corringham, extending from Staplegate House as far Windy Ridge on Pilham Lane
- West of Springthorpe, extending across the landscape as far as Harpswell Low Farm; and
- East of Yawthorpe, extending as far as Hemswell.

This is part of the landscape is shaped by the low hills and ridges that form watersheds between the watercourses. This contrasts with the lower lying areas where intact hedgerows and belts of riverside trees truncate views and help mitigate cumulative visibility.

Users of linear routes, especially footpaths or other rights of way, or transport routes, may potentially experience the aesthetic aspects of the cumulative sites revealed in succession as a series of sequential views. For further details refer to the following detailed visual receptor sheets:

Appendix 8.3.2.2 Individual Viewpoint Receptor Sheets [C6.3.8.3.2.2] Appendix 8.3.2.3 Individual Viewpoint Receptor Sheets [C6.3.8.3.2.3] Appendix 8.3.2.4 Individual Viewpoint Receptor Sheets [C6.3.8.3.2.4]

Appendix 8.3.3.2 Individual Residential Receptor Sheets [C6.3.8.3.3.2] Appendix 8.3.3.3 Individual Residential Receptor Sheets [C6.3.8.3.3.3]

Appendix 8.3.4.2 Individual Transport Receptor Sheets [C6.3.8.3.4.2] Appendix 8.3.4.3 Individual Transport Receptor Sheets [C6.3.8.3.4.3]

Appendix 8.3.5.2 Individual PRoW Receptor Sheets [C6.3.8.3.5.2] Appendix 8.3.5.3 Individual PRoW Receptor Sheets [C6.3.8.3.4.3]

Overall Landscape Character of the Topography and Watercourses

Overall, the character of the landscape and the topography and watercourses is shaped by drainage ditches that feed into the wider drainage network of the River Till and are a feature of the area. To the north of the area is Aisby Beck and Yawthorpe Beck. The River Till rises as a series of streams close to the 20m AOD contour just to the east of Corringham. Its course heads south, passing under a bridge near Heapham Windmill, then flowing to the west of the village. Many tributaries pass across the landscape, and some are fed by field drains which often follow a north south direction. These relevant characteristics of the landscape have some ability to accommodate change without undue adverse

secondary mitigation would however ensure that all existing features would be retained leading to an improvement at the operation stage (Year 15) of the watercousres across the Sites and Study Area.

Figure 8.15.2.9 Cottam 1, 2, 3a and 3b West Burton Cumulative Developments Augmented ZTV [C6.3.4.15.2.9]. This shows the West Burton Development located to the southwest of the Cottam 2 Site where the intervening settlements of Stow, Sturton by Stow and Bransby lie between, where their presence will impair any associated landscape context with the West Burton Site.

The other Cumulative Developments at Bumble Bee Farm, Field Farm and High Marnham are separated from the Scheme by the intervening settlements of Gainsborough, Lea, Blyton and Willingham by Stow.

The topography and watercourse features within these areas are focused around the change from pastoral to arable cropping which has resulted in loss of hedges, and consequently increase in field sizes. Those surviving small scale fields around settlements such as Sturton by Stow are influenced by the meandering watercourses and therefore have a key role to play in helping to define the quality of the landscape and reducing visibility across the area.

Overall Landscape Character of the Topography and Watercourses

Overall, the character of the landscape and the topography and watercourses is shaped by drainage ditches that feed into the wider drainage network of the River Till and are a feature of the area. To the north of the area is Aisby Beck and Yawthorpe Beck. The River Till rises as a series of streams close to the 20m AOD contour just to the east of Corringham. Its course heads south, passing under a bridge near Heapham Windmill, then flowing to the west of the village. Many tributaries pass across the landscape, and some are fed by field drains which often follow a north south direction. These relevant characteristics of the landscape have some ability to accommodate change without undue adverse effects. The cumulative visibility for the Cottam 2 Site would not alter the overall character of the landscape and its and topography and watercourses features. Moreover, these features play a positive role in reducing the overall cumulative effects.



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	effects. The cumulative visibility for the Cottam 2 Site would not alter the overall character of the landscape and its and topography and watercourses features. Moreover, these features play a positive role in reducing the overall cumulative effects.	
	The difference in effect between the addition of the Scheme to the cumulative baseline is low for the Cumulative Sites because there are minor patches of small cumulative change to a limited area of medium sensitivity, affecting some characteristics without altering the overall impression of its character.	
Magnitude	Construction: Low Operation (Year 1): Low Operation (Year 1) with only Embedded Mitigation: Low Operation (Year 15): Very Low Decommissioning: Very Low	Construction: Medium Operation (Year 1): Medium Operation (Year 1) with only Embedded Mitigation: Medium Operation (Year 15): Low Decommissioning: Low
Type of Effect	Construction: Adverse & Short Term Operation (Year 1): Adverse & Long Term Operation (Year 1) with only Embedded Mitigation: Adverse & Long Term Operation (Year 15): Beneficial & Long Term Decommissioning: Neutral & Short Term	Construction: Adverse & Short Term Operation (Year 1): Adverse & Long Term Operation (Year 1) with only Embedded Mitigation: Adverse & Long Term Operation (Year 15): Beneficial & Long Term Decommissioning: Neutral & Short Term
Significance of Effect	Construction: Minor Not Significant Operation (Year 1): Minor Not Significant Operation (Year 1) with only Embedded Mitigation: Minor Not Significant Operation (Year 15): Negligible Not Significant Decommissioning: Negligible Not Significant	Construction: Moderate Significant Operation (Year 1): Moderate Significant Operation (Year 1) with only Embedded Mitigation: Moderate Significant Operation (Year 15): Minor Not Significant Decommissioning: Minor Not Significant

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Landscape Receptor - Topography and Watercourses (Cottam 3a and 3b Site)

Receptor Baseline:

Within the Cottam 3a and 3b Sites, at a regional scale, landscape character is assessed within the East Midlands Regional Landscape Character Assessment as forming part of RLCT Profile: 4a Unwooded Vales, which is shown on Figure 8.5 [C6.4.8.5]. Unwooded Vales extends into the eastern section of the 2km Study Area and shares a boundary with the 'Built Up Area' that extend eastwards from Gainsborough towards Blyton following the main transport route of the A159 (Thonock Road). The Unwooded Vales also extends into the 5km Study Area and shares a boundary with RLCT Profile 6a: Limestone Scarps and Dipslopes. The settlements of Grayingham, Blyborough, Willhoughton and Hemswell are located close to the 5km Study Area boundary with RLCT Profile 4a: Unwooded Vales and RLCT 6a: Limestone Scarps and Dipslopes.

The sites within Cottam 3 can be sub-divided into two distinct land areas:

- Cottam 3a
- Cottam 3b •

Key Features:

The landscape is generally flat, with topography varying only very slightly in elevation, typically with levels of approximately 20m AOD similar to the outlying landscape, although there are some minor undulations of landform to the northeast between the settlements of Northorpe and Scotton that undulate around the flood plain of the River Eau and its various tributaries. A notable topographical feature is located to the east where the land rises to form a distinctive sloping ridge. This is a dominant landform where the scarp slope rises prominently from adjacent low-lying land forming the Edge or the Cliff where a series of small villages follow the ridgeline. The Edge forms a watershed between the major catchments of the Trent and Ancholme, both of which flow into the Humber, and the Witham, which flows into the Wash. The area supports several spring-fed small rivers where an important aquifer underlies the whole limestone ridge. The alignment of roads tend to follow the watercourses, for example Laughton Road, which takes a north-east route from Gainsborough, is almost true to the River Trent and passes through the settlements of Laughton and Laughton Common before reaching the A159 (Laughton Road). Smaller historic settlements are also located in close proximity to the River Trent and these include Walkerith, East Stockwith and Wildsworth where there are few trees and no churches.

Cottam 3a

The landform is generally flat with levels around 20m AOD and then falling gradually to the north towards Northorpe Beck. Beyond Northorpe Beck the landform retains a generally flat gradient at around 20m AOD. The fissured nature of the underlying rock means that there are few surface streams and groundwater percolates into the limestone to emerge as springs where it meets the underlying impermeable mudstones at the foot of the scarp. Several farms have constructed reservoirs to provide water for irrigation and these are particularly common within the flood plain of the River Eau. The River Eau drains into the River Witham and ultimately the Wash.

Cottam 3b

To the south of the railway line, the primary watercourse comprises the tributaries of the River Till which run in all directions and are divided by areas of geometric woodland. Aisby Beck and Corringham Beck cuts across the area to the north and then to the south of Aisby. Man-made, rectilinear drains are a characteristic of the area to the south of the railway line with an absence of natural, meandering watercourses. Other substantial drainage features include Laughton Drain, Highfield Drain and Northorpe Beck. Many of the tributaries pass through the Medieval settlements of Southorpe Village, Dunstall Village and Gilby Village.



Receptor susceptibility to change	Value of Receptor	Sensitivity	Embedded
In terms of forces for change for Cottam 3a	<u>Scenic:</u> The area has a peaceful nature and has managed to retain a	<u><i>Character:</i></u> The roads and watercourses	Embedded N
and 3b (Topography and Watercourses),	relatively remote and undeveloped character, giving the landscape an	combine to give a subtle grain to the	construction
recent trends have shown that the	impression of naturalness.	landscape. The interruptions at the	decommissio
watercourses and their tributaries are often		bridge crossings, such as Blyton Beck,	Mitigation is
impinged from following natural courses.	<i><u>Cultural</u></i> : The Lincolnshire Limestone aquifer is regionally important and	provide local points of interest and the	would includ
There are constraints around introducing	large demands are placed upon it to meet domestic, industry and	opportunity to capture views across the	
structural diversity into the river habitats,	agricultural water supplies as well as supporting base flows to rivers	landscape.	Panels to be
where geomorphological processes should be	and supporting local surface features.		
allowed to occur, thus also reducing the		<u><i>Quality:</i></u> To the south of the railway line,	Panels to be
energy of flood flows, and increasing flood	<u>Natural:</u> Wetland habitats are limited to a few wet woodlands and small	the primary watercourse comprises the	and minimu
storage capacity. The increasing demand for	areas of grazing marsh.	tributaries of the River Till which run in	
water resources in an area of low rainfall may		all directions and are divided by areas	Site boundar
limit agriculture, and/or impact on water	<u>Recreation and Enjoyment:</u> Restoration schemes promote new open	of geometric woodland, and this	existing hed
quality and freshwater habitats.	water and wetland habitats, and these are managed to contribute to the	enhances the quality of the landscape in	growth.
	local landscape and enhance biodiversity interest. Ironstone, limestone,	contrast to the landscape to the north	Brotten
Overall , the susceptibility of the Topography	and sand have all been exploited in this area and workings have been	of the railway line.	Let existing h
and Watercourses for the Cottam 3a and 3b	restored to form a rich mosaic of heathland, grassland, and woodland,		Encourage h
Sites is potentially conditioned by climate	with some stretches of open water.	<u>Value:</u> Areas have a positive landscape	hedges to ac
change may bring drier summers, and which		character but include some areas of	boundaries.
would exacerbate the low summer flows of	Local Distinctiveness and Sense of Place: There are few watercourses in	degradation where agricultural	boundaries.
the rivers in this area. This would impact on	the wider landscape but there are springs and flushes at the edges of	intensification has eroded landscape	The landscap
water quality and freshwater habitats, as well	the limestone plateau where the water meets the underlying	character, particularly in the context of	taken into ac
as reducing the availability of water. The	impermeable layers.	the watercourses where riparian	operation sta
relevant characteristics of the landscape		vegetation is sparse.	mitigation w
therefore have some ability to accommodate	<u>Health and Wellbeing:</u> Some of the restored sand and ironstone		had limited p
change without undue adverse effects given	extraction sites offer open water and semi-natural habitats for both	<u><i>Capacity:</i></u> The landscape benefits from	Embedded N
there is scope to incorporate measures into	informal quiet recreation and 2rganized sports.	high levels of visual containment due to	Linbedded i
cultivation to improve the structural condition		the local landform, hedgerows, and	
of soils, for example by increasing the area of	Important Spatial Function: The area supports several rectilinear	shelter belts and this helps tolerance for	
permanent grassland. The construction of	reservoirs for irrigation supplies.	landscape change. In contrast, the	
reservoirs on farms to supply water for		watercourses tend to have a more open	
irrigation could be designed to enhance	Overall , the value of Topography and Watercourses for the Cottam 3a	setting making them more susceptible	
biodiversity and make a positive contribution	and 3b Sites is shaped by the presence of springs and flushes. There are	to change.	
to the landscape.	areas of open water and objectives for freshwater habitat nature		
	conservation are to avoid damage to wetland and riverine habitats by		
	over-abstraction of water.		
Madium (Ekm Study Araz)		Madium	
Medium (5km Study Area)	Medium (5km Study Area)	Medium	
Medium to Low (Site/Sites)	Medium to Low (Site/Sites)	Medium	

ed Mitigation

Mitigation would be taken into account at the on, operation (Year 1 and Year 15) and sioning stages of the Scheme. This Embedded is also referred to as primary mitigation and ude the following measures:

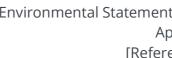
be set a minimum of 3m from Site boundaries.

be set minimum of 20m from major watercourses num of 8m from minor watercourses.

lary fencing to be set back 5m from adjacent edgerows to allow for proposed thickening and

g hedges grow out and managed at 5m. hedgerow trees to grow out within existing add further thickening and growth within the field s.

cape effects **with only** the Embedded Mitigation account equate to those effects set out for the stage (Year 1) and this includes secondary which will have been carried out but will have d physical or landscape character impact at this Mitigation stage.





Construction	Operation (Year 1)	Operation (Year 15)	Decomm
Activities during site preparation / enabling works, construction, and commissioning with effects such as construction traffic, noise and vibration from construction activities, dust	This generally flat, low-lying Site at the Cottam 3a and 3b Sites is part of the shallow broad river valleys locally and would benefit from the protection of minor waterways associated with the Trent and Till rivers as	The effects at the Operational Phase at Year 15 without Mitigation equate to those effects at the beginning of Year 1 before any secondary mitigation has been applied. Mitigation embedded in the design will apply as will the	A similar pro Scheme beil of the Site ir vegetation a
generation, site runoff, mud on roads, and the visual intrusion of plant and machinery on	well as the man-made diches and dykes.	growing out of the existing hedges.	secondary m future basel
site. At the early stages of the construction stage, ground, and lower-level activities such as the construction of the solar panel areas and associated infrastructure and inverters	Secondary mitigation such as planting, and grass seeding would be taken into account at this stage to include the following changes to the landscape:	With secondary mitigation such as planting and grass seeding being taken into account at the operational stage (Year 15) the following changes to the landscape would occur and the effects are set out below.	the duration noise and vi generation a
would be screened by existing vegetation.	Wildflower meadow mix to be sown beneath proposed panels.	Views to the north, south, east, and west of the Cottam 3a and 3b Site/Sites will be screened in the close-mid range	Following de
During the latter part of the construction stage, views would become available of the	Scattered tree belts adjacent to watercourses to better	through the new hedgerow and shelterbelt planting and the enhancement of existing hedges which will be	significantly been carried
elevated activities above the hedgerows, but these would be limited and would not affect the integrity of the waterways and local topography at all.	define these features within the landscape. Open grass buffers adjacent to waterways for biodiversity and improved water quality.	managed to a height of 5m. These new and augmented hedgerows will provide a series of good quality hedgerows both formally strengthening the existing and historical field pattern and creating a multi-layered	stronger and overall chara benefits over retaining and
Other works would be undertaken in connection with the construction including fencing, gates, boundary treatment and other	<u>Cottam 3a</u> A small number of linear man-made ditches and dykes exist across the Site that would benefit from some	landscape. Scattered tree belts will follow the routes of existing watercourses, strengthening their visibility in the wider landscape. Views of the longer distance, where hedgerows do not block these, will be of a layered, well	to retain son biodiversity i
means of enclosure and works for the provision of security and monitoring measures such as CCTV and the laying down of internal	enhancement including a less formal watercourse to the east of the Site which is to be planted with successive scrub to provided biodiversity and improve the presence of the watercourse locally within the	treed landscape with a backdrop of some wooded vegetation in places on the horizon. Both new and existing vegetation will have established and begun to	
tracks. There would also be landscape and biodiversity mitigation works, including	landscape.	mature, creating a much stronger structure to the landscape, and retaining and enhancing the overall	
planting and the improvement of existing hedgerows to all boundaries of the Site/Sites.	A wide grassland buffer of a tall herb mixture, enhancing and protecting the existing native species	character of the area. The proposed grassland will have established and will	
These short-lived construction activities would not affect the watercourses or topography of	for nature conservation will reduce fertilizer and spray run-off improving water quality.	have settled into its natural scheme with some minor appropriate management of differing regimes. The soil	
the area although there may be some limited run-off. There would be a change to the	Across the Site, linear ditches and dykes which are currently abutted by vegetation will be enhanced to	quality will be considerably improved through the lack of cultivation and the chemical run-off will be reduced	
arable land use which will be beneficial to soils and watercourses, but the field boundaries and the associated tree cover would remain intact and help with layering and the	further delineate the field boundaries and minor watercourses as well as adding to the green corridors and biodiversity value.	around the Site(s) enhancing the water quality generally. There will be considerable biodiversity gains through the establishment of the varied grassland types and regimes and a long-term increase in pollinator species and bird	
integration of the new panels. There would not be a fundamental change to the surroundings to the views and settings of	These new riparian species trees and vegetation along the rivers will increase the visual presence of the	and other species and numbers locally. Growth of existing and proposed vegetation is assumed to	
these landscape receptors,	watercourse within the wider landscape as well as attenuating flood risk. Wide grassland margins will	be:	
Overall, the topography and watercourses are able to accommodate the changes that arise	restore, enhance, or create river edge habitats for increased and protected biodiversity.	Woodland/trees and shelterbelts: 2.5m max at Year 1, 7.5m max at Year 15.	
through the construction of the Site without undue adverse effects. The integrity of all	<u>Cottam 3b</u>	New hedgerows: 0.6m at Year 1 and 3.5m at Year 15.	
features will be retained and enhancement at ground level through initial grassland planting will have beneficial effects from the outset.	The Site does not contain any watercourses.	Existing hedgerows: 0.9m at Year 1 and 5m at Year 15.	
	Long views from 'The Ridge' to the east will be retained and enhanced through strengthening of the overall character with increased tree, shelterbelt, and	Shrubs: 0.9m at Year 1 and 5m at Year 15.	

nissioning

rocess to that of construction stage, but with the eing no longer operational. This is an assessment in winter but assumes retention of existing and builds upon the proposed primary and mitigation that had been established as the eline. Effects are those arising from activities for on of the decommissioning to include site traffic, vibration from decommissioning activities, dust and site runoff.

decommissioning, the land is likely to be returned production. The Site will however benefit from the ly enhanced tree and hedgerow planting that has ed out and has begun to mature to create a much nd robust landscape, retaining and enhancing the aracter and providing considerable biodiversity ver the years. Bird mitigation fields are likely to be and the potential may exist to retain grass margins ome varied land use and maintain a high level of ty in the local area.



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	boundary hedge planting, enhancing the historical field patterns that have been reinstated as well as local watercourses. Although new vegetation will be immature, existing hedgerows will have begun to grow out at Year 1 and grassland will be well established.	Overall, following mitigation at Year 15, the Site is able to accommodate the proposed change without undue adverse effects and will achieve considerable beneficial effects in terms of soil and water improvements as well as improved carbon capture and significantly increased biodiversity around the Site.
	 Overall, the structural condition of the soils and water quality locally will be greatly improved through the reversion of intensively managed arable land to mixed grassland, and carbon capture can be increased. Overall, following mitigation at Year 1, the Site is able to accommodate the proposed change without undue adverse effects and will achieve some beneficial effects from the outset. Between Years 1 and 15, the following beneficial effects will be achieved in terms of Topography and Watercourses: Grassland reversion around watercourses A more varied landscape Improved management of exiting vegetation Less intensively managed land around watercourses Soil improvements Increased visibility/definition of watercourses across the landscape. Increased riparian species vegetation Significantly improved biodiversity Improved carbon retention/capture Overwintering opportunities within wetland 	Overall , in terms of mitigation for the Cottam 3a and 3b Sites, the aim is to manage land adjacent to wet woodland and other wetland habitats to buffer them and maintain their hydrology, thus retaining them as landscape features and enhancing their biodiversity interest. The aim is also to identify, maintain and enhance the springs and flushes on the edges of the limestone. There is also the opportunity to establish permanent uncultivated strips alongside watercourses and expansion of wetland to improve carbon capture.
	 Adverse effects (mitigated): Panels and structures across landscape Increased hard standing areas - water runoff management required Potential minor pollution around substations The effects at the Operational Phase at Year 15 without Embedded Mitigation equate to those effects at the beginning of Year 1 before 	
	effects at the beginning of Year 1 before secondary mitigation has been applied. The Effects set out below include secondary mitigation which will have been carried out but	



		will have had limited physical impact at this stage.		
5km Study A	rea:			
Magnitude	Very Low	Low	Low	Very Low
Level of Effect	Neutral & Short Term	Beneficial & Long Term	Beneficial & Long Term	Neutral & S
Significance of Effect	Negligible Not Significant	Minor Not Significant	Minor Not Significant	Negligible N
Site/Sites and	d Cable Route Corridor:			
Magnitude	Very Low	Low	Medium	Very Low
Level of Effect	Neutral & Short Term	Beneficial & Long Term	Beneficial & Long Term	Neutral & S
Significance of Effect	Negligible Not Significant	Minor Not Significant	Moderate Significant	Negligible N

Landscape Receptor – Topography and Watercourses (Cottam 3a and 3b Sites)

In-combination Effects [Cumulative Sites]	Cumulative Effects [Cumulative Developments]
In Summary	In Summary
The In-combination effects of the Cottam 3a and 3b Sites with the other Cumulative Sites (Cottam 1 and 2) is Minor at year 1 of operation and Negligible at year 15 with mitigation. This is due to the limited impact as a result of the low-level nature of the Scheme together with the quantum of mitigation. There will be positive changes in the watercourses due to the scope for more grassland and scattered trees along their margins. The panels would be set back 20m minimum from major watercourses and this would allow scope for these scattered tree belts to follow the route and enable more visibility in the	The Cumulative Effects of the Scheme with the other Cumulative Development and adverse, and adverse giving rise to likely Significant effects.
landscape. The existing landscape character associated with the fabric of the watercourses of the	
Cumulative Sites and Study Area is predominantly arable along their margins and the change to grassland with scattered trees and a significantly improved hedgerow structure would give rise to	<i><u>Fabric of the Landscape</u></i> There would not be the removal of, or changes in individual topography a
overall benefits to biodiversity as well as landscape character in the combination of all the Cumulative	landscape within the Cottam 3a and 3b Sites. The wider landscape is typif
Sites.	give a subtle grain to the landscape. The interruptions at the bridge crossi
	interest and the opportunity to capture views across the area.
Fabric of the Landscape	
There would not be the removal of, or changes in individual topography and watercourse elements or	There would be the introduction of new elements and features comprisin
features of the landscape within Cottam 3a and 3b. The wider landscape is typified by roads and	Cable Route Corridor extending between the Cottam 1 Site/Sites and the Cottam 1 Sites and the Cottam 1 Sites and the Cottam 1 Sites and the Co
watercourses that combine to give a subtle grain to the landscape. The interruptions at the bridge crossings, such as Blyton Beck, provide local points of interest and the opportunity to capture views	and 3b Sites (the 'Cable Route Corridor').
across the area.	Aesthetic Aspects of the Landscape
	Refer to Figure 8.15.1.3 [C6.4.8.15.1.3] which shows that with the Cottam
There would be the introduction of new elements and features comprising the solar panel areas, the	cumulative developments would not be experienced across the majority of
substation area and Cable Route Corridor extending between the Cottam 1 Site/Sites and the Cottam 2	distance, the intervening woodlands, hedgerows, and tree cover between
Site/ and the Cottam 2 and Cottam 3a and 3b Sites (the 'Cable Route Corridor').	built form would also curtail cumulative visibility between these Site/Sites
Aesthetic Aspects of the Landscape	There are local patches of cumulative visibility which may be focus of likel
Refer to Figure 8.15.1.3 [C6.4.8.15.1.3] which shows that with the Cottam 3b Site, cumulative visibility with the Cottam 1 Site/Sites, Cottam 2 Site and Cottam 3b Site would not be experienced across the	and Tillbridge Solar. This cumulative visibility is set out in further detail with
majority of the 2km study area. This is due to the distance, the intervening woodlands, hedgerows, and	

Environmental Statement Landscape and Visual Impact Assessment Appendix 8.2.4.3: Topo Analysis & Evaluation [Reference: EN010133/APP/C6.3.8.2.4.3] Jan 2023

Short Term

Not Significant

Short Term

Not Significant

opments is Moderate with the Tillbridge effects at year 1 of operation. The effects would be terment is due to the low-level nature of the ourses with scattered tree planting, giving rise to all in helping reduce to reduce the cumulative

and watercourse elements or features of the pified by roads and watercourses that combine to ssings, such as Blyton Beck, provide local points of

ing the solar panel areas, the substation area and e Cottam 2 Site and the Cottam 2 and Cottam 3a

m 3a and 3b Sites, cumulative visibility with the y of the 5km study area. This is due to the en the Site/Sites. The intervening settlements and es.

ely significant effects, between the Cottam 3a Site within the following figures:



tree cover between the Site/Sites. The intervening settlements and built form would also curtail cumulative visibility between these Site/Sites.

There are local patches of intervisibility between the Cottam 3a and 3b Sites, extending from the:

- Northeast boundary of the Cottam 3a Site, defined to the west by the Green Respect Burial Park and Park House Farm, and reaching as far as Northorpe in the east
- East boundary of Cottam 3a Site, and stopping short of Cold Harbour Farm; and
- North boundary of the Cottam 3b Site, extending for a short distance as far as Grange Farm and Top Farm.

Despite the concentration of straight roads that cut bluntly across the open arable landscape, there are some minor undulations of landform to the northeast between the settlements of Northorpe and Scotton that undulate around the flood plain of the River Eau and its various tributaries. A notable topographical feature is located to the east where the land rises to form a distinctive sloping ridge. These local undulations help to close down visibility across the landscape.

There are local patches of intervisibility between the Cottam 3a, 3b and Cottam 2 Sites, extending from the:

- South boundary of the Cottam 3b Site, bordered by Pilham to the west and the medieval settlement of Dunstall to the east, and reaching as far as Springthorpe in the south
- South boundary of the Cottam 3a Site, bordered by the eastern edge of Blyton to the west, reaching Grange Farm and stopping short of the mainline railway; and
- North boundary of the Cottam 3a Site, following the alignment of the A159 (Laughton Road) and stopping short to the west of the Green Respect Burial Park.

The natural features however, such as the meandering watercourses and smaller scale field systems bring a tighter grain and added layers to the landscape, which helps curtail views across the area. The alignment of roads tend to follow the watercourses, for example Laughton Road, which takes a northeast route from Gainsborough, is almost true to the River Trent and passes through the settlements of Laughton and Laughton Common before reaching the A159 (Laughton Road).

There is a local patch of intervisibility between All Sites, located to the:

• East of the Cottam 3b Site/ and north of the Bonsdale Farm at Pilham, extending across the landscape to the north of the medieval village of Dunstall as far as the medieval village of Southorpe.

To the south of the railway line, the primary watercourse comprises the tributaries of the River Till which run in all directions and are divided by areas of geometric woodland, and this enhances the quality of the landscape and its ability to provide enclosure and intimacy, in contrast to the landscape to the north of the railway line.

Users of linear routes, especially footpaths or other rights of way, or transport routes, may potentially experience the aesthetic aspects of the cumulative sites revealed in succession as a series of sequential views. For further details refer to the following detailed visual receptor sheets:

Appendix 8.3.2.2 Individual Viewpoint Receptor Sheets [C6.3.8.3.2.2] Appendix 8.3.2.3 Individual Viewpoint Receptor Sheets [C6.3.8.3.2.3] Appendix 8.3.2.4 Individual Viewpoint Receptor Sheets [C6.3.8.3.2.4]

Appendix 8.3.3.2 Individual Residential Receptor Sheets [C6.3.8.3.3.2] Appendix 8.3.3.3 Individual Residential Receptor Sheets [C6.3.8.3.3.3]

Appendix 8.3.4.2 Individual Transport Receptor Sheets [C6.3.8.3.4.2] Appendix 8.3.4.3 Individual Transport Receptor Sheets [C6.3.8.3.4.3]

Appendix 8.3.5.2 Individual PRoW Receptor Sheets [C6.3.8.3.5.2]

Figure 8.15.2.6 Cottam 1, 2, 3a and 3b Gate Burton Cumulative Developments Augmented ZTV [C6.4.8.15.2.6]. This shows Gate Burton to the west of Cottam 3a and 3b, where the intervening settlements of Kexby, Willingham by Stow and Stow lie between, where their presence will impair any associated landscape context with the Gate Burton Site.

Figure 8.15.2.8 Cottam 1, 2, 3a and 3b Tillbridge Solar Cumulative Developments Augmented ZTV [C6.4.8.15.2.8]. This shows Tillbridge to the south of the Cottam 3a and 3b Sites, where the boundaries with Cottam 2 are located directly adjacent to each other, just to the south of Kexby Road and to the west of the settlement of Fillingham. There are no intervening settlements, woodlands or major topography, such that the presence of Tillbridge Development with the Scheme would give rise to a direct and compounded relationship in terms of the landscape context of the watercourses. The presence of the Tillbridge Development would also add to coalescence between the Cottam 1 and the Cottam 2 Sites. The primary and secondary mitigation would however ensure that all existing features would be retained leading to an improvement at the operation stage (Year 15) of the watercousres across the Sites and Study Area.

Figure 8.15.2.9 Cottam 1, 2, 3a and 3b West Burton Cumulative Developments Augmented ZTV [C6.3.4.15.2.9]. This shows the West Burton Development located to the southwest of the Cottam 3a and 3b Sites where the intervening settlements of Stow, Sturton by Stow and Bransby lie between, and where their presence will impair any associated landscape context with the West Burton Site.

The other Cumulative Developments at Bumble Bee Farm, Field Farm and High Marnham are separated from the Scheme by the intervening settlements of Gainsborough, Lea, Blyton and Willingham by Stow.

The topography and watercourse features within these areas are focused around the change from pastoral to arable cropping which has resulted in loss of hedges, and consequently increase in field sizes. Those surviving small scale fields around settlements such as Sturton by Stow are influenced by the meandering watercourses and therefore have a key role to play in helping to define the quality of the landscape and reducing visibility across the area.

Overall Character of the Landscape and Topography and Watercourses

Overall, the character of the landscape and the topography and watercourses is shaped by a landscape that benefits from high levels of visual containment due to the local landform, hedgerows, and shelter belts and this helps tolerance for landscape change. In contrast, the watercourses tend to have a more open setting making them more susceptible to change. These relevant characteristics of the landscape have some ability to accommodate change without undue adverse effects. The cumulative visibility for the Cottam 3a and 3b Sites would not alter the character of the landscape and its land use features. Moreover, these features play a positive role in reducing the overall cumulative effects.

Environmental Statement Landscape and Visual Impact Assessment Appendix 8.2.4.3: Topo Analysis & Evaluation [Reference: EN010133/APP/C6.3.8.2.4.3] Jan 2023



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	Appendix 8.3.5.3 Individual ProW Receptor Sheets [C6.3.8.3.4.3]	
	Overall Character of the Landscape and Topography and Watercourses Overall, the character of the landscape and the topography and watercourses is shaped by a landscape that benefits from high levels of visual containment due to the local landform, hedgerows, and shelter belts and this helps tolerance for landscape change. In contrast, the watercourses tend to have a more open setting making them more susceptible to change. These relevant characteristics of the landscape have some ability to accommodate change without undue adverse effects. The cumulative visibility for the Cottam 3a and 3b Sites would not alter the character of the landscape and its land use features. Moreover, these features play a positive role in reducing the overall cumulative effects.	
	The difference in effect between the addition of the Scheme to the cumulative baseline is low for the Cumulative Sites because there are minor patches of small cumulative change to a limited area of medium sensitivity, affecting some characteristics without altering the overall impression of its character.	
Magnitude	Construction: Low Operation (Year 1): Low Operation (Year 1) with only Embedded Mitigation : Low	Construction: Medium Operation (Year 1): Medium Operation (Year 1) with only Embedded Mitigation: Medium
	Operation (Year 15): Very Low Decommissioning: Very Low	Operation (Year 15): Low Decommissioning: Low
Type of Effect	Construction: Adverse & Short Term Operation (Year 1): Adverse & Long Term Operation (Year 1) with only Embedded Mitigation: Adverse & Long Term Operation (Year 15): Beneficial & Long Term Decommissioning: Neutral & Short Term	Construction: Adverse & Short Term Operation (Year 1): Adverse & Long Term Operation (Year 1) with only Embedded Mitigation: Adverse & Long Tern Operation (Year 15): Beneficial & Long Term Decommissioning: Neutral & Short Term
Significance of Effect	Construction: Minor Not Significant Operation (Year 1): Minor Not Significant Operation (Year 1) with only Embedded Mitigation: Minor Not Significant Operation (Year 15): Negligible Not Significant Decommissioning: Negligible Not Significant	Construction: Moderate Significant Operation (Year 1): Moderate Significant Operation (Year 1) with only Embedded Mitigation: Moderate Significan Operation (Year 15): Minor Not Significant Decommissioning: Minor Not Significant

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Landscape Receptor – Communication and Infrastructure (Cottam 1 Site/Sites)

Receptor Baseline:

Within the Cottam 1 Site/Sites, at a regional scale, landscape character is assessed within the East Midlands Regional Landscape Character Assessment as forming part of RLCT Profile: 4a Unwooded Vales, which is shown on Figure 8.5 [C6.4.8.5]. Unwooded Vales extends across the majority of the 2km and 5km Study Area apart from the eastern most edge where it shares a boundary with RLCT Profile: 6a Limestone Scarps and Dipslopes. The western extent of the 5km Study Area is also host to a small part of RLCT Profile 3a: Floodplain Valleys and RLCT Profile: 4b Wooded Vales.

The Site/Sites within Cottam 1 (2km Study Area) can be sub-divided into two distinct land areas:

- Cottam 1 North
- Cottam 1 South •

Key Features:

The communications and infrastructure network are broadly defined to the north by the A156 (Gainsborough Road) which takes an informal alignment across the landscape serving the smaller settlements of Corringham, Hemswell, Harpswell and Hemswell Cliff, and then connects the larger settlements of Gainsborough with Market Rasen. To the south, the A1500 (Tillbridge Road), a Roman road follows a well-defined straight route and is orientated in a broad northwest to southeast alignment across the landscape. To the east, the landscape is defined by the A15 (Ermine Street), which is also a Roman road following a distinctive straight alignment along the limestone capped scarp slope. The B1398 (Middle Street) also passes along the scarp slope following an almost parallel alignment with Ermine Street. Finally, to the west, the B1241 (Normanby Road, Stow Road then Willingham Road) passes through the settlements of Sturton by Stow, Stow, Normanby by Stow, Willingham by Stow, Kexby and Upton.

Cottam 1 North:

This is an area of land that is broadly defined to the north by the local network comprising Glentworth Road and Kexby Road, which passes through the landscape in an east west direction with several right-angled bends. This local road network connects the smaller settlements of Kexby in the west with Glentworth in the east. To the south of the Site/Sites, Ingham Road runs in an east west direction and forms part of the local road network with a clearly defined straight alignment. This local road network connects the settlements of Stow in the west with Ingham and Ingham Cliff in the east. Ingham road serves several farmsteads and isolated dwellings including Furze Hill, Blackthorn Hill, and The Pastures. To the east, the B1398 (Middle Street) forms an almost continuous and well-defined edge to the Site/Sites and is a strong feature within the landscape where the landform rises distinctly to form the limestone capped scarp slope. To the west, the Site/Sites are defined by the B1241, which follows the almost meandering course of the River Till. To the central part of the Site/Sites, the small settlement of Coates is served via a minor road network that also provides access to several farmsteads and isolated dwellings including Grange Farm, Hall Farm Presswood Cottages and Coates Hall. Within this central part, Fillingham Lane leads into Willingham Road and this route is also part of the local road network passing east to west across the area linking the settlements of Willingham by Stow in the west to Fillingham in the east. This local road network serves several farmsteads and isolated dwellings including Carisbrooke, Slate House Farm, Magin Moor Farm, Poplar Farm, Turpin Farm, Side Farm, Greystones Farm and Glebe Farm.

Cottam 1 South:

This is an area of land that is broadly defined to the north by Ingham Road, which runs in an east west direction and forms part of the local road network with a clearly defined straight alignment. This local road network connects the settlements of Stow in the west with Ingham and Ingham Cliff in the east. Ingham road serves several farmsteads and isolated dwellings including Furze Hill, Blackthorn Hill, and The Pastures. To the south, the boundary of the Site/Sites is defined by Thorpe Lane, which forms part of the local road network that connects the settlements of Sturton by Stow with Brattleby and Aisthorpe. Thorpe Lane serves a small number of dwellings and farmsteads including Clandon House, The Lodge, Thorpe Lane Farm and Glebe Buildings. To the east, the B1398 (Middle Street) forms an almost continuous and well-defined edge and is a strong feature within the landscape where the landform rises distinctly to form the limestone capped scarp slope. To the west, the Site/Sites are defined by Fleets Lane which forms part of the local road network linking the settlements of Sturton by Stow with Stow Pasture. The lane runs in a straight north direction and serves only one property known as Fleets Cottages. To the central part of the Site/Sites, there is a local lane leading west from Cammeringham that serves two properties known as Cold Harbour and Blackthorn Hill.

Environmental Statement Landscape and Visual Impact Assessment Appendix 8.2.5.1: Comms Analysis & Evaluation [Reference: EN010133/APP/C6.3.8.2.5.1] Jan 2023





Receptor susceptibility to change	Value of Receptor	Sensitivity	Embedded Mitigation
In terms of forces for change for the Cottam 1	<u>Scenic:</u> The powerful River Trent and its tributaries and other water courses within its flood plain	<u>Character:</u> This is defined by	Embedded Mitigation would be taken into
Site/Sites (Communications and	provide a strong functional feature running through the landscape, which contribute strongly to	A1500 Roman road near Sturton	account at the construction, operation
Infrastructure), recent trends have shown that	scenic factors.	on Stow that is an important	(Year 1 and Year 15) and decommissioning
significant infrastructure development		historic route and the B1241 is a	stages of the Scheme. This Embedded
pressures exist from the main settlements	<u><i>Cultural:</i></u> The A1500 Roman road near Sturton on Stow is an important historic route and the	strategic north-south minor	Mitigation is also referred to as primary
and roads that traverse the area. The	B1241 is a strategic north-south minor route which links several settlements including Saxilby,	route which links several	mitigation and would include the following
challenges are to conserve the tranquility of	Sturton by Stow and Stow. It continues northwards as a minor road, linking a further string of	settlements including Saxilby,	measures:
the area through careful planning that	small, nucleated settlements such as Upton, Springthorpe and Corringham.	Sturton by Stow and Stow.	
minimises road construction, car use and			Panels to be set a minimum of 3m from
disturbance, and provides sustainable	Natural: The east west travel direction often links the older settlements moving in a more	<u>Quality:</u> The east west travel	Site boundaries.
transport options and well-designed green	random pattern. These roads gain access to smaller villages and are popular for recreation since	direction between the north-	
infrastructure.	they provide attractive destinations as narrow country lanes often with hedgerows on both	south routes links the older	Site boundary fencing to be set back 5m
	sides.	settlements moving in a more	from adjacent existing hedgerows to allow
Overall , the susceptibility of the		random pattern, and which adds	for proposed thickening and growth.
Communications and Infrastructure for the	<u>Recreation and Enjoyment:</u> This region represents a major east-west link, connecting Lincolnshire	interest to the landscape.	
Cottam 1 Site/Sites is conditioned by the	with the North of England.		Existing hedges are to be allowed to grow
sensitivity of the rural roads and minor tracks,		<u>Value:</u> The landscape shows	out and will be managed to a height of 5m.
lanes and farm roads that are bordered by	Local Distinctiveness and Sense of Place: This is a predominantly rural and sparsely settled area	evidence of historic settlement	Hedgerow trees will be encouraged to
wide verges. Driving north to south across the	with small villages and dispersed farms linked by quiet lanes that connect across the landscape	with farms, nucleated villages,	grow out to add further thickening and
area is relatively straightforward as the A156	to the wider strategic road network linking the cities of Nottingham and Lincoln.	and small hamlets such as	growth to the field boundaries with the
runs fairly true to the River Trent and the	the shift and Middle sizes. The land the standard the standard to see a function illustration of the standard for the	Thorpe le Fallows and Coates,	addition of new hedgerow trees as
B1241 follows the almost meandering course	<u>Health and Wellbeing:</u> The local roads (that gain access to smaller villages) are popular for	which are features value that	appropriate, randomly spaced along the
of the River Till. Most of the developed settlements are near these roads, however	recreation since they provide attractive destinations as narrow country lanes often with high	are not highly recognised.	length of existing hedges.
narrow country lanes link east west and this	levels of tranquility and isolation.	<u><i>Capacity:</i></u> Main roads are	Lighting will be limited to downlights within
direction of travel is slightly more challenging.	Important Spatial Function: Main roads are significant features in the landscape with recent	significant features in the	substations and battery banks only and
The relevant characteristics of the landscape	development concentrated along these main roads. The bypassing of original village centers has	landscape with recent	used when maintenance or security is
therefore have some ability to accommodate	also changed the spatial function of the landscape.	development concentrated	required. Lighting will be PIR operated and
change without undue adverse effects given		along these main roads. The	will be calibrated to vehicle and personnel
there is scope to protect the character and	Overall , the value of the Communications and Infrastructure for the Cottam 1 Site/Sites is	bypassing of original village	movements. All visible lighting would be
diversity of the road networks through	shaped by the wide range of features which make one landscape type or area different from	centers has changed the spatial	50W, installed at a maximum height of 4m
conservation and enhancement of the local	another. The strategic major road network is defined by important historic routes and in	function of the landscape	with cowls fitted to prevent light spillage.
lanes and recognition of the value that the	contrast, the east west minor road network links several historic and distinctive smaller string of	leaving some vulnerability to	Lighting required within panelled areas will
strategic routes provide in connections across	settlements across the area. Overall, the prevailing road network is formed by narrow lanes that	landscape change.	be manually operated. There will be no
the region.	are often tranquil and hedged to both sides with wide grassed verges.		lighting on perimeter fencing.
			The landscape effects with only the
			Embedded Mitigation taken into account
			equate to those effects set out for the
			operation stage (Year 1) and this includes
			secondary mitigation which will have been
			carried out but will have had limited
			physical or landscape character impact at
Madium (Elem Struch: Aran)	Madium (Elem Study Araz)	Modium	this Embedded Mitigation stage.
Medium (5km Study Area)	Medium (5km Study Area)	Medium	
Medium (Site/Sites)	Medium (Site/Sites)	Medium	



Landscape Receptor – Communication and Infrastructure (Cottam 1 Site/Sites)

Construction	Operation (Year 1)	Operation (Year 15)	Decom
Activities during site preparation / enabling works,	Cottam 1 North; The main communication and	The effects at the Operational Phase at Year 15	A similar
construction, and commissioning with effects such as	infrastructure receptor is Willingham Road (T074) that	without Mitigation equate to those effects at the	the Scher
construction traffic, noise and vibration from	bisects the Site/Sites running in an east/west direction	beginning of Year 1 before any secondary mitigation	assessme
construction activities, dust generation, site runoff,	linking between Willingham by Stow and Fillingham.	has been applied. Mitigation embedded in the design	of existin
mud on roads, and the visual intrusion of plant and		will apply as will the growing out of the existing	
	Cattam 1 South: The main communication and		primary a establish
machinery on site. At the early stages of the	<u>Cottam 1 South:</u> The main communication and	hedges.	
construction stage, ground, and lower-level activities	infrastructure receptor is Ingham Road (T107) and	With accordant mitigation such as planting and grass	arising fro
such as the construction of the solar panel areas and	Stow Lane (T105) that bisects the Site/Sites running in	With secondary mitigation such as planting and grass	decommi
associated infrastructure and inverters would be	an east/west direction linking between Stow and	seeding being taken into account at the operational	vibration
screened partially by existing vegetation, in particular	Ingham.	stage (Year 15) the following changes to the landscape	generatio
along the Willingham Road that passes through the		would occur and the effects are set out below.	
Cottam 1 North Site, and Stow Lane, Thorpe Road and	The foreground context of the routes (T072, T074,	The landscape context to the north, south, east, and	Following
Fleets Lane to the southwest passing through and	T098, T099, T105, T107, T110, T119, T120, T121 and	west of the Cottam 1 Site/Sites will be well-integrated	returned
around the Cottam 1 South Site.	T12) would change from the agricultural fields to an	in the close-mid range proximity due to the new	benefit fr
	area of panels, but they would be set back behind the	hedgerows and shelterbelt planting and the	hedgerov
During the latter part of the construction stage, views	existing hedgerows.	enhancement of existing hedgerows which will be	matured
would become available of the elevated activities		managed to a height of 5m in the middle distance.	landscap
above the hedgerows, but these would be limited to	Secondary mitigation such as planting, and grass	These new and augmented hedgerows will provide a	character
few views from these landscape receptors and would	seeding would be taken into account at this stage to	series of good quality field boundaries both formally	benefits of
not affect their integrity or overall use.	include the following changes to the landscape:	strengthening the existing and historical field pattern	wetland g
6,		and creating a multi-layered landscape. Scattered	the poter
Other works would be undertaken in connection with	Wildflower meadow mix to be sown beneath proposed	tree belts will follow the routes of existing	maintain
the construction including fencing, gates, boundary	Wildflower meadow mix to be sown beneath proposed	watercourses, strengthening their visibility in the wider	biodivers
treatment and other means of enclosure and works for	panels.	landscape. Views of the longer distance, where	
the provision of security and monitoring measures		hedgerows do not block these, will be of a layered, well	Without
such as CCTV and the laying down of internal tracks.	Mitigation for increased traffic will include the	treed landscape with a backdrop of some wooded	througho
There would also be landscape and biodiversity	protection and enhancement of existing roadside	vegetation in places on the horizon. Both new and	views/lan
mitigation works, including planting and the	vegetation where this sits within the Order limits and	existing vegetation will have established and begun to	the existi
	the increase in general tree cover across the Site/Sites,		
improvement of existing hedgerows to all boundaries	breaking up views, creating biodiversity gains and	mature, creating a much stronger structure to the	to grow o
of the Site/Sites.	capturing carbon.	landscape, and retaining its overall character of the	5m. It is a
		area.	
These short-lived construction activities would affect	Although new vegetation will be immature, existing		With Mit
routes to and from the Cottam 1 Site/Site to some	hedgerows will have begun to grow out at Year 1.	Growth of existing and proposed vegetation is	decommi
degree, but their integrity would not be lost. There		assumed to be:	term land
would be a change to the arable land use, but the field	Overall, the communications links are able to		
boundaries and the associated tree cover would	accommodate the increased level of traffic between	Woodland/trees and shelterbelts: 2.5m max at Year 1,	
remain intact and help with layering and the	the Cottam 1 Site/Sites and to the wider transport links	7.5m max at Year 15.	
integration of the new panels in the context of these	without undue adverse effects on the integrity of these		
routes. There would not be a fundamental change to	routes. These routes are often used for informal	New hedgerows: 0.6m at Year 1 and 3.5m at Year 15.	
the surroundings to the landscape setting of these	recreation but will not be unduly affected during the		
landscape receptors but an increase in traffic locally	operational phase of the development. Although there	Existing hedgerows: 0.9m at Year 1 and 5m at Year 15.	
would put some pressure on these communication	will be some loss of tranquillity, this will be mitigated		
links in the short term.		Shrubs: 0.9m at Year 1 and 5m at Year 15.	
	by improved vegetative cover locally predominantly		
Cottam 1 North:	screening or softening views of additional traffic.	By Year 15, this vegetation will have matured and been	
T072 Access to Fillingham Grange: Access from		managed to a height of 5m. Hedgerow trees will have	
Willingham Road (T074) to fields 'B' is from the south	Between Years 1 and 15, the following beneficial	matured and shelterbelts and scattered trees will have	
	effects will be achieved in terms of the Communication	reached a height of some 7.5m.	
via this existing track off the Willingham Road that	and infrastructure		
leads to Fillingham Grange.	 Grassland improvements along some roads 	Overall, the communications links are able to	
	- A more varied landscape along existing routes	accommodate the increased level of traffic between	
T074 Willingham Road: Access to fields 'A' would be		the Cottam 1 Site/Sites and to the wider transport links	
gained off the Willingham Road and run parallel to	1		1

Environmental Statement Landscape and Visual Impact Assessment Appendix 8.2.5.1: Comms Analysis & Evaluation [Reference: EN010133/APP/C6.3.8.2.5.1] Jan 2023

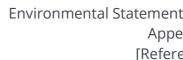
mmissioning

ar process to that of construction stage, but with neme being no longer operational. This is an ment of the Site in winter but assumes retention ting vegetation and builds upon the proposed ry and secondary mitigation that had been shed as the future baseline. Effects are those from activities for the duration of the missioning to include site traffic, noise and on from decommissioning activities, dust ation and site runoff.

ing decommissioning, the land is likely to be ed to arable production. The Site will however from the significantly enhanced tree and row planting that has been carried out and has ed to create a much stronger and robust ape, retaining, and enhancing the overall ter and providing considerable biodiversity ts over the years. Bird mitigation fields and d grazing marshes are likely to be retained and tential may exist to retain grass margins to in some varied land use and a high level of ersity in the local area.

ut Secondary Mitigation having been applied hout the scheme, the only change to the landscape following decommissioning would be isting hedgerows which will have been allowed w out and will have been managed to a height of is assumed that these will be retained.

Mitigation, the negative effects of the physical missioning will be balanced out by the long andscape and visual effects of this mitigation.





	track that leads to North Farm. Further southwest	 Improved management of existing roadside 	
	along Willingham Road, access to the remainder of the	vegetation	without undue adverse effects and the integrity and tranquility of these routes. These routes are often use
	fields north of the Willingham Road would be directly	 Improved biodiversity along communication 	for informal recreation but will not be unduly affected
	from Willingham Road through existing field openings	links	during the operational phase of the development.
	or the use of existing farm tracks.	- Improved carbon retention/capture with	
		roadside vegetation enhancement.	T074 Willingham Road: At the Cottam 1 North Site,
· ·	T074 Willingham Road: Access from Willingham Road		Willingham Road will be protected and enhanced
	to fields 'B' is from the south via an existing track (T072)	Adverse effects (mitigated):	through the enhancement of existing hedgerows to
	off the Willingham Road that leads to Fillingham	 Panels and structures across the landscape 	thicken and grow out these from their over managed
	Grange.	 Increased hard standing and access tracks 	state. Verge enhancements will also be implemented
		areas – water runoff management required	through the seeding of poor-quality verges with
	T098 Unnamed Road, Stow: The Cottam 1 North Site	- Visual intrusion in early years	seeds/hay from a donor Local Wildlife Site.
	will be accessed via field entrances that lead off the	- Increased traffic in the local area with	
	road	associated visual intrusion	T107: Ingham Road: At the Cottam 1 South Site, views
	TOOD Costos Lana Staur Access to fields (F/ from the	 Increased noise, mud and dust levels Minor loss of transmilling 	from the Ingham Road will be mitigated by both new
	T099 Coates Lane, Stow: Access to fields 'F' from the	- Minor loss of tranquillity	and enhanced hedgerows along the northern
	west off the B1241 (Normanby Road).	The effects at the Operational Phase at Year 15 without	boundary of the Site, with hedgerow trees irregularly spaced along their length.
	Cottam 1 South:	Embedded Mitigation equate to those effects at the	
	cottani i bouti.	beginning of Year 1 before secondary mitigation has	Overall , in terms of mitigation for the Cottam 1 South
	T105 Stow Lane: The Cottam 1 South Site will be	been applied. The Effects set out below include	Site, due to the sensitivity of the rural lanes, the
	accessed from Stow Lane via a new route to the west	secondary mitigation which will have been carried out	hedgerows would be protected to ensure sight lines
	of Blackthorn Hill	but will have had limited physical impact at this stage.	are not impinged. Heavy vehicles can erode the
		Cottam	character of rural roads, and this would be managed
-	T107 Ingham Road: The Cottam 1 South Site will be		effectively with the Scheme all hedgerows and tree
	accessed from Ingham Road via minor farm tracks and		cover would be retained. The approach roads to the
	field entrances that lead off Stow Lane at the		smaller settlements are a key feature that add to the
	settlement off Stow Pasture.		identity of the local landscape and lines of trees are
			often characteristic in these locations and these would
	T110 Blackthorn Lane: The Cottam 1 South Site will be		be protected and retained. Any new tree planting
	accessed via existing field entrances that lead off the		would be confined to hedgerows (i.e., not on verges)
	lane.		particularly on historic enclosure roads, where
	T119 Fleets Lane: The Cottam 1 South Site will be		applicable.
	accessed from Fleets Lane via existing field entrances		
	that lead off the lane.		
	T120 Unnamed Road: The Cottam 1 South Site will be		
	accessed via field entrances that lead off the road.		
,	T121 Unnamed Road: The Cottam 1 South Site will be		
	accessed via field entrances that lead off the road.		
	T127 Thorpe Lane: The Cottam 1 South Site will be		
	accessed from Thorpe Lane via field entrances that		
	lead off the lane.		
	Cable Davida Camidan		
	Cable Route Corridor:		
	The Cable Doute Corridor required for Cottom Dourse		
	The Cable Route Corridor required for Cottam Power Station (CPS) to the Cottam 1 Site/Sites leads in a broad		
	east west direction before heading south to meet with		
	the CPS. The Cable Route Corridor for the Cottam 1		
	Site/Sites to the Cottam 2 Site will run in a broadly		
	northwest/southeast direction. These two Cable Route		
	Corridors will cross several communication and		



infrastructure receptors, and this is detailed within the Cable Route Corridor Receptor Sheets at Appendix 8.2.11 [C6.3.8.2.11] .			
Overall, the communications links are able to accommodate the increased level of traffic between the Sites and to the wider transport links without undue adverse effects. The integrity and tranquillity of these routes, often used for informal recreation, will be affected to some degree by increased traffic during the construction phase but this will be short term and field specific at any one time to the Cottam 1 Site/Sites.			
irea:	·	·	
Low	Low	Low	Very l
Adverse & Short Term	Adverse & Long Term	Adverse & Long Term	Neutr
Minor Not Significant	Minor Not Significant	Minor Not Significant	Negli
d Cable Route Corridor:			
Medium	Low	Low	Very I
Adverse & Short Term	Adverse & Long Term	Adverse & Long Term	Neutr
Moderate Significant	Minor Not Significant	Minor Not Significant	Negli
	Cable Route Corridor Receptor Sheets at Appendix 8.2.11 [C6.3.8.2.11]. Overall, the communications links are able to accommodate the increased level of traffic between the Sites and to the wider transport links without undue adverse effects. The integrity and tranquillity of these routes, often used for informal recreation, will be affected to some degree by increased traffic during the construction phase but this will be short term and field specific at any one time to the Cottam 1 Site/Sites. Trea: Low Adverse & Short Term Minor Not Significant Medium Adverse & Short Term	Cable Route Corridor Receptor Sheets at Appendix 8.2.11 [C6.3.8.2.11]. Overall, the communications links are able to accommodate the increased level of traffic between the Sites and to the wider transport links without undue adverse effects. The integrity and tranquillity of these routes, often used for informal recreation, will be affected to some degree by increased traffic during the construction phase but this will be short term and field specific at any one time to the Cottam 1 Site/Sites. Icow Adverse & Short Term Minor Not Significant Medium Adverse & Short Term Adverse & Short Term Adverse & Short Term	Cable Route Corridor Receptor Sheets at Appendix 8.2.11 [C6.3.8.2.11].Appendix Statistic Sheets at Appendix accommodate the increased level of traffic between the Sites and to the wider transport links without undue adverse effects. The integrity and tranquillity of these routes, often used for informal recreation, will be affected to some degree by increased traffic during the construction phase but this will be short term and field specific at any one time to the Cottam 1 Site/Sites.LowIcowLowLowAdverse & Short TermAdverse & Long TermMinor Not SignificantMinor Not SignificantMediumLowAdverse & Short TermAdverse & Long TermAdverse & Short TermAdverse & Long Term

y Low

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In-Combination Effects [Cumulative Sites]	Cumulative Effects [Cumulative Developments]
In Summary The In-combination effects of the Cottam 1 Site with the other Cumulative Sites (Cottam 2 and 3a and 3b) is Minor at year 1 of operation and Negligible at year 15 with mitigation. This is due to the limited impact as a result of the low-level nature of the Scheme together with the quantum of mitigation. There will be positive changes in the communications and infrastructure due to the scope for additional vegetation enhancing the local landscape character and likewise the setting of the local road network. The existing landscape character associated with the outer edges of these roads and local lanes of the Cumulative Sites and Study Area is predominantly woodland and tree cover around the margins and the change to grassland with scattered trees and a significantly improved hedgerow networks would give rise to overall	In Summary The Cumulative Effects of the Scheme with the other Cumulative Development and adverse, giving rise to likely Significant effects at year 15 with the embedded and additional mitigation. This bettermet together with the improvements to the margins of the road and local planting, giving rise to the vegetative layering of the landscape across reduce the cumulative effect.
benefits to landscape character and views along these road networks in the combination of all the Cumulative Sites.	<i><u>Fabric of the Landscape</u></i> There would not be the removal of or changes in individual element area.
Fabric of the Landscape	
There would not be the removal of, or changes in individual communications and infrastructure elements or features of the landscape within the Cottam 1 Site/SItes. The landscape is shaped by the wide range of	There would be the introduction of new elements and features com area within the character area
local and strategic road networks, which make one landscape type or area different from another. The	Another time Annual to a fither I and a sure a
strategic major road network is defined by important historic routes and in contrast, the east west minor road network links several historic and distinctive smaller string of settlements across the area. Overall,	Aesthetic Aspects of the Landscape Refer to Figure 8.15.2.1 [C6.4.8.15.2.1] which shows that with the Co
the prevailing road network is formed by narrow lanes that are often tranquil and hedged to both sides	cumulative developments would not be experienced across the maj
with wide grassed verges.	distance, the intervening woodlands, hedgerows, and tree cover be built form would also curtail cumulative visibility.
There would be the introduction of new elements and features comprising the solar panel areas, the	
substation area and Cable Route Corridor extending between the Cottam Power Station and the Cottam 1 Site/Sites and extending between the Cottam 1 Site/Sites and Cottam 2 Site (the 'Cable Route Corridors').	There are local patches of cumulative visibility which may be focus of Site/Sites and Gate Burton Energy Park, Tillbridge Solar and West Bu in further detail within the following figures:
<u>Aesthetic Aspects of the Landscape</u>	
Refer to Figure 8.15.1.1 [C6.4.8.15.1.1] which shows that with the Cottam 1 Site/Sites, cumulative visibility	
with the Cable Route Corridor, Cottam 2, and Cottam 3a and 3b Sites and the Cable Route Corridors would not be experienced across the majority of the 2km study area. This is due to the distance, the	shows Gate Burton to the west of Cottam 1, where the intervening solution is between, where their presence will impair any associated lands
intervening woodlands, hedgerows, and tree cover between the Site/Sites. The intervening settlements and built form would also curtail cumulative visibility between these cumulative sites and the Cable Route	Figure 8.15.2.8 Cottam 1, 2, 3a and 3b Tillbridge Solar Cumulative I
Corridors.	shows Tillbridge to the south of the Cottam 1 Site, where their bour just to the south of Kexby Road and to the west of the settlement o
There are very minor patches of cumulative intervisibility between the Cottam 1 Site/Sites and the Cottam 2 Site, located to the:	
east of Upton and to the south of Sturgate Airfield	Tillbridge Development would also add to coalescence between the
 south of Kexby in the locality of Valley Farm east of Willingham by Stow in the locality of the residential property known as Carisbrooke 	secondary mitigation would however ensure that all existing feature the operation stage (Year 15) of the watercousres across the Sites a
 east of Stow, just to the east of the property known as Tam Howes; and 	the operation stage (real 15) of the water cousies across the sites a
• west of Sturton by Stow, extending from West Syke Lane as far as Normanby by Stow.	Figure 8.15.2.9 Cottam 1, 2, 3a and 3b West Burton Cumulative Dev shows the West Burton Development located to the southwest of the
This is a predominantly rural and sparsely settled area with small villages and dispersed farms linked by	of Stow, Sturton by Stow and Bransby lie between, where their pres
quiet lanes that connect across the landscape to the wider strategic road network linking the cities of	with the West Burton Site.
Nottingham and Lincoln. The quiet lanes are populated by small settlements that bring enclosure,	The other Cumulative Developments at Bumble Bee Farm, Field Far
intimacy, and interest to the landscape.	Scheme by the intervening settlements of Gainsborough, Lea, Blyto
There are very minor patches of cumulative intervisibility between the Cottam 1 Site/Sites and the Cottam	
2, and Cottam 3a Site, located to the:	The landscape is shaped by the wide range of local and strategic ro
 northeast of Sturton by Stow, extending between Tillbridge Road and Ingham Road. 	different from another. The strategic major road network is defined
	east west minor road network links several historic and distinctive s the prevailing road network is formed by narrow lanes that are often

> pments is Moderate with the Tillbridge r 1 of operation. The effects would be Minor at is due to the low-level nature of the Scheme, ne network with new hedgerows and tree e Sites and Study Area, all in helping reduce to

features of the landscape within the character

ng the solar panel areas and the substation

1 Site/Sites, cumulative visibility with the of the 5km study area. This is due to the n the Site/Sites. The intervening settlements and

ely significant effects, between the Cotton 1 Solar Park. This cumulative visibility is set out

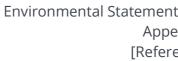
ments Augmented ZTV [C6.4.8.15.2.6]. This ements of Kexby, Willingham by Stow and Stow context with the Gate Burton Site.

opments Augmented ZTV [C6.4.8.15.2.8]. This es' are located directly adjacent to each other, ngham. There are no intervening settlements, velopment with the Scheme would give rise to a of the watercourses. The presence of the am 1 and the Cottam 2 Sites. The primary and ould be retained leading to an improvement at tudy Area.

ments Augmented ZTV [C6.3.4.15.2.9]. This ttam 1 Site where the intervening settlements will impair any associated landscape context

nd High Marnham are separated from the d Willingham by Stow.

etworks, which make one landscape type or area mportant historic routes and in contrast, the er string of settlements across the area. Overall, nquil and hedged to both sides with wide





SOLAR PROJECT		
	The approach roads to the smaller settlements are a key feature that add to the identity of the local	grassed verges and they have a major role in helping to define the quality
	landscape and lines of trees are often characteristic in these locations and add to enclosure across the landscape.	across the area.
		Overall Landscape Character of the Communications and Infrastructure
	There are very minor patches of cumulative intervisibility between the Cottam 1 Site/Sites and the Cottam 2, and Cottam 3b Sites, located to the:	Overall, the character of the landscape and the communications and infra settlement with farms, nucleated villages, and small hamlets such as Tho
	• northeast of Sturton by Stow, extending between School Lane Farm and Ingham Road.	value that are not highly recognised for adding intimacy and interest to the the landscape and land use have some ability to accommodate change w
	The approach roads to the smaller settlements are a key feature that add to the identity of the local landscape and lines of trees are often characteristic in these locations and add to enclosure across the landscape.	visibility for the Cottam 1 Site/Sites would not alter the overall character of infrastructure features. Moreover, these features are often set within a v form that plays a positive role in reducing the overall cumulative effects.
	 There are local patches of intervisibility between All Sites comprising the landscape to the: east boundary of the Cottam 1 North Site/Sites, extending from Glentworth in the north as far as lngham in the south. 	
	Main roads are significant features in the landscape with recent development concentrated along these main roads. The bypassing of original village centers has also changed the spatial function of the landscape and its ability to provide enclosure in views across the area.	
	Users of linear routes, especially footpaths or other rights of way, or transport routes, may potentially experience the aesthetic aspects of the cumulative sites revealed in succession as a series of sequential views. For further details refer to the following detailed visual receptor sheets:	
	Appendix 8.3.2.2 Individual Viewpoint Receptor Sheets [C6.3.8.3.2.2] Appendix 8.3.2.3 Individual Viewpoint Receptor Sheets [C6.3.8.3.2.3] Appendix 8.3.2.4 Individual Viewpoint Receptor Sheets [C6.3.8.3.2.4]	
	Appendix 8.3.3.2 Individual Residential Receptor Sheets [C6.3.8.3.3.2] Appendix 8.3.3.3 Individual Residential Receptor Sheets [C6.3.8.3.3.3]	
	Appendix 8.3.4.2 Individual Transport Receptor Sheets [C6.3.8.3.4.2] Appendix 8.3.4.3 Individual Transport Receptor Sheets [C6.3.8.3.4.3]	
	Appendix 8.3.5.2 Individual PRoW Receptor Sheets [C6.3.8.3.5.2] Appendix 8.3.5.3 Individual PRoW Receptor Sheets [C6.3.8.3.4.3]	
	<u>Overall Landscape Character of the Communications and Infrastructure</u> Overall, the character of the landscape and the communications and infrastructure is shaped by evidence	
	of historic settlement with farms, nucleated villages, and small hamlets such as Thorpe le Fallows and Coates, which are features value that are not highly recognised for adding intimacy and interest to the	
	landscape. These relevant characteristics of the landscape and land use have some ability to accommodate change without undue adverse effects. The cumulative visibility for the Cottam 1 Site/Sites would not alter the overall character of the landscape and its communications and infrastructure	
	features. Moreover, these features are often set within a well-vegetated context or associated with built form that plays a positive role in reducing the overall cumulative effects.	
	The difference in effect between the addition of the Scheme to the cumulative baseline is low and very	
	low for the Cumulative Sites because there are minor patches of small cumulative change to a limited area of medium sensitivity, affecting some characteristics without altering the overall impression of its character.	
	Construction: Very Low	Construction: Medium
	Operation (Year 1): Very Low	Operation (Year 1): Medium
Magnitude	Operation (Year 1) with only Embedded Mitigation: Very Low	Operation (Year 1) with only Embedded Mitigation: Medium
	Operation (Year 15): Very Low	Operation (Year 15): Low Decommissioning: Low

ity of the landscape and reducing the visibility

frastructure is shaped by evidence of historic orpe le Fallows and Coates, which are features the landscape. These relevant characteristics of without undue adverse effects. The cumulative r of the landscape and its communications and well-vegetated context or associated with built



	Construction: Adverse & Short Term	Construction: Adverse & Short Term
Turne of	Operation (Year 1): Adverse & Long Term	Operation (Year 1): Adverse & Long Term
Type of	Operation (Year 1) with only Embedded Mitigation: Adverse & Long Term	Operation (Year 1) with only Embedded Mitigation: Adverse & Long Tel
Effect	Operation (Year 15): Beneficial & Long Term	Operation (Year 15: Neutral & Long Term
	Decommissioning: Neutral & Short Term	Decommissioning: Neutral & Short Term
	Construction: Negligible Not Significant	Construction: Moderate Significant
Significance	Operation (Year 1): Negligible Not Significant	Operation (Year 1): Moderate Significant
-	Operation (Year 1) with only Embedded Mitigation: Negligible Not Significant	Operation (Year 1) with only Embedded Mitigation: Moderate Significa
of Effect	Operation (Year 15): Negligible Not Significant	Operation (Year 15): Minor Not Significant
	Decommissioning: Negligible Not Significant	Decommissioning: Minor Not Significant

Term

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Landscape Receptor – Communication and Infrastructure (Cottam 2 Site)

Receptor Baseline:

Within the Cottam 2 to Cottam 3a and 3b Sites, at a regional scale, landscape character is assessed within the East Midlands Regional Landscape Character Assessment as forming part of RLCT Profile: 4a Unwooded Vales, which is shown on Figure 8.5 [C6.4.8.5].

The landscape is characterized by the dynamic broad valley of the River Trent which is bordered by large urban areas including the cities of Nottingham and Lincoln connected by a strategic road network in a mostly north south direction. There are also scattered rural settlements perched on the edge of the floodplain that are linked by a smaller network of minor roads and local lanes which generally follow an east west alignment.

Key Features:

The Site/Sites within Cottam 2 (2km Study Area) are broadly defined to the north by the A159 (Laughton Road) which takes an informal alignment across the landscape leading north from Gainsborough and serving the settlements of Wharton, Blyton, Laughton, Scotton and Scotter, and then connecting the larger settlement of Scunthorpe. The mainline railway that connects Gainsborough to Grimsby (via Brigg) also broadly defines the Site/Sites to the north, intertwined with the route of the B1205 (Kirton Road) that connects Gainsborough to Kirton in Lindsey. To the south, the A631 (Corringham Road), follows an informal alignment that is orientated in a broad east direction connecting Gainsborough in the west with Hemswell and Hemswell Cliff in the east. To the east, the landscape is defined by the B1398 (Middle Street) following a distinctive almost straight alignment along the limestone capped scarp slope on a near parallel alignment with Ermine Street. Middle Street connects the settlements of Harpswell, Hemswell, Willhoughton, Blyborough, Gravinghan and Kirton in Lindsey. Finally, to the west, the local road network (Pilham Lane) passes north south in a straight alignment connecting the A631 at Corringham in the south with the small settlement of Pilham in the north. The Site/Sites have residential properties towards the central part, known as The Cottage and Corringham Grange Farm and these are accessed by a narrow unnamed road that passes in a broadly north-northwest to south-southeast direction. Two further access tracks then lead off the main access road to these residential properties, running in a perpendicular alignment that reflects the geometric form of the field parcels. The A631 connects the small settlement of Corringham in the west to Hemswell, which occupies the limestone capped scarp slope to the east. The A631 is a strategic communication route that connects Gainsborough in the west to the A15 in the east.

There are also other small roads forming part of the local road network running in a predominantly east west and north south direction across the landscape that are within the immediate context of the Site/Sites. To the north/northwest, PilhamLane runs in an east west direction and then changes direction at the right-angled bend to meet with Kirton Road. To the south, Mill Mere Road borders the boundary of the Site/Sites and passes east west direction and then changes direction at the right-angled bend to link with the A631 (Corringham Road). To the east, the small settlement of Yawthorpe is served by a local road leading off Templefield Road where several farmseads and residential properties make up this small hamlet including Ancliffe Farm, Home Farm, The Cottage, and Taskers Farm. To the west, Corringham Beck runs in a north south direction connecting East Lane in the south at Corringham with Pilham Lane in the north. Corringham Beck serves several properties known as The Old Hall, Hall Farm and Keeper's Cottage.

Environmental Statement Landscape and Visual Impact Assessment Appendix 8.2.5.2: Comms Analysis & Evaluation [Reference: EN010133/APP/C6.3.8.2.5.2] Jan 2023



Interms of forces for change for the Cottam State: This region represents a major east west link; connecting including in parts, rich in Site Communications and infrastructure, recent trush how shown tot significant. The mainter mean east west link; connecting including in parts, rich in finds trusters east and beat heritigs. Inhelded Mitigation which be tait Gamabarcage is a major infrastructure development pressures east form the main stategic location of annon rads on the linestone capped capp signs to conserve the major game to a number of instoir sciencements in the intervening linkscape. Inhelded Mitigation which be tait account at the construction, parts and the intervening indication at the intervening east and the strategic location of annon rads on the linestone capped capped signs to conserve the major and intervening indication at linestone capped capped signs to compared in the intervening indication at linestone capped capped signs to compared in the intervening indication at linestone capped capped signs to compared in the intervening indication at linestone capped capped signs to compared in the intervening indication at linestone capped capped signs to compared in the intervening indication at linest true capped capped signs to compared in the intervening indication at linest true intervening indication at linest at linest true intervening indication at linest tr	LAR PROJECT			
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conserve the trangulity of the acte through provide sustainable transport of provide sustainable and well-being transport and sustainable and well-being transport of provide sustainable and well-being transport of provide sustainable and well-being transport and sustainable and well-being transport of provide sustainable and well-being transport of provide sustainable and well-being transport and sustaina	traverse the area. The challenges are to		-	mitigation and would include the following
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Medium to Low (Site/Sites)	Medium to Low (Site/Sites)	Medium to Low (Site/Sites)	Medium	



ommissioning

ilar process to that of construction stage, but with cheme being no longer operational. This is an sment of the Site in winter but assumes retention sting vegetation and builds upon the proposed ary and secondary mitigation that had been lished as the future baseline. Effects are those g from activities for the duration of the mmissioning to include site traffic, noise and tion from decommissioning activities, dust ration and site runoff.

wing decommissioning, the land is likely to be ned to arable production. The Site will however fit from the significantly enhanced tree and erow planting that has been carried out and has red to create a much stronger and robust cape, retaining, and enhancing the overall cter and providing considerable biodiversity fits over the years. Bird mitigation fields and nd grazing marshes are likely to be retained and otential may exist to retain grass margins to tain some varied land use and a high level of versity in the local area.

out Secondary Mitigation having been applied ghout the scheme, the only change to the /landscape following decommissioning would be xisting hedgerows which will have been allowed ow out and will have been managed to a height of t is assumed that these will be retained.

Mitigation, the negative effects of the physical mmissioning will be balanced out by the long landscape and visual effects of this mitigation.



SOLAR PROJECT				
	Grange. There will also be construction activities directly adjacent to the lane. The minor roads around the Site (running predominantly north/south and east/west) may also need to accommodate a relatively limited level of additional traffic to bring forward the construction phase of the development. The Cable Route Corridor Required for the Cottam 1 Site/Sites to Cottam 2 Site and Cottam 2 Site to Cottam 3a and 3b Sites will run in a broadly northwest/southeast direction. These two Cable Route Corridors will cross several communication and infrastructure receptors, and this is detailed within the Cable Route Corridor Receptor Sheets at Appendix 8.2.11 [C6.3.8.2.11] . Overall, the communications links are able to accommodate the increased level of traffic between the Sites and to the wider transport links without undue adverse effects. The integrity and tranquility of these routes, often used for informal recreation, will be affected to some degree by increased traffic during the construction phase but this will be short term and field/site specific at any one time.	 Improved management of existing roadside vegetation Improved biodiversity along communication links Improved carbon retention/capture with roadside vegetation enhancement. Adverse effects (mitigated): Panels and structures across the landscape Increased hard standing and access tracks areas – water runoff management required Visual intrusion in early years Increased traffic in the local area with associated visual intrusion Increased noise, mud and dust levels Minor loss of tranquillity The effects at the Operational Phase at Year 15 without Embedded Mitigation equate to those effects at the beginning of Year 1 before secondary mitigation has been applied. The Effects set out below include secondary mitigation which will have been carried out but will have had limited physical impact at this stage. 	Overall, the communications links are able to accommodate the increased level of traffic between the Sites and to the wider transport links without undue adverse effects. The integrity and tranquility of these routes, often used for informal recreation, will not be unduly affected during the operational phase of the development. Overall , in terms of mitigation for the Cottam 2 Site, due to the sensitivity of the rural lanes, the hedgerows would be protected to ensure sight lines are not impinged. Heavy vehicles can erode the character of rural roads, and this would be managed effectively with the Scheme all hedgerows and tree cover would be retained. The approach roads to the smaller settlements are a key feature that add to the identity of the local landscape and lines of trees are often characteristic in these locations and these would be protected where applicable and retained. Any new tree planting would be confined to hedgerows (i.e., not on verges) particularly on historic enclosure roads, where applicable.	
5km Study A	rea:			
Magnitude	Low	Low	Low	Very L
Level of Effect	Adverse & Short Term	Adverse & Long Term	Adverse & Long Term	Neutr
Significance of Effect	Minor Not Significant	Minor Not Significant	Minor Not Significant	Neglig
Site/Sites an	d Cable Route Corridor:			
Magnitude	Medium	Low	Low	Very L
Level of Effect	Adverse & Short Term	Adverse & Long Term	Adverse & Long Term	Neutr
Significance of Effect	Moderate Significant	Minor Not Significant	Minor Not Significant	Neglig

y Low

utral & Short Term

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utral & Short Term

gligible **Not Significant**



Landscape Receptor – Communication and Infrastructure (Cottam 2 Site)

In-Combination Effects [Cumulative Sites]

In Summary

The In-combination effects of the Cottam 2 Site with the other Cumulative Sites (Cottam 1 and 3a and 3b) is Minor at year 1 of operation and Negligible at year 15 with mitigation. This is due to the limited impact as a result of the low-level nature of the Scheme together with the quantum of mitigation. There will be positive changes in the communications and infrastructure due to the scope for additional vegetation enhancing the local landscape character and likewise the setting of the local settlements, smallholdings and isolated dwellings. The existing landscape character associated with the outer edges of the settlements of the Cumulative Sites and Study Area is predominantly woodland and tree cover around the margins and the change to grassland with scattered trees and a significantly improved hedgerow networks would give rise to overall benefits to landscape character and views towards these settlements in the combination of all the Cumulative Sites.

Fabric of the Landscape

There would not be the removal of, or changes in individual communication and infrastructure or features of the landscape within Cottam 2. The wider landscape is typified by the local roads that gain access to smaller villages are valuable wildlife corridors since they are often narrow country lanes with grass verges, hedgerows to both sides and high levels of tranquility.

There would be the introduction of new elements and features comprising the solar panel areas, the substation area and the Cable Route Corridor extending between the Cottam 1 Site/Sites and the Cottam 2 Site and the Cottam 2 Site and Cottam 3a and 3b Sites (the 'Cable Route Corridors').

Aesthetic Aspects of the Landscape

Refer to Figure 8.15.1.2 [C6.4.8.15.1.2] which shows that with the Cottam 2 Site, cumulative visibility with the Cottam 1 Site/Sites and the Cottam 3a and 3b Sites would not be experienced across the entirety of the 2km study area. This is due to the distance, the intervening woodlands, hedgerows, and tree cover between the Site/Sites. The intervening settlements and built form would also curtail cumulative visibility.

There are local patches of intervisibility between the Cottam 2 Site and the Cottam 3a and Cottam 3b Sites extending from the:

- South boundary of the Cottam 2 Site, starting at the eastern edge of Corringham and reaching as far as Yawthorpe Beck and Yawthorpe
- West boundary of the Cottam 2 Site, extending as far as Pilham Lane
- East boundary of the Cottam 2 Site, extending as far Yawthorpe and Yawthorpe Fox Covert
- Northwest boundary of the Cottam 2 Site, extending as far as the Cottam 3a and 3b Sites.

The landscape shows evidence of historic settlement with farms and nucleated villages and small hamlets such as Aisby, Corringham and Pilham with good levels of tree cover that help provide enclosure.

There is a local patch of intervisibility between the Cottam 2 Site and the Cottam 3b Site, comprising the:

- Northern-most tip of the Cottam 2 Site extending across the medieval village of Dunstall as far as the medieval village of Southorpe; and
- Southeast of the River Eau, extending as far as Huckerby Farm and Huckerby Bungalows.

There are also other small roads forming part of the local road network running in a predominantly east west and north south direction across the landscape that are within the immediate context of the Site/Sites. To the north/northwest. Pilham Lane runs in an east west direction and then changes direction at the right-angled bend to meet with Kirton Road. The changes of direction in the road network provide more intimacy and interest in views across the area and add intimacy at the junctions.

Cumulative Effects [Cumulative Developments]

In Summary

The Cumulative Effects of the Scheme with the other Cumulative Developments is Moderate with the Tillbridge Development and adverse, giving rise to likely Significant effects at year 1 of operation. The effects would be Minor at year 15 with the embedded and additional mitigation. This betterment is due to the low-level nature of the Scheme, together with the improvements to the margins of the roads and local lanes with new hedgerows and tree planting, giving rise to the vegetative layering of the landscape across the Sites and Study Area, all in helping reduce to reduce the cumulative effect.

Fabric of the Landscape

There would not be the removal of, or changes in individual communication and infrastructure or features of the landscape within the Cottam 2 Site. The wider landscape is typified by the local roads that gain access to smaller villages are valuable wildlife corridors since they are often narrow country lanes with grass verges, hedgerows to both sides and high levels of tranquility.

There would be the introduction of new elements and features comprising the solar panel areas, the substation area and the Cable Route Corridor extending between the Cottam 1 Site/Sites and the Cottam 2 Site and the Cottam 2 and Cottam 3a and 3b Sites (the 'Cable Route Corridors').

Aesthetic Aspects of the Landscape

Refer to Figure 8.15.2.2 [C6.4.8.15.2.2] which shows that with the Cottam 2 Site, cumulative visibility with the cumulative developments would not be experienced across the majority of the 5km study area. This is due to the distance, the intervening woodlands, hedgerows, and tree cover between the Site/Sites. The intervening settlements and built form would also curtail cumulative visibility.

There are local patches of cumulative visibility which may be focus of likely significant effects, between the Cottam 2 Site and Tillbridge Solar. This cumulative visibility is set out in further detail within the following figures:

Figure 8.15.2.6 Cottam 1, 2, 3a and 3b Gate Burton Cumulative Developments Augmented ZTV [C6.4.8.15.2.6]. This shows Gate Burton to the west of Cottam 2, where the intervening settlements of Kexby, Willingham by Stow and Stow lie between, where their presence will impair any associated landscape context with the Gate Burton Site.

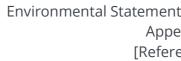
Figure 8.15.2.8 Cottam 1, 2, 3a and 3b Tillbridge Solar Cumulative Developments Augmented ZTV [C6.4.8.15.2.8]. This shows Tillbridge to the south of the Cottam 2 Site, where their boundaries' are located directly adjacent to each other, just to the south of Kexby Road and to the west of the settlement of Fillingham. There are no intervening settlements, woodlands or major topography, such that the presence of Tillbridge Development with the Scheme would give rise to a direct and compounded relationship in terms of the landscape context of the watercourses. The presence of the Tillbridge Development would also add to coalescence between the Cottam 1 and the Cottam 2 Sites. The primary and secondary mitigation would however ensure that all existing features would be retained leading to an improvement at the operation stage (Year 15) of the watercousres across the Sites and Study Area.

Figure 8.15.2.9 Cottam 1, 2, 3a and 3b West Burton Cumulative Developments Augmented ZTV [C6.3.4.15.2.9]. This shows the West Burton Development located to the southwest of the Cottam 2 Site where the intervening settlements of Stow, Sturton by Stow and Bransby lie between, where their presence will impair any associated landscape context with the West Burton Site.

The other Cumulative Developments at Bumble Bee Farm, Field Farm and High Marnham are separated from the Scheme by the intervening settlements of Gainsborough, Lea, Blyton and Willingham by Stow.

The landscape is shaped by the wide range of local and strategic road networks, which make one landscape type or area different from another. The strategic major road network is defined by important historic routes and in contrast, the east west minor road network links several historic and distinctive smaller string of settlements across the area. Overall, the prevailing road network is formed by narrow lanes that are often tranquil and hedged to both sides with wide grassed

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SOLAR PROJECT		
	There are local patches of intervisibility between All Sites comprising the:	verges and they have a major role in helping to define the quality of the la
	North of the Bonsdale Farm at Pilham, extending across the landscape to the north of the	area.
	medieval village of Dunstall as far as the medieval village of Southorpe	
	 West of the settlement of Corringham, extending from Staplegate House as far Windy Ridge on 	Overall Character of the Landscape and Communications and Infrastructure
	Pilham Lane	Overall, the character of the landscape and the land use is shaped by the s
	• West of Springthorpe, extending across the landscape as far as Harpswell Low Farm; and	important historic routes and the strategic minor road network also links s
	• East of Yawthorpe, extending as far as Hemswell.	settlements across the area, these networks play an important role in way
		for the Cottam 2 Site would not alter the overall character of the landscape
	The close proximity to Gainsborough as a major historic crossing on the River Trent to the west and the	features. Moreover, these features are often set within a well-vegetated co
	strategic location of Roman roads on the limestone capped scarp slope to the east give rise to a number	positive role in reducing the overall cumulative effects.
	of historic settlements in the intervening landscape, which add a 'time depth' and features of intimacy	
	within the landscape.	
	Users of linear routes, especially footpaths or other rights of way, or transport routes, may potentially	
	experience the aesthetic aspects of the cumulative sites revealed in succession as a series of sequential	
	views. For further details refer to the following detailed visual receptor sheets:	
	Appendix 8.3.2.2 Individual Viewpoint Receptor Sheets [C6.3.8.3.2.2]	
	Appendix 8.3.2.3 Individual Viewpoint Receptor Sheets [C6.3.8.3.2.3]	
	Appendix 8.3.2.4 Individual Viewpoint Receptor Sheets [C6.3.8.3.2.4]	
	Appendix 8.3.3.2 Individual Residential Receptor Sheets [C6.3.8.3.3.2]	
	Appendix 8.3.3.3 Individual Residential Receptor Sheets [C6.3.8.3.3.3]	
	Appendix 8.3.4.2 Individual Transport Receptor Sheets [C6.3.8.3.4.2]	
	Appendix 8.3.4.3 Individual Transport Receptor Sheets [C6.3.8.3.4.3]	
	Appendix 8.3.5.2 Individual PRoW Receptor Sheets [C6.3.8.3.5.2]	
	Appendix 8.3.5.3 Individual ProW Receptor Sheets [C6.3.8.3.4.3]	
	Overall Character of the Landscape and Communications and Infrastructure	
	Overall, the character of the landscape and the land use is shaped by the strategic major road network	
	that is defined by important historic routes and the strategic minor road network also links several	
	historic and distinctive smaller string of settlements across the area, these networks play an important	
	role in wayfinding across the area. The cumulative visibility for the Cottam 2 Site would not alter the	
	overall character of the landscape and its communications and infrastructure features. Moreover, these	
	features are often set within a well-vegetated context or associated with built form that plays a positive role in reducing the overall cumulative effects.	
	The difference in effect between the addition of the Scheme to the cumulative baseline is low and very low for the Cumulative Sites because there are minor patches of small cumulative change to a limited	
	area of medium sensitivity, affecting some characteristics without altering the overall impression of its	
	character.	
	Construction: Very Low	Construction: Medium
	Operation (Year 1): Very Low	Operation (Year 1): Medium
Magnitude	Operation (Year 1) with only Embedded Mitigation: Very Low	Operation (Year 1) with only Embedded Mitigation: Medium
	Operation (Year 15): Very Low	Operation (Year 15): Low
	Decommissioning: Very Low	Decommissioning: Low
	Construction: Adverse & Short Term	Construction: Adverse & Short Term
Type of	Operation (Year 1): Adverse & Long Term	Operation (Year 1): Adverse & Long Term
Effect	Operation (Year 1) with only Embedded Mitigation: Adverse & Long Term	Operation (Year 1) with only Embedded Mitigation: Adverse & Long Term
Lincet	Operation (Year 15): Beneficial & Long Term	Operation (Year 15): Neutral & Long Term
	Decommissioning: Neutral & Short Term	Decommissioning: Neutral & Short Term
Significance	Construction: Negligible Not Significant	Construction: Moderate Significant
of Effect	Operation (Year 1): Negligible Not Significant	Operation (Year 1): Moderate Significant
	Operation (Year 1): Negligible Not Significant	Operation (Year 1) with only Embedded Mitigation: Moderate Significant

landscape and reducing the visibility across the

e strategic major road network that is defined by s several historic and distinctive smaller string of ayfinding across the area. The cumulative visibility ape and its communications and infrastructure context or associated with built form that plays a



Operation (Year 15): Negligible Not Significant	Operation (Year 15: Minor Not Significant
Decommissioning: Negligible Not Significant	Decommissioning: Minor Not Significant



Landscape Receptor – Communication and Infrastructure (Cottam 3a and 3b Sites)

Receptor Baseline:

Within the Cottam 3a and 3b Sites, at a regional scale, landscape character is assessed within the East Midlands Regional Landscape Character Assessment as forming part of RLCT Profile: 4a Unwooded Vales, which is shown on Figure 8.5 [C6.4.8.5]. Unwooded Vales is located within the 2km Study Area, but only extending across its eastern most part, then sharing the western most part with RLCT Profile 4b: Wooded Vales. The landscape character type then occupies an eastern part of the 5km Study Area where it shares a boundary with Kirton in Lindsey. The western part of the 5km Study Area then comprises of a mixture of RLCT 2b: Planned and Drained Fens and Carrlands, RLCT 4a: Unwooded Vales and RLCT 4b: Wooded Vales, The Unwooded Vales is generally characterised by mixed agriculture set within an enclosed landscape of low, well-maintained hedgerows.

The Site/Sites within Cottam 3 (2km Study Area) can be sub-divided into two distinct land areas.

- Cottam 3a
- Cottam 3b

Key Features:

The Sites within Cottam 3a and 3b (2km Study Area) are broadly defined to the north by the A159 (Laughton Road) which takes an informal alignment across the landscape leading north from Gainsborough and serving the settlements of Wharton, Blyton, Laughton, Scotton and Scotter, and then connecting the larger settlement of Scunthorpe. To the south, the A631 (Corringham Road), follows a fairly informal alignment that is orientated in a broad east direction connecting Gainsborough in the west with Hemswell and Hemswell Cliff in the east. To the east, the landscape is defined by the B1398 (Middle Street) following a distinctive almost straight alignment along the limestone capped scarp slope on a near parallel alignment with Ermine Street. Middle Street connects the settlements of Harpswell, Hemswell, Willhoughton, Blyborough, Grayinghan and Kirton in Lindsey. Finally, to the west, the local road network (Station Road and Pilham Lane) passes north south in a straight alignment connecting the small settlement of Pilham in the south with the larger settlement of Blyton in the north at the junction with Kirton Road in the north.

Cottam 3a:

This is an area of land that is broadly defined to the north by a very limited network of roads that only comprise the A159, which connects to the larger settlement of Scotter. There is a further local lane that passes in a broad east west direction connecting Laughton Woods in the west with Scotton (High Street) in the east. This local lane provides access to Scotton Common Nature Reserve and Dallison Plantation and is a busy road which provides a direct link to Scotton from the A159. To the south, Kirton Road runs in an east west straight alignment and forms most of the southern boundary of the Site/Sites. This road runs in a predominantly east to west direction across the agricultural landscape turning to a broadly north to south alignment for a short section to the east before returning to the main east to west alignment. This road connects the settlements of Blyton in the west with Grayingham in the east. Kirton road serves several farmsteads and isolated dwellings including The Fields Farm, Grange Farm, Blenheim Farm and Grange Farm. To the east, Kirton Road takes a north south direction at the right-angled turn in the road at the junction with Pilham Road. To the west, the Site/Sites are defined by the A159, Laughton Road which passes north and skirts the eastern edge of Laughton Wood. To the central part of the Site/Sites, there are several tracks associated with the former airfield use and current use as the Blyton Park Driving Centre. There is also a collection of tracks that serve Blyton Grange and Blue Bell Farm at the northeast corner of the Site/Sites. The surrounding landscape is also punctuated by small roads linking villages, with the B1205 The A159 is located to the west of the site running through Blyton and then northward before turning northeast towards the village of Scotter. In the east, the road network is scarce, but where present they are relatively more formal and often change to a linear north to south alignment to follow the limestone capped scarp slope, such as Grayingham Low Road that ultimately connects to Kirton in Lindsey. Further to the east, the B1398 (Middle Street) and the A15 (Ermine Street) also follow the same north south alignment and are former Roman roads. Towards the west, the road network is more formal with a greater concentration of east west and north south connections. Towards Gainsborough the road network diminishes where large areas of parkland and woodland are found within the Laughton Area of Greater Landscape Value (AGLV).

Cottam 3b:

This is an area of land that is mostly bordered to the north by the mainline railway that passes between Gainsborough and Grimsby via Kirton in Lindsey and Brigg. The railway line takes a serpentine route through Gainsborough and then cuts across the landscape in a straight alignment (south-southwest to north-northeast) before taking a southwest to northeast alignment towards the edge of Kirton in Lindsey. Beyond the railway line, there is a secondary road (Kirton Road) that passes in a broad east west direction, and which connects Blyton in the west with Kirton in Lindsey in the east. This road provides access to several farmsteads including Grange Farm, The Fields Farm and Top Farm and is a busy road which provides a direct link to Blyton from the A15. To the south, Green Lane is part of the local road network and runs in an east west direction between Pilham in the west and Pilham Lane in the east. This road takes an indirect alignment with several right-angled bends and serves a single property called Home Farm. To the east, the Site/Sites are bordered by Pilham Lane, which takes a north south direction connecting Kirton Road in the north then taking a right-angled turn to connect with Pilham Lane to the south of Aisby and Gilby. To the west, the Site/Sites are defined by Pilham Lane, and which connects the settlements of Blyton, Pilham, Gilby and Corringham. To the central part of the Site/Sites, there is only one track which runs in an east west direction and is also a public right of way (PRoW). The track serves Glebe Farm and runs through to Pilhaml Lane as a narrow green lane with bordering hedgerows to each side.

The surrounding landscape is also host to other major road networks including the A159 (Thonock Road) that passes through Blyton before taking a northeast direction towards the small settlement of Scotter. In the east, the road network is scarce, but where present they often take an east west alignment connecting to the villages such as Hemswell, Willhoughton, Blyborough and Gravingham that line the limestone capped scarp slope. Further to the east, the B1398 (Middle Street) and the A15 (Ermine Street) that follow a north south alignment and are former Roman roads. Towards the west, the road network is scarce with arterial roads mainly leading towards Gainsborough where large areas of parkland and woodland are found within the Laughton Area of Greater Landscape Value (AGLV.

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3a and 25 bits (Communications and instructure), reveal reach shaws west routes that or intrinsically finked and offer many locations there are challenges in conserving the transult, or dn area. Riad construction, are subtained area. Riad construction, are subtained area. Riad constructions and ind the storing relationship with the River Trent continues to provide a dynamic landscape. Unitation is attained and impact the storing relationship with the River Trent continues to provide a dynamic landscape. The instructure are help to the storing relationship with the River Trent continues to provide a dynamic landscape with in the toxic or there are a subject on the indicate. The instructure of history. The instructure of history. The instructure of the continues to grant the device on the story is that hold significant varies of history. The instructure of the continues to grant the device on the story is that hold significant varies of history. The instructure of the continues to grant the continues to grant the continue to the lond continue to the landscape. The instructure of the continue to the landscape. The landscape shows are significant varies of history to the store of the continue to the landscape. The landscape shows are significant varies of history to the store of the continue to the landscape. The landscape shows are significant varies of history to the store of the continue to the landscape. The landscape show are significant varies of history to the store of the continue to the landscape. The landscape show area significant varies of history to the store of the continue to the landscape. The landscape show area significant varies of history to the store of the continue to the lan	Receptor susceptibility to change	Value of Receptor	Sensitivity	Embedded Mitigation
this Embedded Mitigation stage.	In terms of forces for change for the Cottam 3a and 3b Site (Communications and Infrastructure), recent trends have shown that there are challenges in conserving the tranquility of the area. Road construction, car use and disturbance have made an impact. Sustainable transport options and well- designed green infrastructure are likely to take some pressures away from the main settlements and roads that traverse the area. The distinctive long straight Roman roads form the basis of current road networks and are at risk of losing their character. Overall , the susceptibility of the Communications and Infrastructure for the Cottam 3 and 3b Sites is conditioned by the relative lack of road connectivity east to west. Driving north to south across the area is generally straightforward as the A156 runs true to the River Trent and the A15 and B1398 follow the limestone capped scarp slope to the east. Most of the developed settlements are near these roads, however narrow country lanes link east west and this direction of travel is slightly more challenging. The relevant characteristics of the landscape therefore have some ability to accommodate change without undue adverse effects given there is scope to protect the character and diversity of the road networks through the conservation and enhancement of the rural roads. These minor tracks, lanes and farm roads are often bordered by tall hedgerows and wide verges and evidence of Roman influence through Medieval settlement is also present through abandoned villages.	 Scenic: It is an area that shows a distinct contrast between busy north south routes and the more tranquil, less accessible east west routes that are intrinsically linked and offer many locations to capture views across the landscape. Cultural: The landscape has always been a powerhouse for the country in terms of connectivity and the strong relationship with the River Trent continues to provide a dynamic landscape with a rich network of history. Natural: The landscape shows significant potential to develop into a more sustainable landscape. Whilst not offering a significant variety of habitats, there is scope to build upon existing areas that hold significant wildlife value and explore potential to create new habitats. Recreation and Enjoyment: Senses of inspiration and escapism are likely to be associated with the long views afforded from the Cliff along the western edge, as well as the long-distance views to Lincoln Cathedral. Local Distinctiveness and Sense of Place: The Power Stations are a symbol of the River Trent and its place in powering the country. These features hold a positive value when defining the 'sense of place'. Health and Wellbeing: The sense of enjoyment that helps promote health and wellbeing stems from the local lanes, small villages, arable fields, and the peacefulness of the landscape. Important Spatial Function: The spatial function is provided by the large-scale limestone plateau landscape with its west facing scarp known as the Cliff. Overall, the value of the Communications and Infrastructure for the Cottam 3a and 3b Sites is shaped by the growth and development of nearby settlements that is changing the road networks. These changes present considerable challenges around highway management 	Character: The roads and watercourses combine to give a subtle grain to the landscape. The interruptions at the bridge crossings, such as Blyton Beck, provide local points of interest and the opportunity to capture views across the landscape.Quality: Duality: The landscape shows evidence of historic settlement with farms and nucleated villages and small hamlets such as the Medieval village of Southorpe. The landscape surrounding these settlements retain some rural and tranquil character with farms, but minor lanes and roads are interrupted by the presence the former airfield in parts.Value: The sense of enjoyment that helps promote health and wellbeing stems from the local lanes, small villages, arable fields, and the peacefulness of the landscape.Capacity: The landscape benefits from good levels of visual containment due to the local landform, hedgerows, and shelter belts and this helps tolerance for landscape change. An increase in traffic using the east west routes across the area adds some vulnerability of the	 account at the construction, operation (Year 1 and Year 15) and decommissioning stages of the Scheme. This Embedded Mitigation is also referred to as primary mitigation and would include the following measures: Panels to be set a minimum of 3m from Site boundary fencing to be set back 5m from adjacent existing hedgerows to allow for proposed thickening and growth. Existing hedges are to be allowed to grow out and will be managed to a height of 5m. Hedgerow trees will be encouraged to grow out to add further thickening and growth to the field boundaries with the addition of new hedgerow trees as appropriate, randomly spaced along the length of existing hedges. Lighting will be limited to downlights within substations and battery banks only and used when maintenance or security is required. Lighting will be PIR operated and will be calibrated to vehicle and personnel movements. All visible lighting would be 50W, installed at a maximum height of 4m with cowls fitted to prevent light spillage. Lighting required within panelled areas will be manually operated. There will be no lighting on perimeter fencing. The landscape effects with only the Embedded Mitigation taken into account equate to those effects set out for the operation stage (Year 1) and this includes secondary mitigation which will have been carried out but will have had limited
Medium (5km Study Area) Medium (5km Study Area)				
	Medium (5km Study Area)	Medium (5km Study Area)	Medium	



Construction	Operation (Year 1)	Operation (Year 15)	Decon
Activities during site preparation / enabling works, construction, and commissioning with effects such as construction traffic, noise and vibration from construction activities, dust generation, site runoff, mud on roads, and the visual intrusion of plant and machinery on site. At the early stages of the construction stage, ground, and lower-level activities such as the construction of the solar panel areas and associated infrastructure and inverters would be screened partially by existing vegetation, in particular along the Laughton Road and the Kirton Road/Pilham Lane around the Cottam 3a Site and the Pilham Lane and to a lesser degree the Green Lane adjacent to the	Cottam 3a:The main communication and infrastructure receptors are Kirton Road to C228 (T016) and Kirton Road (T019).Cottam 3b:The main communication and infrastructure receptors are Bonsdale Lane, Blyton (T021), Station Road (T023), Green Lane (T028) and the mainline railway (T163).The foreground context of the routes (T016, T019, T021 and T028) would change from the agricultural fields to an area of panels, but they would be set back behind the existing hedgerows.	The effects at the Operational Phase at Year 15 without Mitigation equate to those effects at the beginning of Year 1 before any secondary mitigation has been applied. Mitigation embedded in the design will apply as will the growing out of the existing hedges. With secondary mitigation such as planting and grass seeding being taken into account at the operational stage (Year 15) the following changes to the landscape would occur and the effects are set out below. Views to the north, south, east, and west of the Site will	A simila the Sche assessm of existi primary establisl arising f decomn vibration generat Followin returned
Cottam 3b Site. During the latter part of the construction stage, views would become available of the elevated activities above the hedgerows, but these would be limited to few views from these landscape receptors and would not affect their integrity or overall use. Other works would be undertaken in connection with the construction including fencing, gates, boundary treatment and other means of enclosure and works for the provision of security and monitoring measures such as CCTV and the laying down of internal tracks. There would also be landscape and biodiversity mitigation works, including planting and the improvement of existing hedgerows to all boundaries of the Site/Sites.	The minor roads around the Site (running predominantly north/south and east/west) may also need to accommodate a minor amount of additional traffic during the operation phase of the Scheme. Where these roads are within, or abut the Cottam 3a and 3b Site, boundary vegetation will be enhanced, and the wide road margins retained. Secondary mitigation such as planting, and grass seeding would be taken into account at this stage to include the following changes to the landscape: Enhanced existing vegetation adjacent to these routes and further north where the eastern boundary of the 3b Site abuts Bonsdale Lane, new planting will mitigate views and help to buffer any additional traffic along	be screened in the close-mid range through the new hedgerow and shelterbelt planting and the enhancement of existing hedges which will be managed to a height of 5m in the middle distance. These new and augmented hedgerows will provide a series of good quality hedgerows both formally strengthening the existing and historical field pattern and creating a multi-layered landscape. Scattered tree belts will follow the routes of existing watercourses, strengthening their visibility in the wider landscape. Views of the longer distance, where hedgerows do not block these, will be of a layered, well treed landscape with a backdrop of some wooded vegetation in places on the horizon. Both new and existing vegetation will have established and begun to mature, creating a much stronger structure to the landscape, and retaining its overall character of the area.	benefit f hedgero matureo landscaj characto benefits wetland the pote maintain biodiver Withou through views/la the exist to grow 5m. It is
These short-lived construction activities would affect routes to and from the Site(s) to some degree, but their integrity would not be lost. There would be a change to the arable land use, but the field boundaries and the associated tree cover would remain intact and help with layering and the integration of the new panels. There would not be a fundamental change to the surroundings to the views and settings of these landscape receptors but an increase in traffic locally would put some pressure on these communication links in the short term.	 these routes. Their overall tranquility, although reduced would, in the main be retained, with the wide verges allowing the continuation of informal recreation along these routes. Further north at Cottam 3a Site, the access routes are off the B1205 Kirton Road. The northern boundary of this road is to be enhanced with outgrown hedgerows and hedgerow trees where currently this route is very open and exposed being part of the former airfield. Mitigation for increased traffic will include the protection and enhancement of existing roadside vegetation where this sits within the Order limits and 	 Growth of existing and proposed vegetation is assumed to be: Woodland/trees and shelterbelts: 2.5m max at Year 1, 7.5m max at Year 15. New hedgerows: 0.6m at Year 1 and 3.5m at Year 15. Existing hedgerows: 0.9m at Year 1 and 5m at Year 15. Shrubs: 0.9m at Year 1 and 5m at Year 15. By Year 15, this vegetation will have matured and been 	With Mi decomn term lar
T016: Kirton Road to C228: The Cottam 3a Site will not be directly accessed from this section of the route, but there would be construction activities within the context of the highway for a short section of the route.	the increase in general tree cover across the Site,breaking up views, creating biodiversity gains andcapturing carbon.Although new vegetation will be immature, existinghedgerows will have begun to grow out at Year 1.	 managed to a height of 5m. Hedgerow trees will have matured and shelterbelts and scattered trees will have reached a height of some 7.5m. T023 Station Road: Access to the Cottam 3b Site is off Pilham Lane/Station Road to the west of the Site along a track heading east. This track is also a local PRoW and access to Glebe Farm. Enhancement of this route 	

ommissioning

ilar process to that of construction stage, but with cheme being no longer operational. This is an sment of the Site in winter but assumes retention sting vegetation and builds upon the proposed ary and secondary mitigation that had been lished as the future baseline. Effects are those g from activities for the duration of the mmissioning to include site traffic, noise and tion from decommissioning activities, dust ration and site runoff.

wing decommissioning, the land is likely to be ned to arable production. The Site will however fit from the significantly enhanced tree and erow planting that has been carried out and has red to create a much stronger and robust cape, retaining, and enhancing the overall cter and providing considerable biodiversity fits over the years. Bird mitigation fields and nd grazing marshes are likely to be retained and otential may exist to retain grass margins to tain some varied land use and a high level of versity in the local area.

out Secondary Mitigation having been applied ghout the scheme, the only change to the /landscape following decommissioning would be xisting hedgerows which will have been allowed ow out and will have been managed to a height of t is assumed that these will be retained.

Mitigation, the negative effects of the physical mmissioning will be balanced out by the long landscape and visual effects of this mitigation.



Magnitude	Medium	Low	Low	Very L
	d Cable Route Corridor:		L	14-
Significance of Effect	Minor Not Significant	Minor Not Significant	Minor Not Significant	Negli
Level of Effect	Adverse & Short Term	Adverse & Long Term	Adverse & Long Term	Neut
Magnitude	Low	Low	Low	Very
5km Study A				
	 T019 Kirton Road: The Cottam 3a Site will be directly accessed off Kirton Road via existing field entrances and tracks. Cottam 3b: T021 Bonsdale Lane, Blyton: The Cottam 3b Site will be accessed directly off this lane via existing field entrances and tracks. T023 Station Road: Will provide access to the Cottam 3b Site via the PRoW (Pilh/20/1). T028 Green Lane: The Cottam 3b Site will be accessed directly off this lane via the existing field entrance/track. T163 The mainline railway: Construction traffic may need to cross at Blyton Level Crossing. The minor roads around the Site (running predominantly north/south and east/west) may also need to accommodate a relatively limited level of additional traffic to bring forward the construction phase of the development. The Cable Route Corridor required for the Cottam 2 Site to Cottam 3a and 3b Sites will run in a broadly northwest/southeast direction. This Cable Route Corridor Receptor Sheets at Appendix 8.2.11 [C6.3.8.2.11]. Overall, the communications links are able to accommodate the increased level of traffic between the Sites and to the wider transport links without undue adverse effects. The integrity and tranquillity of these routes, often used for informal recreation, will be short term and field/site specific at any one time. The Laughton Road provides a good link north/south being a major route through the area. 	 Overall, the communications links are able to accommodate the increased level of traffic between the Sites and to the wider transport links without undue adverse effects and the integrity and tranquillity of these routes, often used for informal recreation, will not be unduly affected during the operational phase of the development. Although there will be some loss of tranquillity, this will be mitigated by improved vegetative cover locally predominantly screening or softening views of additional traffic. Between Years 1 and 15, the following beneficial effects will be achieved in terms of the Communication and infrastructure Grassland improvements along some roads A more varied landscape along existing routes Improved management of existing roadside vegetation Improved carbon retention/capture with roadside vegetation enhancement. Adverse effects (mitigated): Panels and structures across the landscape Increased hard standing and access tracks areas - water runoff management required Visual intrusion in early years Increased noise, mud and dust levels Minor loss of tranquillity The effects at the Operational Phase at Year 15 without Embedded Mitigation equate to those effects at the beginning of Year 1 before secondary mitigation has been applied. The Effects set out below include secondary mitigation which will have been carried out but will have had limited physical impact at this stage. 	is proposed to its eastern section with exiting vegetation along its western section creating a suitable boundary on both sides of the track. T019 Kirton Road: Access to the Cottam 3a Site from the south would be off the Kirton Road south directly south of the Site and accessed off the B1205 including through the racetrack entrance. Overall, the communications links are able to accommodate the increased level of traffic between the Sites and to the wider transport links without undue adverse effects and the integrity and tranquillity of these routes, often used for informal recreation, will not be unduly affected during the operational phase of the development. Overall , in terms of mitigation for the Cottam 3a and 3b Sites, due to the sensitivity of the rural lanes, the hedgerows would be protected to ensure sight lines are not impinged. Heavy vehicles can erode the character of rural roads, and this would be managed effectively with the Scheme all hedgerows and tree cover would be retained. The approach roads to the smaller settlements are a key feature that add to the identity of the local landscape and lines of trees are often characteristic in these locations and these would be protected where applicable and retained. Any new tree planting would be confined to hedgerows (i.e., not on verges) particularly on historic enclosure roads, where applicable.	

ry Low

utral & Short Term

gligible Not Significant

Very Low



Level of	Adverse & Short Term	Adverse & Long Term	Adverse & Long Term	Neutra
Effect				
Significance	Moderate Significant	Minor Not Significant	Minor Not Significant	Neglig
of Effect				

In-Combination Effects [Cumulative Sites]	Cumulative Effects [Cumulative Developments]
In Summary	In Summary
The In-combination effects of the Cottam 3a and 3b Sites with the other Cumulative Sites (Cottam 1 and	The Cumulative Effects of the Scheme with the other Cumulative Develo
2) is Minor at year 1 of operation and Negligible at year 15 with mitigation. This is due to the limited	Development and adverse, giving rise to likely Significant effects at ye
impact as a result of the low-level nature of the Scheme together with the quantum of mitigation. There	year 15 with the embedded and additional mitigation. This betterment
will be positive changes in the communications and infrastructure due to the scope for additional	together with the improvements to the margins of the local lanes and re
vegetation enhancing the local landscape character and likewise the setting of the local settlements,	planting, giving rise to the vegetative layering of the landscape across the
smallholdings and isolated dwellings. The existing landscape character associated with the outer edges	reduce the cumulative effect.
of the settlements of the Cumulative Sites and Study Area is predominantly woodland and tree cover	
around the margins and the change to grassland with scattered trees and a significantly improved	
hedgerow networks would give rise to overall benefits to landscape character and views towards these	Fabric of the Landscape
settlements in the combination of all the Cumulative Sites.	There would not be the removal of, or changes in individual land use ele
	Cottam 3a and 3b Sites. The wider landscape is typified by the growth a
<u>Fabric of the Landscape</u>	changing the road networks. These changes present considerable challe
There would not be the removal of, or changes in individual land use elements or features of the	and an increase in traffic using the east west routes across the area.
landscape within the Cottam 3a and 3b Sites. The wider landscape is typified by the growth and	
development of nearby settlements that is changing the road networks. These changes present	There would be the introduction of new elements and features comprise
considerable challenges around highway management interventions and an increase in traffic using the	Cable Route Corridor extending between the Cottam 1 Site/Sites and th
east west routes across the area.	and 3b Sites (the 'Cable Route Corridors').
There would be the introduction of new elements and features comprising the solar panel areas, the	Aesthetic Aspects of the Landscape
substation area and Cable Route Corridor extending between the Cottam 1 Site/Sites and the Cottam 2	Refer to Figure 8.15.1.3 [C6.4.8.15.1.3] which shows that with the Cotta
Site and the Cottam 2 and Cottam 3a and 3b Sites (the 'Cable Route Corridors').	cumulative developments would not be experienced across the majorit
	distance, the intervening woodlands, hedgerows, and tree cover betwee
Aesthetic Aspects of the Landscape	built form would also curtail cumulative visibility between these Site/Sit
Refer to Figure 8.15.1.3 [C6.4.8.15.1.3] which shows that with the Cottam 3b Site, cumulative visibility	
with the Cottam 1 Site/Sites and the Cottam 2 and Cottam 3b Sites would not be experienced across the	There are local patches of cumulative visibility which may be focus of lik
majority of the 2km study area. This is due to the distance, the intervening woodlands, hedgerows, and	and Tillbridge Solar. This cumulative visibility is set out in further detail
tree cover between the Site/Sites. The intervening settlements and built form would also curtail	
cumulative visibility between these Site/Sites.	Figure 8.15.2.6 Cottam 1, 2, 3a and 3b Gate Burton Cumulative Develop
	Gate Burton to the west of Cottam 2, where the intervening settlements
There are local patches of intervisibility between the Cottam 3a and 3b Sites, extending from the:	between, where their presence will impair any associated landscape co
Northeast boundary of the Cottam 3a Site, defined to the west by the Green Respect Burial Park	
and Park House Farm, and reaching as far as Northorpe in the east	Figure 8.15.2.8 Cottam 1, 2, 3a and 3b Tillbridge Solar Cumulative Devel
 East boundary of the Cottam 3a Site, and stopping short of Cold Harbour Farm; and 	shows Tillbridge to the south of the Cottam 2 Site, where their boundar
North boundary of the Cottam 3b Site, extending for a short distance as far as Grange Farm	to the south of Kexby Road and to the west of the settlement of Fillingh
and Top Farm.	woodlands or major topography, such that the presence of Tillbridge De
	direct and compounded relationship in terms of the landscape context
It is an area that shows a distinct contrast between busy north south routes and the more tranquil, less	Development would also add to coalescence between the Cottam 1 and
accessible east west routes that are intrinsically linked and offer many locations to capture views across	mitigation would however ensure that all existing features would be ret
the landscape. Kirton Road is an exception being a busy east west route with little intimacy or 'sense of	stage (Year 15) of the watercousres across the Sites and Study Area.
place'.	
There are local patches of intervicibility between the Cottam 22, 26 and Cottam 2 Sites, system directions	Figure 8.15.2.9 Cottam 1, 2, 3a and 3b West Burton Cumulative Develop
There are local patches of intervisibility between the Cottam 3a, 3b and Cottam 2 Sites, extending from the:	the West Burton Development located to the southwest of the Cottam 2

tral & Short Term

ligible Not Significant

opments is Moderate with the Tillbridge ar 1 of operation. The effects would be Minor at is due to the low-level nature of the Scheme, oad network with new hedgerows and tree ne Sites and Study Area, all in helping reduce to

ements or features of the landscape within the nd development of nearby settlements that is enges around highway management interventions

ing the solar panel areas, the substation area and e Cottam 2 Site and the Cottam 2 and Cottam 3a

m 3a and 3b Sites, cumulative visibility with the y of the 5km study area. This is due to the en the Site/Sites. The intervening settlements and es.

ely significant effects, between the Cottam 3a Site within the following figures:

oments Augmented ZTV [C6.4.8.15.2.6]. This shows of Kexby, Willingham by Stow and Stow lie ntext with the Gate Burton Site.

lopments Augmented ZTV [C6.4.8.15.2.8]. This ies' are located directly adjacent to each other, just am. There are no intervening settlements, evelopment with the Scheme would give rise to a of the watercourses. The presence of the Tillbridge I the Cottam 2 Sites. The primary and secondary ained leading to an improvement at the operation

oments Augmented ZTV [C6.3.4.15.2.9]. This shows Site where the intervening settlements of Stow,



 South boundary of the Cottam 3b Site, bordered by Pilham to the west and the medieval settlement of Dunstall to the east, and reaching as far as Springthorpe in the south South boundary of the Cottam 3a Site, bordered by the eastern edge of Blyton to the west, reaching Grange Farm and stopping short of the mainline railway; and North boundary of the Cottam 3a Site, following the alignment of the A159 (Laughton Road) and stopping short to the west of the Green Respect Burial Park. The sense of enjoyment that helps promote health and wellbeing stems from the local lanes, small villages, arable fields, and the peacefulness of the landscape away from Gainsborough. There is a local patch of intervisibility between All Sites, located to the: East of the Cottam 3b Site and north of the Bonsdale Farm at Pilham, extending across the landscape to the north of the medieval village of Dunstall as far as the medieval village of Southorpe. This is close to an area of land that is mostly bordered to the north by the mainline railway that passes between Gainsborough and Grimsby via Kirton in Lindsey and Brigg. The railway line takes a serpentine route through Gainsborough and then cuts across the landscape in a straight alignment (south-southwest to north-northeast) before taking a southwest to northeast alignment towards the edge of Kirton in Lindsey. Beyond the railway line, there is a secondary road (Kirton Road) that passes in a broad east west direction, and which connects Blyton in the west witk Kirton in Lindsey in the east. These networks provide a visual and physical barrier across the landscape that severs the cumulative potential of the Site/Sites. Users of linear routes, especially footpaths or other rights of way, or transport routes, may potentially experience the aesthetic aspects of the cumulative sites revealed in succession as a series of sequential views. For further	Sturton by Stow and Bransby lie between, where their presence will im West Burton Site. The other Cumulative Developments at Bumble Bee Farm, Field Farm a by the intervening settlements of Gainsborough, Lea, Blyton and Willin The landscape is shaped by the wide range of local and strategic road n different from another. The strategic major road network is defined by west minor road network links several historic and distinctive smaller s prevailing road network links several historic and distinctive smaller s prevailing road network is formed by narrow lanes that are often trance verges and they have a major role in helping to define the quality of th area. <i>Overall Character of the Landscape and Communications and Infrastructu</i> Overall, the character of the landscape and the communications and in evidence of historic settlement with farms and nucleated villages and s Southorpe. The landscape surrounding these settlements retain some lanes and roads are interrupted by the presence the former airfield in landscape have some ability to accommodate change without undue a Cottam 3a and 3b Sites would not alter the character of the landscape features. Moreover, these features are often set within a well-vegetate positive role in reducing the overall cumulative effects.
Overall Character of the Landscape and Communications and Infrastructure Overall, the character of the landscape and the communications and Infrastructure is shaped by the landscape shows evidence of historic settlement with farms and nucleated villages and small hamlets such as the Medieval village of Southorpe. The landscape surrounding these settlements retain some rural and tranquil character with farms, but minor lanes and roads are interrupted by the presence the former airfield in parts. These relevant characteristics of the landscape have some ability to accommodate change without undue adverse effects. The cumulative visibility for the Cottam 3a and 3b Sites would not alter the character of the landscape and its communications and infrastructure features. Moreover, these features are often set within a well-vegetated context or associated with built form that plays a positive role in reducing the overall cumulative effects.	
The difference in effect between the addition of the Scheme to the cumulative baseline is low and very low for the Cumulative Sites because there are minor patches of small cumulative change to a limited area of medium sensitivity, affecting some characteristics without altering the overall impression of its character.	

impair any associated landscape context with the

n and High Marnham are separated from the Scheme lingham by Stow.

d networks, which make one landscape type or area by important historic routes and in contrast, the east r string of settlements across the area. Overall, the nquil and hedged to both sides with wide grassed the landscape and reducing the visibility across the

ture

I Infrastructure is shaped by the landscape shows I small hamlets such as the Medieval village of ne rural and tranquil character with farms, but minor in parts. These relevant characteristics of the adverse effects. The cumulative visibility for the be and its communications and infrastructure ated context or associated with built form that plays a



Magnitude	Construction: Very Low	Construction: Medium
	Operation (Year 1): Very Low	Operation (Year 1): Medium
	Operation (Year 1) with only Embedded Mitigation: Very Low	Operation (Year 1) with only Embedded Mitigation: Medium
	Operation (Year 15): Very Low	Operation (Year 15): Low
	Decommissioning: Very Low	Decommissioning: Low
	Construction: Adverse & Short Term	Construction: Adverse & Short Term
Type of	Operation (Year 1): Adverse & Long Term	Operation (Year 1): Adverse & Long Term
	Operation (Year 1) with only Embedded Mitigation: Adverse & Long Term	Operation (Year 1) with only Embedded Mitigation: Adverse & Long Terr
Effect	Operation (Year 15): Beneficial & Long Term	Operation (Year 15): Neutral & Long Term
	Decommissioning: Neutral & Short Term	Decommissioning: Neutral & Short Term
	Construction: Negligible Not Significant	Construction: Moderate Significant
Significance	Operation (Year 1): Negligible Not Significant	Operation (Year 1): Moderate Significant
-	Operation (Year 1) with only Embedded Mitigation: Negligible Not Significant	Operation (Year 1) with only Embedded Mitigation: Moderate Significar
of Effect	Operation (Year 15): Negligible Not Significant	Operation (Year 15): Minor Not Significant
	Decommissioning: Negligible Not Significant	Decommissioning: Minor Not Significant

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Landscape Receptor – Settlements, Industry, Commerce, and Leisure (Cottam 1 Site/Sites)

Receptor Baseline:

Within the Cottam 1 Site/Sites, at a regional scale, landscape character is assessed within the East Midlands Regional Landscape Character Assessment as forming part of RLCT Profile: 4a Unwooded Vales, which is shown on Figure 8.5 [C6.4.8.5]. Unwooded Vales extends across the majority of the 2km and 5km Study Area apart from the eastern most edge where it shares a boundary with RLCT Profile: 6a Limestone Scarps and Dipslopes. The western extent of the 5km Study Area is also host to a small part of RLCT Profile 3a: Floodplain Valleys and RLCT Profile: 4b Wooded Vales.

The Site/Sites within Cottam 1 (2km Study Area) can be sub-divided into two distinct land areas:

- Cottam 1 North
- Cottam 1 South •

Key Features:

The Settlements, Industry, Commerce and Leisure network is broadly defined to the north-west by the large settlement of Gainsborough (approximately 8.7km) which is Britain's most inland port and one of the main cities within the area along with Newark-on-Trent, Nottingham, Lincoln, and Grantham. The smaller settlements then to the north are typically villages of Medieval origin such the small hamlets of Coates, Gilby, Dunstall and Southorpe. To the southeast, the city of Lincoln is a prominent landmark with the Cathedral that captures the skyline in views across the area. Other settlements to the south include the main town of Saxilby at approximately 19km and Bransby (approximately 1.9km). Otherwise, larger settlements are sparse to the south of the area. To the east, the landscape is defined by compact villages and dispersed farmsteads with the A15 (Ermine Street), which is also a Roman road, following a distinctive straight alignment along the limestone capped scarp slope. Ermine Street connects the city of Lincoln from the south as far as the Humber Estuary in the north. The B1398 (Middle Street) also passes along the scarp slope following an almost parallel alignment with Ermine Street and this historic route supports a string of smaller settlements including Scampton, Aisthorpe, Brattleby, Cammeringham (approximately 1.5km), Ingham (approximately 1.6km), Fillingham (approximately 1km) and Glentworth. Finally, to the west, there are immense coal-fired power stations that exert a visual influence over a wide area, particularly the plumes that rise from them and the pylons and power lines that are linked to them. To the west, the A156 (Gainsborough Road) is almost true to the River Trent and passes through the settlements of Marton, Gate Burton, Knaith before reaching the large settlement of Gainsborough. Other settlements to the west include Stow (approximately 840m), Normanby by Stow (adjacent) and Willingham by Stow (approximately 960m). With the exception of the villages/hamlets mentioned above, the area is relatively sparsely populated with isolated residential properties and farmsteads dotted throughout the surrounding countryside. The Site/Sites lie within the parishes of Fillingham, Cammeringham, Thornton in the Fallows, Sturton by Stow, Stow, and Willingham.

Cottam 1 North:

This is an area of land that is broadly defined to the north by settlements associated with Glentworth Road and Kexby Road. This local road network connects the smaller settlements of Kexby (approximately 1.6km in the west) with Glentworth in the east. Along this route several isolated farmsteads stand back from the road and are associated with small woodlands and lines of trees including Primrose Farm, Glebe Farm, Low Field Farm, Westlands Farm and Spitals Farm. Other residential properties stand closer to the road and include Low Farm Cottages, Low Farm and Glentworth Grange. To the south of the Site/Sites, Ingham Road runs in an east west direction with a clearly defined straight alignment. This local road network connects the settlements of Stow in the west with Ingham and Ingham Cliff in the east. Ingham road serves several farmsteads and isolated dwellings including Furze Hill, Blackthorn Hill, and The Pastures. Other settlements to the south include Sturton by Stow, Thorpe le Fallows (approximately 100m) and Brattleby. To the east, the B1398 (Middle Street) forms an almost continuous and well-defined edge to the Site/Sites and is a strong feature within the landscape where the landform rises distinctly to form the limestone capped scarp slope. Along this edge there is a string of smaller settlements including Ingham, Fillingham, Glentworth and Harpswell. To the west, the Site/Sites are defined by the B1241, of which the alignment is almost true meandering course of the River Till. Along this route, settlements include Sturton by Stow (approximately 1.15km, Stow, Normanby by Stow, Willingham by Stow, Kexby, Upton and Heapham. To the central part of the Site/Sites, the small settlement of Coates is served via a minor road network that also provides access to several farmsteads and isolated dwellings including Grange Farm, Hall Farm Presswood Cottages and Coates Hall. Within this central part, Fillingham Lane also leads into Willingham Road and this route passes east to west across the area linking the settlements of Willingham by Stow in the west to Fillingham in the east. This local road network serves several farmsteads and isolated dwellings including Carisbrooke, Slate House Farm, Magin Moor Farm, Poplar Farm, Side Farm, Grevstones Farm and Glebe Farm. Long westward views to the power stations can be experienced from some areas of higher ground between Fillingham and Glentworth. Eastward views from the local lanes can be experienced towards the scarp face of the Lincoln 'Cliff' especially where there is a sharp right-angled bends on the local roads such as between Kexby and Fillingham.

Cottam 1 South:

This is an area of land that is broadly defined to the north by Ingham Road, which runs in an east west direction with a clearly defined straight alignment. This local road network connects the settlements of Stow in the west with Ingham and Ingham Cliff in the east. Ingham road serves several farmsteads and isolated dwellings that are set close to the road including Furze Hill and The Pastures with Blackthorn Hill set back almost 300m from the road with associated woodland cover and lines of trees. To the south, the boundary of the Site/Sites is defined by Thorpe Lane, that connects the settlements of Sturton by Stow with Brattleby and Aisthorpe. Thorpe Lane serves a small number of dwellings and farmsteads that are set close to the road frontage including Clandon House, The Lodge, Thorpe Lane Farm and Glebe Buildings. To the east, the B1398 (Middle Street) forms an almost continuous and well-defined edge and is a strong feature within the landscape where the landform rises distinctly to form the limestone capped scarp slope. To the west, the boundary of the Site/Sites is defined by Fleets Lane, in part, which links the settlements of Sturton by Stow with Stow Pasture. The lane runs in a straight north direction and serves only one property known as Fleets Cottages. To the central part of the Site/Sites, there is a local lane leading west from Cammeringham that serves two properties known as Cold Harbour and Blackthorn Hill. The network of watercourses provides access for recreation for fishing, walking, and experiencing nature but the River Till corridor is devoid of access. Appreciation of the river corridor can only generally be experienced at the section between Tillbridge Road and Thorpe Lane and crossing points with the local roads. The villages have a broad landscape setting due to the absence of woodlands and flat, low-lying landscape and views from the B1241 of the village churches are particularly important. The area around Thorpe Lane exhibits the balance between outlying farmsteads and the clustered villages of Sturton by Stow, Cammeringham, Brattleby and Aisthorpe. The tracts of open farmland are an important feature in this balance.

Environmental Statement Landscape and Visual Impact Assessment Appendix 8.2.6.1: Settlement Analysis & Evaluation [Reference: EN010133/APP/C6.3.8.2.6.1] Jan 2023



SOLAR PROJECT			
Receptor susceptibility to change	Value of Receptor	Sensitivity	Embedded Mitigation
In terms of forces for change for the Cottam 1	Scenic: There is a string of small, nucleated settlements on the limestone capped scarp slope that	<u>Character:</u> The string of small,	Embedded Mitigation would be taken into
Site/Sites (Settlements, Industry, Commerce,	add to the sequence of views, especially towards landmark churches such as the Grade II* Listed	nucleated settlements on the	account at the construction, operation
and Leisure), recent trends have shown that	Church of St. Cuthbert at Brattleby.	limestone capped scarp slope	(Year 1 and Year 15) and decommissioning
urban expansion on the edge of the main		add to the sequence of views	stages of the Scheme. This Embedded
settlements has eroded the predominantly	<u><i>Cultural:</i></u> Lincoln Cathedral is a prominent landmark on the skyline along with other church	and help define the settled	Mitigation is also referred to as primary
rural character. While the power stations and	spires of the surrounding settlements. Where the farmhouses are set back from the road's lines	character of the landscape.	mitigation and would include the following
sugar beet factory provide a sense of place,	of trees such as horse chestnuts form distinctive features, and this is particularly noticeable at		measures:
their scale is very dominant. This is especially	Thorpe le Fallows.	<u><i>Quality:</i></u> Where the farmhouses	
relevant to the coal powered power stations		are set back from the road's	Panels to be set a minimum of 3m from
that stand in the flat low-lying landscape.	<u>Natural:</u> The quiet rural lanes provide opportunities for wildlife corridors across the area.	lines of trees such as horse	Site boundaries.
Other major industrial developments are		chestnuts form distinctive	
focused along the Trent flood plain corridor	<u>Recreation and Enjoyment:</u> Recreation is provided by numerous small country lanes and there are	features, and this is particularly	Site boundary fencing to be set back 5m
including industrial estates, sewage treatment	few public rights of way (PRoW). This is a landscape of long views towards the west of the power	noticeable at Thorpe le Fallows.	from adjacent existing hedgerows to allow
works and active sand and gravel extraction	stations and towards the east of the string of settlements that line the limestone capped scarp	The farmsteads and dwellings	for proposed thickening and growth.
sites. The aim should be to manage and	slope.	add a positive character to the	
further enhance access via the network of		local network where there are	Existing hedges are to be allowed to grow
quiet lanes, villages, footpaths, and	Local Distinctiveness and Sense of Place: The coal fired power stations exert a visual influence over	associated heritage features.	out and will be managed to a height of 5m.
watercourses. Extension of the non-road	a wide area, mostly with the plumes that rise from them and the pylons and power lines that		Hedgerow trees will be encouraged to
network, especially where it can link people to	pass across the outlying landscape.	<u>Value:</u> The long westward views	grow out to add further thickening and
the river corridors and other areas for		to the power stations on the	growth to the field boundaries with the
recreation.	Health and Wellbeing: There is a public right of way (PRoW) network associated with the river	River Trent are key to the spatial	addition of new hedgerow trees as
	Trent corridor, otherwise access for recreation is limited to the local lanes, in particular Thorpe	qualities of the area and the	appropriate, randomly spaced along the
	Lane which is a quiet backwater relative to the other local lanes.	pattern of settlement.	length of existing hedges.
Overall , the aim is to ensure new			
developments are well-integrated with well	Important Spatial Function: The long westward views to the power stations on the River Trent are	<u>Capacity:</u> The landscape has	Lighting will be limited to downlights within
designed, green infrastructure and resist new	key to the spatial qualities of the area.	some vulnerability to	substations and battery banks only and
development that threatens tranquility. The		unsympathetic development,	used when maintenance or security is
aim is also to conserve the strongly nucleated	Overall , the value of Settlements, Industry, Commerce, and Leisure for the Cottam 1 Site/Sites is	due to the predominantly rural	required. Lighting will be PIR operated and
character by encouraging new development	shaped by the nature of the predominantly rural and sparsely settled area with small villages	and sparsely settled area with	will be calibrated to vehicle and personnel
to take place within the existing curtilage of	and dispersed farms linked by quiet rural lanes, contrasting with the busy city of Lincoln and	small villages and dispersed	movements. All visible lighting would be
settlements. Enhancing and promoting access	town of Gainsborough. The villages have a broad landscape setting and the sequence of views	farms linked by quiet rural	50W, installed at a maximum height of 4m
to river corridors for recreation and health	towards churches is an important feature along with the other long views across the landscape.	lanes. Although these features	with cowls fitted to prevent light spillage.
benefits. The relevant characteristics of the		are generally commonplace,	Lighting required within panelled areas will
landscape therefore have some ability to		they add a particular sense of	be manually operated. There will be no
accommodate change without undue adverse		place.	lighting on perimeter fencing.
effects given the sensitivity of the rural roads			
and minor farm tracks. The edges of the			The landscape effects with only the
villages, the sequence of views to the			Embedded Mitigation taken into account
churches and the avenues and lines of trees			equate to those effects set out for the
on the approaches to farms are also sensitive			operation stage (Year 1) and this includes
features. The balance between clustered			secondary mitigation which will have been
villages and their adjacent, outlying			carried out but will have had limited
farmsteads is an important characteristic.			physical or landscape character impact at
Madium to Lligh (Eluc Ctudu Auro)	Madium to Lligh (Elum Study Area)	Madium to Uish	this Embedded Mitigation stage.
Medium to High (5km Study Area)	Medium to High (5km Study Area)	Medium to High	
Medium (Site/Sites)	Medium (Site/Sites)	Medium	



Landscape Receptor – Settlements, Industry, Commerce, and Leisure (Cottam 1 Site/Sites)

Construction	Operation (Year 1)	Operation (Year 15)	Decom
Activities during site preparation / enabling works,	There will be very minor enhancements to leisure	The effects at the Operational Phase at Year 15	A similar
construction, and commissioning with effects such as	pursuits within the locality with a small number of	without Mitigation equate to those effects at the	the Sche
construction traffic, noise and vibration from	PRoW being enhanced through tree and hedge	beginning of Year 1 before any secondary mitigation	assessm
construction activities, dust generation, site runoff,	planting adjacent to the Cottam 1 Site/Sites.	has been applied. Mitigation embedded in the design	of existin
mud on roads, and the visual intrusion of plant and		will apply as will the growing out of the existing	primary
machinery on site. At the early stages of the	The proposed development will have little effect on	hedges.	establish
construction stage, ground, and lower-level activities	local industry and commerce although the introduction		arising fr
such as the construction of the solar panel areas and	of the solar farm will provide some additional traffic to	With secondary mitigation such as planting and grass	decomm
associated infrastructure and inverters would be	the roads and lanes locally. Mitigation will be in the	seeding being taken into account at the operational	vibration
predominantly screened by existing vegetation.	form of tree, hedge, and shelterbelt planting as well as	stage (Year 15) the following changes to the landscape	generatio
predominantly screened by existing vegetation.	shrub and grassland areas which will both screen	would occur and the effects are set out below.	generativ
During the latter part of the construction stage, views	views of the additional traffic and provide benefits in	Views from the adjacent settlements and	Following
would become available of the elevated activities	terms of reducing noise and carbon impacts.	commercial/industrial units will be screened in the	returned
above the hedgerows, and some limited views from		close to mid-range proximity due to the presence of	benefit fi
Brattleby, Coates Fillingham, Ingham, Stow and Sturton	The settlements locally (Brattleby, Coates Fillingham,	the new hedgerows, scattered tree, and shelterbelt	hedgerov
	Ingham, Stow and Sturton by Stow) will not be affected	planting together with the enhancement of existing	matured
by Stow may be possible, but this would be short term.	and their proximity to the Cottam 1 Site/Sites will be	hedgerows which will be managed to a height of 5m.	
Other works would be undertaken in connection with	separated through the proposed mitigation. This		landscap
		These new and augmented hedgerows will provide a	characte
the construction including fencing, gates, boundary	mitigation will include strong boundary vegetation	series of good quality field boundaries both formally	benefits
treatment and other means of enclosure and works for	screening views from the nearest public vantage points	strengthening the existing and historical field pattern	wetland
the provision of security and monitoring measures	and enhancing the settlement settings where they are	and creating a multi-layered landscape. Views of the	the poter
such as CCTV and the laying down of internal tracks.	in an appropriate context. The overall increase in	longer distance, where hedgerows do not block these,	maintain
There would also be landscape and biodiversity	vegetative cover and the reduction of over intensively	will be of a layered, well treed landscape with the	biodivers
mitigation works, including planting and the	farmed arable land will have benefits locally both in	addition of shelterbelt and scattered tree planting	14/5±b a.v.t
improvement of existing hedgerows to all boundaries	landscape character and visual terms and with regard	around the boundary of the Site/Sites with a backdrop	Without
of the Site/Sites.	to a considerable increase in the biodiversity around	of some wooded vegetation in places on the horizon.	through
These shout lived constructions activities consuld not	settlements/isolated dwellings across the area.	Both new and existing vegetation will have established	views/lar
These short-lived construction activities would not		and begun to mature, creating a much stronger	the exist
affect any of the settlements or other	The development will have no adverse effects on the	structure to the landscape, and retaining the overall	to grow o
commercial/industrial areas in this area. There would	larger settlements such Gainsborough, Newark-on-	character of the area.	5m. It is a
be a change to the arable land use, but the field	Trent, Nottingham, Lincoln, and Grantham due to its		
boundaries and the associated tree cover would	distance from these locations.	Growth of existing and proposed vegetation is	With Mit
remain intact and help with layering and the		assumed to be:	decomm
integration of the new panels. Development would not	There is potential that a small number of farm		term lan
have any adverse effects on the integrity of the local	buildings will be lost/reutilised due to the change in the	Woodland/trees and shelterbelts: 2.5m max at Year 1,	
settlements.	arable production within the Cottam 1 Site/Sites.	7.5m max at Year 15.	
	There will be no industrial development associated	New hedgerows: 0.6m at Year 1 and 3.5m at Year 15.	
	with the use of the Cottam 1 Site/Sites, and other built		
	infrastructure associated with the solar farm will be	Existing hedgerows: 0.9m at Year 1 and 5m at Year 15.	
	limited to temporary (but long term) buildings with the		
	overall development having an anticipated life span of	Shrubs: 0.9m at Year 1 and 5m at Year 15.	
	40 years.		
		By Year 15, additional vegetated cover will have	
	Secondary mitigation such as planting, and grass	established and begun to mature, enhancing the local	
	seeding would be taken into account at this stage to	landscape character and likewise the setting of the	
	include the following measures:	local settlements, smallholdings, and isolated dwellings	
		across the area. Additional traffic will have been	
	Cottam 1 South:	mitigated by improvements to roadside vegetation	
		where possible within the Order limits. Some PRoW	
	Along Thorpe Lane, shelterbelt planting, scattered tree	and recreational routes along minor roads will be	
	אוטווצ וווטועכ במווכ, זווכונכועכו שמוונוווצ, זנמננכוכם נוכב		

Environmental Statement Landscape and Visual Impact Assessment Appendix 8.2.6.1: Settlement Analysis & Evaluation [Reference: EN010133/APP/C6.3.8.2.6.1] Jan 2023

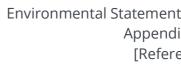
mmissioning

lar process to that of construction stage, but with heme being no longer operational. This is an ment of the Site in winter but assumes retention ting vegetation and builds upon the proposed ry and secondary mitigation that had been ished as the future baseline. Effects are those from activities for the duration of the missioning to include site traffic, noise and on from decommissioning activities, dust ation and site runoff.

ing decommissioning, the land is likely to be ed to arable production. The Site will however from the significantly enhanced tree and row planting that has been carried out and has ed to create a much stronger and robust ape, retaining, and enhancing the overall ter and providing considerable biodiversity ts over the years. Bird mitigation fields and nd grazing marshes are likely to be retained and tential may exist to retain grass margins to ain some varied land use and a high level of ersity in the local area.

ut Secondary Mitigation having been applied shout the scheme, the only change to the landscape following decommissioning would be isting hedgerows which will have been allowed w out and will have been managed to a height of is assumed that these will be retained.

Mitigation, the negative effects of the physical missioning will be balanced out by the long andscape and visual effects of this mitigation.



Cottam

forward with the Scheme. A new hedgerow is also proposed and will be set back from the War Memorial Site adjacent to Thorpe Lane within the settlement of Thorpe le Fallows To the east of the Cottam 1 Site/Sites, existing vegetation including woodlands at Brattleby Gorse and new and enhanced hedgerows with hedgerow trees will help to provide separation and screening with the settlements of Brattleby and Cammeringham. To the north of the Cottam 1 Site/Sites, new and enhanced hedgerows bordering the northeast boundary of the Cottam 1 North and South Site/Sites will mitigate views from Ingham to the east.

To the west, scattered trees adjacent to the River Till, shelterbelt planting and enhanced hedgerows will mitigate any impact on the settlement of Sturton by Stow.

Cottam 1 North:

To the north of the Cottam 1 North Site, enhanced hedgerows to the north of the area of panels within the B fields will mitigate effects from this direction. The main area of panels is mitigated to the north by a mixture of enhanced hedgerows, where appropriate, and a new hedgerow to field C3 where this is currently gappy and absent. There will also be long blocks of shelterbelt planting across the Cottam 1 Site, particularly to the south, where a shelterbelt is proposed adjacent to the River Till and is associated watercourses. There will be enhanced hedgerows elsewhere on this boundary with the River Till to improve biodiversity connections to the river corridor and a block of shelterbelt planting adjacent to the PRoW in field C25.

To the east of the Cottam 1 North Site, there may be potential intervisibility with Ingham and Fillingham villages, but existing vegetation is augmented by a belt of scattered trees adjacent to the River Till and its associated watercourses and drains. A new hedgerow is also proposed adjacent to the PRoW (Fill/86/1) to the east of the Site/Sites, running in a north-south direction.

On the western boundary of the Cottam 1 North Site/Sites, successional scrub planting will augment existing woodland belts, with some scattered trees to the northeast and a new hedge to the west of field C2. Generally new hedgerows are proposed where none currently exist to enhance the field boundary framework and mitigate views towards the panel's areas. The main area of panels are located beyond the strong existing tree belt and associated woodland at Larch Plantation and Fillingham Low Wood.

enhanced through additional planting creating more intimate and less exposed routes.

The local settlement and commercial/industrial facilities are able to accommodate the Scheme without undue adverse effects. The proposed Scheme will have no adverse effects in the physical integrity of the settlements adjacent to the Site and there will be beneficial effects in terms of local tree/hedge cover and biodiversity net gains enhancing the local character and the setting of these settlements.

Overall, in terms of mitigation for the Cottam 1 Site/Sites, due to the sensitivity of the man-made interventions the aim is to raise awareness of the distinctive settlement, industry, commerce, and leisure features and to raise the value that people place on them to help protect and enhance the area. The aim is to conserve settlement pattern by ensuring that development is complimentary to intrinsic local character. Trees and hedgerows make an important contribution to the landscape setting of villages and their management should be a priority, particularly when associated with farmsteads and large-scale agricultural buildings. Lines of trees in characteristic locations should also be retained and enhanced.

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 Potential views from Fillingham village would be mitigated with a new hedge to the southeast of fields B2 and B3 with existing woodland to the southeast of this area also helping to curtail visibility. Enhanced hedgerows to the eastern boundary of B4 also help to mitigate views in this direction. <u>Cottam 1 West:</u> Shelterbelts and enhanced hedgerows augment the existing vegetation to the west of the Cottam 1 Site/Sites with scattered tree belts adjacent to the River Till towards the south and existing vegetation further north being retained. Large areas of bird mitigation are also proposed between the Site/Sites and the settlement in the west at Willingham by Stow and Stow. Shelterbelt planting is also proposed to mitigate views from dwellings along the Ingham Road looking north, 	
 whilst new and enhanced hedgerows are proposed to the northern boundary of the Cottam 1 Site/Sites. There would also be shelterbelt planting to the western boundary of the Cottam 1 Site/Sites and to the south of the Ingham Road to assist with the integration of the panel areas in the west. Between Years 1 and 15, the following beneficial effects will be achieved in terms of Settlements, 	
 Commerce and Industry: Grassland reversion around settlements A more varied landscape in terms of management and vegetation Less intensively managed land around settlement edges Potential for grazing around settlement edges General water quality improvements Soil improvements Increased woodland/vegetation cover Significantly improved biodiversity Improved carbon retention/capture Enhancement and strengthening of the Local Character Area 	
 Adverse effects (mitigated): Panels and structures across the landscape Increased traffic through local routes and some settlements 	
The effects at the Operational Phase at Year 15 without Embedded Mitigation equate to those effects at the beginning of Year 1 before secondary mitigation has been applied. The Effects set out below include	



		secondary mitigation which will have been carried out	t	
		but will have had limited physical impact at this stage.		
5km Study A	rea:			
Magnitude	Very Low	Low	Low	Very Lo
Level of	Adverse & Short Term	Beneficial & Long Term	Beneficial & Long Term	Neutral
Effect				
Significance	Negligible Not Significant	Minor-Moderate Not Significant	Minor-Moderate Not Significant	Negligik
of Effect				
Site/Sites and	d Cable Route Corridor			
Magnitude	Very Low	Low	Low	Very Lo
Level of	Adverse & Short Term	Beneficial & Long Term	Beneficial & Long Term	Neutral
Effect				
Significance	Negligible Not Significant	Minor Not Significant	Minor Not Significant	Negligik
of Effect				

Landscape Receptor – Settlements, Industry, Commerce, and Leisure (Cottam 1 Site/Sites)

In-Combination Effects [Cumulative Sites]	Cumulative Effects [Cumulative Developments]
In Summary	In Summary
The In-combination effects of the Cottam 1 Site with the other Cumulative Sites (Cottam 2 and 3a and 3b)	The Cumulative Effects of the Scheme with the other Cumulative Develo
is Minor at year 1 of operation and Negligible at year 15 with mitigation. This is due to the limited impact	Development and adverse, giving rise to no likely Significant effects at y
as a result of the low-level nature of the Scheme together with the quantum of mitigation. There will be	Negligible at year 15 with the embedded and additional mitigation. This
positive changes to the settlements, industry, commerce and leisure due to the scope for additional	the Scheme, together with the improvements to the margins of the road
vegetation enhancing the local landscape character and likewise the setting of the local settlements and	and tree planting, giving rise to the vegetative layering of the landscape
their approaches, and particularly in the context of the church spires. The existing landscape character	reduce to reduce the cumulative effect.
associated with the outer edges of these settlements of the Cumulative Sites and Study Area is	
predominantly woodland and tree cover around the margins and the change to grassland with scattered	Fabric of the Landscape
trees and a significantly improved hedgerow networks would give rise to overall benefits to landscape	There would not be the removal of, or changes in individual settlement,
character in the combination of all the Cumulative Sites.	features of the landscape within the Cottam 1 Site. The nature of the pr
Fabric of the Landscape	small villages and dispersed farms linked by quiet rural lanes, contrastir Gainsborough. The villages have a broad landscape setting and the sequ
There would not be the removal of, or changes in individual settlement, industry, commerce, and leisure	feature along with the other long views across the landscape.
elements or features of the landscape within the Cottam 1 Site/Sites. The nature of the predominantly	reature along with the other long views across the landscape.
rural and sparsely settled wider area with small villages and dispersed farms linked by quiet rural lanes,	There would be the introduction of new elements and features compris
contrasting with the busy city of Lincoln and town of Gainsborough is the main spatial function of the	and Cable Route Corridor extending between the Cottam Power Station
landscape. This spatial function is tempered by the villages that have a broad landscape setting and the	between the Cottam 1 Site/Sites and the Cottam 2 Site (the 'Cable Route
sequence of views towards churches, which is an important feature along with the other long views across	
the landscape, which have scope for enhancement.	Aesthetic Aspects of the Landscape
	Refer to Figure 8.15.2.1 [C6.4.8.15.2.1] which shows that with the Cottar
There would be the introduction of new elements and features comprising the solar panel areas, the	cumulative developments would not be experienced across the majority
substation area and Cable Route Corridor extending between the Cottam Power Station and the Cottam 1	distance, the intervening woodlands, hedgerows, and tree cover betwee
Site/Sites and extending between the Cottam 1 Site/Sites and the Cottam 2 Site (the 'Cable Route	built form would also curtail cumulative visibility.
Corridors').	
	There are local patches of cumulative visibility which may be focus of lik
<u>Aesthetic Aspects of the Landscape</u>	Site/Sites and Gate Burton Energy Park, Tillbridge Solar and West Burton
Refer to Figure 8.15.1.1 [C6.4.8.15.1.1] which shows that with the Cottam 1 Site/Sites, cumulative visibility	in further detail within the following figures:
with the Cable Route Corridor, Cottam 2, and Cottam 3a and 3b Sites and the Cable Routes Corridor	
would not be experienced across the majority of the 2km study area. This is due to the distance, the intervening woodlands, hedgerows, and tree cover between the Site/Sites. The intervening settlements	Figure 8.15.2.6 Cottam 1, 2, 3a and 3b Gate Burton Cumulative Develop shows Gate Burton to the west of Cottam 1, where the intervening settle
Intervening woonlands, nergerows, and tree cover netween the site/sites, the intervening cettlements	I Shows Gale Burton to the West of Cottam 1, where the intervening settle

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elopments is Minor with the Tillbridge t year 1 of operation. The effects would be his betterment is due to the low-level nature of ad and local lane network with new hedgerows be across the Sites and Study Area, all in helping

nt, industry, commerce, and leisure elements or predominantly rural and sparsely settled area with sting with the busy city of Lincoln and town of equence of views towards churches is an important

rising the solar panel areas, the substation area on and the Cottam 1 Site/Sites and extending ute Corridors').

tam 1 Site/Sites, cumulative visibility with the rity of the 5km study area. This is due to the veen the Site/Sites. The intervening settlements and

likely significant effects, between the Cotton 1 ton Solar Park. This cumulative visibility is set out

opments Augmented ZTV [C6.4.8.15.2.6]. This ttlements of Kexby, Willingham by Stow and Stow pe context with the Gate Burton Site.





Figure 8.15.2.8 Cottam 1, 2, 3a and 3b Tillbridge Solar Cumulative Developments Augmented ZTV [C6.4.8.15.2.8]. This and built form would also curtail cumulative visibility between these cumulative sites and the Cable Route Corridors. shows Tillbridge to the south of the Cottam 1 Site, where their boundaries' are located directly adjacent to each other, just to the south of Kexby Road and to the west of the settlement of Fillingham. There are no intervening settlements, There are very minor patches of cumulative intervisibility between the Cottam 1 Site/Sites and the Cottam woodlands or major topography, such that the presence of Tillbridge Development with the Scheme would give rise to a 2 Site, located to the: direct and compounded relationship in terms of the landscape context of the settlements. The presence of the Tillbridge • east of Upton and to the south of Sturgate Airfield Development would also add to coalescence between the Cottam 1 and the Cottam 2 Sites. The primary and secondary • south of Kexby in the locality of Valley Farm mitigation would however ensure that all existing features would be retained leading to an improvement at the east of Willingham by Stow in the locality of the residential property known as Carisbrooke operation stage (Year 15) of the watercousres across the Sites and Study Area. east of Stow, just to the east of the property known as Tam Howes; and • west of Sturton by Stow, extending from West Syke Lane as far as Normanby by Stow. Figure 8.15.2.9 Cottam 1, 2, 3a and 3b West Burton Cumulative Developments Augmented ZTV [C6.3.4.15.2.9]. This ٠ shows the West Burton Development located to the southwest of the Cottam 1 Site where the intervening settlements of Stow, Sturton by Stow and Bransby lie between, where their presence will impair any associated landscape context The landscape has some vulnerability to unsympathetic development, due to the predominantly rural and with the West Burton Site. sparsely settled area with small villages and dispersed farms linked by quiet rural lanes. Although these features are generally commonplace, they add a particular sense of place and offer the scope for The other Cumulative Developments at Bumble Bee Farm, Field Farm and High Marnham are separated from the landscape improvements to benefit views across the landscape. Scheme by the intervening settlements of Gainsborough, Lea, Blyton and Willingham by Stow. There are very minor patches of cumulative intervisibility between the Cottam 1 Site/Sites, Cottam 2 Site, The nature of the predominantly rural and sparsely settled wider area with small villages and dispersed farms linked by and Cottam 3a Site, located to the: quiet rural lanes, contrasting with the busy city of Lincoln and town of Gainsborough is the main spatial function of the • northeast of Sturton by Stow, extending between Tillbridge Road and Ingham Road. landscape. This spatial function is tempered by the villages that have a broad landscape setting and the sequence of views towards churches, which is an important feature along with the other long views across the landscape, which have Recreation is provided by numerous small country lanes and there are few public rights of way (PRoW). scope for enhancement. This is a landscape of long views towards the west of the power stations and towards the east of the string of settlements that line the limestone capped scarp slope from this location. Overall Character of the Landscape and Settlement, Industry, Commerce and Leisure Overall, the character of the landscape and the settlement, industry, commerce, and leisure is shaped by the trees and There are very minor patches of cumulative intervisibility between the Cottam 1 Site/Sites, Cottam 2 Site, hedgerows that make an important contribution to the landscape setting of villages. The edges of the villages, the and Cottam 3b Site, located to the: sequence of views to the churches and the avenues and lines of trees on the approaches to farms are also important. northeast of Sturton by Stow, extending between School Lane Farm and Ingham Road. These relevant characteristics of the landscape and land use have some ability to accommodate change without undue adverse effects. The cumulative visibility for the Cottam 1 Site/Sites would not alter the overall character of the The villages have a broad landscape setting due to the absence of woodlands and flat, low-lying landscape landscape and its settlement features. Moreover, these features are often set within a well-vegetated context and the and views from the B1241 of the village churches are particularly important. The area around Thorpe associated built form plays a positive role in reducing the overall cumulative effects. Lane exhibits the balance between outlying farmsteads and the clustered villages of Sturton by Stow, Cammeringham, Brattleby and Aisthorpe. The tracts of open farmland are an important feature in this balance. There are local patches of intervisibility between All Sites comprising the landscape to the: east boundary of the Cottam 1 North Site/Sites, extending from Glentworth in the north as far as Ingham in the south. Where the farmhouses are set back from the road's lines of trees such as horse chestnuts form distinctive features, and this is particularly noticeable at Thorpe le Fallows. The farmsteads and dwellings add a positive character to the local network where there are associated heritage features. Users of linear routes, especially footpaths or other rights of way, or transport routes, may potentially experience the aesthetic aspects of the cumulative sites revealed in succession as a series of sequential views. For further details refer to the following detailed visual receptor sheets: Appendix 8.3.2.2 Individual Viewpoint Receptor Sheets [C6.3.8.3.2.2] Appendix 8.3.2.3 Individual Viewpoint Receptor Sheets [C6.3.8.3.2.3] Appendix 8.3.2.4 Individual Viewpoint Receptor Sheets [C6.3.8.3.2.4] Appendix 8.3.3.2 Individual Residential Receptor Sheets [C6.3.8.3.3.2] Appendix 8.3.3.3 Individual Residential Receptor Sheets [C6.3.8.3.3.3] Appendix 8.3.4.2 Individual Transport Receptor Sheets [C6.3.8.3.4.2] Appendix 8.3.4.3 Individual Transport Receptor Sheets [C6.3.8.3.4.3]

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SOLAR PROJECT		
	Appendix 8.3.5.2 Individual PRoW Receptor Sheets [C6.3.8.3.5.2]	
	Appendix 8.3.5.3 Individual PRoW Receptor Sheets [C6.3.8.3.4.3]	
	Overall Character of the Landscape and Settlement, Industry, Commerce and Leisure	
	Overall, the character of the landscape and the settlement, industry, commerce, and leisure is shaped by	
	the trees and hedgerows that make an important contribution to the landscape setting of villages. The	
	edges of the villages, the sequence of views to the churches and the avenues and lines of trees on the	
	approaches to farms are also important. These relevant characteristics of the landscape and land use	
	have some ability to accommodate change without undue adverse effects. The cumulative visibility for the Cottam 1 Site/Sites would not alter the overall character of the landscape and its settlement features.	
	Moreover, these features are often set within a well-vegetated context and the associated built form plays	
	a positive role in reducing the overall cumulative effects.	
	The difference in effect between the addition of the Scheme to the cumulative baseline is very low and	
	very for the Cumulative Sites because there are minor patches of small cumulative change to a limited	
	area of medium sensitivity, affecting some characteristics without altering the overall impression of its	
	character.	
	Construction: Very Low	Construction: Low
	Operation (Year 1): Very Low	Operation (Year 1): Low
Magnitude	Operation (Year 1) with only Embedded Mitigation: Very Low	Operation (Year 1) with only Embedded Mitigation: Low
	Operation (Year 15): Very Low Decommissioning: Very Low	Operation (Year 15): Very Low Decommissioning: Very Low
	Construction: Adverse & Short Term	Construction: Adverse & Short Term
	Operation (Year 1): Adverse & Long Term	Operation (Year 1): Adverse & Long Term
Type of	Operation (Year 1) with only Embedded Mitigation: Adverse & Long Term	Operation (Year 1) with only Embedded Mitigation: Adverse & Long Te
Effect	Operation (Year 15): Beneficial & Long Term	Operation (Year 15): Neutral & Long Term
	Decommissioning: Neutral & Short Term	Decommissioning: Neutral & Short Term
	Construction: Negligible Not Significant	Construction: Minor Not Significant
Significance	Operation (Year 1): Negligible Not Significant	Operation (Year 1): Minor Not Significant
of Effect	Operation (Year 1) with only Embedded Mitigation: Negligible Not Significant	Operation (Year 1) with only Embedded Mitigation: Minor Not Signific
of Effect	Operation (Year 15): Negligible Not Significant	Operation (Year 15): Negligible Not Significant
	Decommissioning: Negligible Not Significant	Decommissioning: Negligible Not Significant

* Potential exists to use targeted, low-density sheep grazing in appropriate areas of wildflower meadow under panelled areas for short periods once a suitable sward has established. This may allow for diversification of grazing management. Grazing of tussock seeded areas may be appropriate to reduce the sward every three years. Careful monitoring is however required to prevent overgrazing with conservation grazing densities used.

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Landscape Receptor – Settlements, Industry, Commerce, and Leisure (Cottam 2 Site)

Receptor Baseline:

Within the Cottam 2 to Cottam 3a and 3b Sites, at a regional scale, landscape character is assessed within the East Midlands Regional Landscape Character Assessment as forming part of RLCT Profile: 4a Unwooded Vales, which is shown on Figure 8.5 [C6.4.8.5].

The landscape is characterised by the Trent flood plain corridor, including power stations, and associated overhead power lines, industrial estates, sewage treatment works and active sand and gravel extraction sites. The flood plain is bordered by large urban areas including the cities of Nottingham and Lincoln and there are also scattered rural settlements perched on the edge of the floodplain. Overall, the character of the flood plain is predominantly rural.

The Settlements, Industry, Commerce and Leisure network is broadly defined to the southwest by the large settlement of Gainsborough (approximately 6km) which is Britain's most inland port and one of the main cities within the area along with Newark-on-Trent, Nottingham, Lincoln, and Grantham. Pilham is located approximately 2.2km to the northwest, Blyton is located approximately 3.6km to the northwest, beyond which lies Laughton all outside the Study Area and the other smaller settlements to the north are typically villages of Medieval origin such the small hamlets of Gilby, Dunstall and Southorpe. To the southeast, the city of Lincoln is a prominent landmark with the Cathedral that captures the skyline in views across the area. Other settlements to the south include a small string of villages to the south of the A631 (Corringham Road) and include Springthorpe, Sturgate, Heapham, Upton and Kexby that form a local cluster in an alignment true to the River Till. To the east, the landscape is defined by compact villages and dispersed farmsteads with the A15 (Ermine Street), which is also a Roman road, following a distinctive straight alignment along the limestone capped scarp slope. Ermine Street connects the city of Lincoln from the south as far as the Humber Estuary in the north. The B1398 (Middle Street) also passes along the scarp slope diverting from its almost parallel alignment with Ermine Street to form a wide curve. This historic route supports a string of small settlements to the north of the A631 (Corringham Road) including Hemswell (approximately 5.5km), Willhoughton (approximately 5km), Blyborough (approximately 5.2km) and Grayingham (approximately 9km). Finally, to the west, the market town of Gainsborough on the east bank of the River Trent, its associated road networks and industry form the main area of settlement since this is the crossing point of the east-west A631. Corringham located approximately 600m to the south-west is the only other main settlement to the east of Gainsborough following the route of the A631. West Lindsey District Council currently has its offices in Gainsborough and the town has two railway stations and West Burton Power Station is approximately 5km to the south-west of the town, next to the Sheffield-Lincoln Railway Line. With the exception of the market towns/villages/hamlets mentioned above, the area is relatively sparsely populated with isolated residential properties and farmsteads dotted throughout the surrounding countryside.

Key Features:

This is an area of land that is broadly defined to the north by settlements associated with Pilham Lane, Green Lane and Pilham Lane. Along this route there are only a very small number of isolated farmsteads, some which stand back from the road, forming a distinguished collection of buildings including Old Hall, Hall Farm, Moscar Farm and Aisby House Farm. Other residential properties include The Cottage and Corringham Grange Farm, which are located to the south-west extent of the Site/Sites. To the south of the Site/Sites, the area is also largely devoid of settlement, industry, commerce, and leisure uses apart from the small sewage works on Springthorpe Road. There are residential properties known as Magin Moor Cottages adjacent to the A631 (Corringham Road) and Grange Cottage off School Lane to the east of Springthorpe. Farmsteads include New Church Farm, Springthorpe Grange, Hemswell Grange and Harpswell Grange, which are scattered across the landscape between Springthorpe and Hemswell. Springthorpe is located approximately 1.9km to the south with Heapham and Upton located beyond Springthorpe to the southeast. To the east, Northorpe is located at approximately 590m and Willoughton is located approximately 4km to the Northeast. Hemswell is located approximately 4km to the southeast, Harpswell is located approximately 5km to the southeast all outside the Study Area. To the west, the Site/Sites are defined East Lane, which passes to the east of Corringham in and east-west direction and then takes a turn to head north-south to connect with Pilham Lane. East Lane follows the course of Coringham Beck for approximately 400m at the southern end where it makes a right-angled turn to head north. To the central part of the Site/Sites, the two properties, The Cottage and Corringham Grange Farm served by minor tracks are the only features, otherwise there are no other associated settlement, industry, commerce, and leisure uses within this area. The Cottam 2 Site lies wholly within the Parish of Corringham which is surrounded by the parishes of Pilham, Blyton, Northorpe, Blyborough, Willoughton, Hemswell, Harpswell, Springthorpe, Upton, Lea, Gainsborough and Thornock.

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Pocontor suscentibility to change	Value of Percenter	Soncitivity	Emboddod Mitigation
Receptor susceptibility to change	Value of Receptor	Sensitivity	Embedded Mitigation
In terms of forces for change for the Cottam 2	<u>Scenic:</u> Despite the importance of nucleated settlements in this area, they are frequently hidden	<u>Character:</u> Despite the	Embedded Mitigation would be taken into
Site (Settlements, Industry, Commerce, and	from view by tall hedgerows that border the local lanes. The setting of settlements are therefore	importance of nucleated	account at the construction, operation
Leisure), recent trends have shown that the	more widely appreciated in long views east and west across the area.	settlements in this area, they are	(Year 1 and Year 15) and decommissioning
upgrades to roads across the area, often from		frequently hidden from view by	stages of the Scheme. This Embedded
single to a dual carriageway have triggered	<i><u>Cultural:</u></i> The church spires and tower of the scarp slope settlements form a prominent	tall hedgerows that border the	Mitigation is also referred to as primary
change in terms of settlement and	landmark on the skyline along with the large farmsteads that occupy the rising land in the	local lanes, meaning they give a	mitigation and would include the following
development. Apart from the construction	foreground.	reduced contribution to	measures:
associated with bridges and embankments to		landscape character.	
support these road upgrades residential and	<u>Natural:</u> The quiet rural lanes provide opportunities for wildlife corridors across the area		Panels to be set a minimum of 3m from
business development has also expanded in	especially where they are associated with the waters course such as with East Lane and	<u><i>Quality:</i></u> The setting of	Site boundaries.
association with these works. Given the close	Corringham Beck.	settlements are more widely	
proximity to Gainsborough the main elements		appreciated in long views east	Site boundary fencing to be set back 5m
of change are the noise and visual intrusion of	<u>Recreation and Enjoyment</u> : This is a landscape of long views towards the west of the power	and west across the area rather	from adjacent existing hedgerows to allow
the traffic using the A631. The impact on the	stations and towards the east of the string of settlements that line the limestone capped scarp	than at close range due to the	for proposed thickening and growth.
local lanes that feed into the A631 is also a	slope. Some of the local lanes provide a quiet backwater to appreciate these views but closer to	abundance of hedgerows and	
consideration such as locations close to	the major roads the recreation and enjoyment factors significantly diminish.	tree cover around their edges.	Existing hedges are to be allowed to grow
Springthorpe Road, East Lane, the local road			out and will be managed to a height of 5m.
to Yawthorpe, Pilham Lane and Mill Mere	Local Distinctiveness and Sense of Place: There is a string of small, nucleated settlements on the	<u>Value:</u> The landscape shows	Hedgerow trees will be encouraged to
Road.	limestone capped scarp slope that add to the sequence of views, especially towards	evidence of historic settlement	grow out to add further thickening and
	Willhoughton and Willhoughton Cliff where the associated woodlands form a strong feature on	with farms and nucleated	growth to the field boundaries with the
Overall , the aim is to ensure that road	the horizon.	villages and small hamlets such	addition of new hedgerow trees as
improvements and associated new		as Aisby, Corringham and	appropriate, randomly spaced along the
development protect the character of the	Health and Wellbeing: Recreation is provided by numerous small country lanes and there are few	Pilham. The landscape	length of existing hedges.
local lanes from noise, visual intrusion, and	public rights of way (PRoW) which connect these lanes and provide scope for circular routes	surrounding these settlements	
construction interventions. Pressure on the	across the area.	retain a deeply rural and	Lighting will be limited to downlights withir
land for arable agriculture and competing		tranquil character.	substations and battery banks only and
demands of farm diversification are also	Important Spatial Function: Where the farmhouses are set back from the roads, they form a		used when maintenance or security is
leading to the introduction of large-scale	distinctive group of buildings and associated tree cover. This is particularly noticeable at Aisby	<u><i>Capacity:</i></u> The nucleated nature	required. Lighting will be PIR operated and
buildings and parking/visitor attractions to	Farm, Moscar Farm and Hall Farm.	of the settlement pattern adds	will be calibrated to vehicle and personnel
stem from farmsteads in guiet rural locations,		to the sense of place in wide	movements. All visible lighting would be
which is causing significant change to the	Overall , the value of Settlements, Industry, Commerce, and Leisure for the Cottam 2 Site is	views across the area. However,	50W, installed at a maximum height of 4m
rural character of the area in some parts. The	shaped by the nucleated nature of the settlement pattern that adds to the sense of place in	in places the scale of major	with cowls fitted to prevent light spillage.
relevant characteristics of the landscape	views across the area. However, in places the scale of major roads such as the A631 (Corringham	roads such as the A631	Lighting required within panelled areas wil
therefore have some ability to accommodate	Road) dominates the landscape and overpowers the sense of place. This is particularly evident in	(Corringham Road) dominates	be manually operated. There will be no
change without undue adverse effects given	capturing the long westward views to the power stations on the River Trent and views towards	the landscape and overpowers	lighting on perimeter fencing.
the tranquility of the areas away from the	the limestone capped scarp slope in the east.	this sense of place, leaving the	
main road networks is under threat. The		landscape more vulnerable to	The landscape effects with only the
balance between promoting industry,		change.	Embedded Mitigation taken into account
commerce and leisure and the impact on the			equate to those effects set out for the
rural settlements and local lanes is an			operation stage (Year 1) and this includes
important consideration, especially where			secondary mitigation which will have been
these features are in close proximity the			carried out but will have had limited
larger settlements and market towns such as			physical or landscape character impact at
Gainsborough.			this Embedded Mitigation stage.
Medium (5km Study Area)	Medium (5km Study Area)	Medium	
Medium to Low (Site/Sites)	Medium to Low (Site/Sites)	Medium to Low	



Construction	Operation (Year 1)	Operation (Year 15)	Decomr
construction, and commissioning with effects such as construction activities, dust generation, site runoff, mud on roads, and the visual intrusion of plant and machinery on site. At the early stages of the construction stage, ground, and lower-level activities such as the constructure and inverters would be predominantly screened by existing vegetation. During the latter part of the construction stage, views would become available of the elevated activities above the hedgerows, and some limited views from Corringham may be possible, but this would be short term. Other works would be undertaken in connection with the construction including fencing, gates, boundary treatment and other means of enclosure and works for the provision of security and monitoring measures such as CCTV and the laying down of internal tracks. There would also be landscape and biodiversity mitigation works, including planting and the improvement of existing hedgerows to all boundaries of the Site/Sites. These short-lived construction activities would not affect any of the settlements or other commercial/industrial areas in this area. There would be a change to the arable land use, but the field boundaries and the associated tree cover would remain intact and help with layering and the integration of the new panels. Development would not have any adverse effects on the integrity of the local settlements.	The proposed development will have little effect on local industry and commerce, although the introduction of the solar farm will give rise to some minor additional traffic to the roads and lanes locally. Mitigation will be in the form of tree, hedge, and shelterbelt planting as well as shrub and grassland areas which will both mitigate views of this additional traffic and provide benefits in terms of reducing noise and carbon impacts. The settlements locally will be protected through the proposed mitigation at the boundary of the Site/Sites with distinctive areas of tree cover to enhance the settlement settings where they are in close proximity to the proposed Scheme. The overall increase in vegetative cover and the reduction of over intensively farmed arable land will have benefits locally both in landscape character and visual terms. There will also be a considerable increase in the biodiversity around settlements/isolated dwellings across the area. The Scheme will have no adverse effects on the larger settlements such as Gainsborough, Newark-on-Trent, Nottingham, Lincoln, and Grantham due to its distance from these locations. There is potential that a small number of farm buildings will be lost/reutilised due to the change in the arable production within the Site(s). There will be no industrial development associated with the use of the Cottam 2 Site/Sites, and other built infrastructure associated with the solar farm will be limited to temporary (but long term) buildings with the overall development having an anticipated life span of 40 years. Secondary mitigation such as planting, and grass seeding would be taken into account at this stage to include the following measures: Development is set back 300m from the village of Corringham to the west of the Site to provide scope for additional planting along this boundary. A 5m wide shelterbelt is to be planted to the western boundary of the Site and although this will be immature at Year 1, existing vegetation adjacent to the settlement will predominantly obsc	The effects at the Operational Phase at Year 15 without Mitigation equate to those effects at the beginning of Year 1 before any secondary mitigation has been applied. Mitigation embedded in the design will apply as will the growing out of the existing hedges. With secondary mitigation such as planting and grass seeding being taken into account at the operational stage (Year 15) the following changes to the landscape would occur and the effects are set out below. Views from the adjacent settlements and commercial/industrial units will be screened in the close to mid-range through the new hedgerows, scattered tree and shelterbelt planting together with the enhancement of existing hedges which will be managed to a height of 5m. These new and augmented hedgerows woll provide a series of good quality hedgerows both formally strengthening the existing and historical field pattern and creating a multi-layered landscape. Views of the longer distance, where hedgerows do not block these, will be of a layered, well treed landscape with the addition of shelterbelt and scattered tree planting around the Site with a backdrop of some wooded vegetation in places on the horizon. Both new and existing vegetation will have established and begun to mature, creating a multi-layered landscape. Une and proposed vegetation is assumed to be: Woodland/trees and shelterbelts: 2.5m max at Year 1, 7.5m max at Year 15. New hedgerows: 0.6m at Year 1 and 3.5m at Year 15. Existing hedgerows: 0.9m at Year 1 and 5m at Year 15. By Year 15, the shelterbelt, hedgerow, and scattered tree planting will have established and begun to mature, enhancing the local character area and therefore the setting of the local settlements, smallholdings, and isolated dwellings. Additional traffic will have been mitigated by improvements to roadside vegetation where possible within the Order limits. Some PRoW and recreational routes along minor roads will be enhanced through additional	A similar the Scher assessme of existin primary a establish arising fr decomm vibration generation Following returned benefit fr hedgerow matured landscap character benefits of wetland g the poter maintain biodivers Without throughov views/lan the existi to grow of 5m. It is a With Mit decomm

nmissioning

ar process to that of construction stage, but with eme being no longer operational. This is an nent of the Site in winter but assumes retention ing vegetation and builds upon the proposed and secondary mitigation that had been shed as the future baseline. Effects are those from activities for the duration of the missioning to include site traffic, noise and on from decommissioning activities, dust tion and site runoff.

ng decommissioning, the land is likely to be ed to arable production. The Site will however from the significantly enhanced tree and ow planting that has been carried out and has ed to create a much stronger and robust ape, retaining, and enhancing the overall ter and providing considerable biodiversity over the years. Bird mitigation fields and grazing marshes are likely to be retained and ential may exist to retain grass margins to in some varied land use and a high level of rsity in the local area.

ut Secondary Mitigation having been applied nout the scheme, the only change to the andscape following decommissioning would be sting hedgerows which will have been allowed out and will have been managed to a height of assumed that these will be retained.

litigation, the negative effects of the physical missioning will be balanced out by the long ndscape and visual effects of this mitigation.



		[Refere
	 Development is set back some 750m from the village of Aisby and proposed scattered tree and hedge planting on the north-eastern boundary of the Site will help to mitigate any views. New native hedgerow planting to the field boundaries will be introduced where appropriate and existing hedgerows will be allowed to grow out. Proposed and existing hedgerows to be managed at 5m. Hedgerow trees will be added to existing hedges to further screen views. Enhancements to the overall level of tree cover will have a minor but beneficial effect on the setting of the Settlements locally, and although proposed vegetation will be immature at this point it will have established, and existing planting will have been allowed to start growing out. These Settlement landscape receptors are able to accommodate the development without undue adverse effects and there will be beneficial effects in terms of local tree/hedge cover and biodiversity net 	 planting creating more intimate and less exposed routes. The local settlement and commercial/industrial facilities locally are able to accommodate the development without undue adverse effects on landscape character. The proposed development will have no adverse effects in the physical integrity of the settlements adjacent to the Site and there will be beneficial effects in terms of local tree/hedge cover and biodiversity net gains enhancing the local character. Overall, in terms of mitigation for the Cottam 2 Site, due to the close proximity to the market town of Gainsborough, the aim is to conserve the rural settlement pattern of the outlying villages. Any development should be complimentary to intrinsic local character and the nucleated form of the settlements is a key feature, especially in long views across the area. Mitigation measures should also aim to minimize car use to protect the tranquility of the area and any development should consider well
	 Between Years 1 and 15, the following beneficial effects will be achieved in terms of Settlements, Commerce and Industry: Grassland reversion around settlements A more varied landscape in terms of management and vegetation Less intensively managed land around settlement edges Potential for grazing around settlement edges General water quality improvements Soil improvements Increased woodland/vegetation cover Significantly improved biodiversity Improved carbon retention/capture Enhancement and strengthening of the Local Character Area 	designed green infrastructure.
	 Adverse effects (mitigated): Panels and structures across the landscape Increased traffic through local routes and some settlements The effects at the Operational Phase at Year 15 without Embedded Mitigation equate to those effects at the beginning of Year 1 before secondary mitigation has been applied. The Effects set out below include secondary mitigation which will have been carried out 	
5km Study Area:	secondary mitigation which will have been carried out but will have had limited physical impact at this stage.	



Magnitude	Very Low	Low	Low	Very Lo
Level of Effect	Adverse & Short Term	Beneficial & Long Term	Beneficial & Long Term	Neutra
Significance of Effect	Negligible Not Significant	Minor-Moderate Not Significant	Minor-Moderate Not Significant	Negligi
Site/Sites and	d Cable Route Corridor:			·
Magnitude	Very Low	Low	Low	Very Lo
Level of Effect	Adverse & Short Term	Beneficial & Long Term	Beneficial & Long Term	Neutra
Significance of Effect	Negligible Not Significant	Minor Not Significant	Minor Not Significant	Negligi

Landscape Receptor - Settlements, Industry, Commerce, and Leisure (Cottam 2 Site)

In-Combination Effects [Cumulative Sites]	Cumulative Effects [Cumulative Developments]
In Summary	In Summary
The In-combination effects of the Cottam 2 Site with the other Cumulative Sites (Cottam 1 and 3a and	The Cumulative Effects of the Scheme with the other Cumulative Developme
3b) is Minor at year 1 of operation and Negligible at year 15 with mitigation. This is due to the limited	and adverse, giving rise to no likely Significant effects at year 1 of operation
impact as a result of the low-level nature of the Scheme together with the quantum of mitigation. There	
will be positive changes to the settlements, industry, commerce and leisure due to the scope for	with the improvements to the margins of the road and local lane network wi
additional vegetation enhancing the local landscape character and likewise the setting of the local	rise to the vegetative layering of the landscape across the Sites and Study Ar
settlements and their approaches, and particularly in the context of the church spires. The existing	cumulative effect.
landscape character associated with the outer edges of these settlements of the Cumulative Sites and	
Study Area is predominantly woodland and tree cover around the margins and the change to grassland	Fabric of the Landscape
with scattered trees and a significantly improved hedgerow networks would give rise to overall benefits	
to landscape character in the combination of all the Cumulative Sites.	Cottam 2 Site. The wider landscape is typified by The Settlements, Industry,
	defined to the southwest by the large settlement of Gainsborough.
<u>Fabric of the Landscape</u>	
There would not be the removal of, or changes in individual settlement elements or features of the	There would be the introduction of new elements and features comprising t
landscape within the Cottam 2 Site.	the Cable Route Corridor extending between the Cottam 1 Site/Sites and the
	3a and 3b Sites (the 'Cable Route Corridors').
There would be the introduction of new elements and features comprising the solar panel areas, the	
substation area and the Cable Route Corridor extending between the Cottam 1 Site/Sites and the	Aesthetic Aspects of the Landscape
Cottam 2 Site and the Cottam 2 and Cottam 3a and 3b Sites (the 'Cable Route Corridors').	Refer to Figure 8.15.2.2 [C6.4.8.15.2.2] which shows that with the Cottam 2 S
Assthatic Achasta of the Landscane	developments would not be experienced across the majority of the 5km stur- intervening woodlands, hedgerows, and tree cover between the Site/Sites. T
<u>Aesthetic Aspects of the Landscape</u> Refer to Figure 8.15.1.2 [C6.4.8.15.1.2] which shows that with the Cottam 2 Site, cumulative visibility	would also curtail cumulative visibility.
with the Cottam 1 Site/Sites and the Cottam 3a and 3b Sites would not be experienced across the	
entirety of the 2km study area. This is due to the distance, the intervening woodlands, hedgerows, and	There are local patches of cumulative visibility which may be focus of likely s
tree cover between the Site/Sites. The intervening settlements and built form would also curtail	Tillbridge Solar. This cumulative visibility is set out in further detail within the
cumulative visibility.	
	Figure 8.15.2.6 Cottam 1, 2, 3a and 3b Gate Burton Cumulative Development
There are local patches of intervisibility between the Cottam 2 Site and with the 3a and Cottam 3b Sites	-
extending from the:	between, where their presence will impair any associated landscape contex
 South boundary of the Cottam 2 Site, starting at the eastern edge of Corringham and reaching 	
as far as Yawthorpe Beck and Yawthorpe	Figure 8.15.2.8 Cottam 1, 2, 3a and 3b Tillbridge Solar Cumulative Developm
West boundary of the Cottam 2 Site, extending as far as Pilham Lane	shows Tillbridge to the south of the Cottam 1 Site, where their boundaries' a
• East boundary of the Cottam 2 Site, extending as far Yawthorpe and Yawthorpe Fox Covert	to the south of Kexby Road and to the west of the settlement of Fillingham.
• Northwest boundary of the Cottam 2 Site, extending as far as the Cottam 3a and 3b Site.	woodlands or major topography, such that the presence of Tillbridge Develo
	direct and compounded relationship in terms of the landscape context of th

Environmental Statement Landscape and Visual Impact Assessment Appendix 8.2.6: Settlement Analysis & Evaluation [Reference: EN010133/APP/C6.3.8.2.6.2] January 2023

Low

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igible **Not Significant**

Low

ral & Short Term

igible Not Significant

ments is Minor with the Tillbridge Development on. The effects would be Negligible at year 15 he low-level nature of the Scheme, together with new hedgerows and tree planting, giving Area, all in helping reduce to reduce the

ements or features of the landscape within the ry, Commerce and Leisure network is broadly

ig the solar panel areas, the substation area and he Cottam 2 Site and the Cottam 2 and Cottam

2 Site, cumulative visibility with the cumulative tudy area. This is due to the distance, the . The intervening settlements and built form

y significant effects, between the Cottam 2 and the following figures:

nents Augmented ZTV [C6.4.8.15.2.6]. This shows f Kexby, Willingham by Stow and Stow lie ext with the Gate Burton Site.

oments Augmented ZTV [C6.4.8.15.2.8]. This ' are located directly adjacent to each other, just n. There are no intervening settlements, elopment with the Scheme would give rise to a direct and compounded relationship in terms of the landscape context of the settlements. The presence of the Tillbridge



Where the farmhouses are set back from the roads, they form a distinctive group of buildings and associated tree cover. This is particularly noticeable at Aisby Farm, Moscar Farm and Hall Farm. When these farmhouses are set in woodland or tree cover, they provide points of enclosure and intimacy along the long straight roads.

There is a local patch of intervisibility between the Cottam 2 Site and with the Cottam 3b Site, comprising the:

- Northern-most tip of the Cottam 2 Site extending across the medieval village of Dunstall as far as the medieval village of Southorpe; and
- Southeast of the River Eau, extending as far as Huckerby Farm and Huckerby Bungalows.

The intensive agricultural land use also contributes to the abundance of farmsteads and these features make a significant contribution in breaking down the visibility between the cumulative sites.

There are local patches of intervisibility between All Sites comprising the:

- North of the Bonsdale Farm at Pilham, extending across the landscape to the north of the medieval village of Dunstall as far as the medieval village of Southorpe
- West of the settlement of Corringham, extending from Staplegate House as far Windy Ridge on Pilham Lane
- West of Springthorpe, extending across the landscape as far as Harpswell Low Farm; and ٠
- East of Yawthorpe, extending as far as Hemswell.

The presence of settlement in the open landscape such as Yawthorpe brings mature trees and woodland cover to the landscape setting of the cumulative sites, and this helps in providing separation and screening between them.

Users of linear routes, especially footpaths or other rights of way, or transport routes, may potentially experience the aesthetic aspects of the cumulative sites revealed in succession as a series of sequential views. For further details refer to the following detailed visual receptor sheets:

Appendix 8.3.2.2 Individual Viewpoint Receptor Sheets [C6.3.8.3.2.2] Appendix 8.3.2.3 Individual Viewpoint Receptor Sheets [C6.3.8.3.2.3] Appendix 8.3.2.4 Individual Viewpoint Receptor Sheets [C6.3.8.3.2.4]

Appendix 8.3.3.2 Individual Residential Receptor Sheets [C6.3.8.3.3.2] Appendix 8.3.3.3 Individual Residential Receptor Sheets [C6.3.8.3.3.3]

Appendix 8.3.4.2 Individual Transport Receptor Sheets [C6.3.8.3.4.2] Appendix 8.3.4.3 Individual Transport Receptor Sheets [C6.3.8.3.4.3]

Appendix 8.3.5.2 Individual PRoW Receptor Sheets [C6.3.8.3.5.2] Appendix 8.3.5.3 Individual PRoW Receptor Sheets [C6.3.8.3.4.3]

Overall Character of the Landscape and Settlement, Industry, Commerce and Leisure

Overall, the character of the landscape and the settlement, industry, commerce, and leisure is shaped by the setting of settlements are more widely appreciated in long views east and west across the area rather than at close range due to the abundance of hedgerows. These relevant characteristics of the landscape and land use have some ability to accommodate change without undue adverse effects. The cumulative visibility for the Cottam 2 Site would not alter the overall character of the landscape and its land use features. Moreover, these features are often set within a well-vegetated context and the associated built form plays a positive role in reducing the overall cumulative effects.

The difference in effect between the addition of the Scheme to the cumulative baseline is very low and very for the Cumulative Sites because there are minor patches of small cumulative change to a limited area of medium sensitivity, affecting some characteristics without altering the overall impression of its character.

Development would also add to coalescence between the Cottam 1 and the Cottam 2 Sites. The primary and secondary mitigation would however ensure that all existing features would be retained leading to an improvement at the operation stage (Year 15) of the watercousres across the Sites and Study Area.

Figure 8.15.2.9 Cottam 1, 2, 3a and 3b West Burton Cumulative Developments Augmented ZTV [C6.3.4.15.2.9]. This shows the West Burton Development located to the southwest of the Cottam 1 Site where the intervening settlements of Stow, Sturton by Stow and Bransby lie between, where their presence will impair any associated landscape context with the West Burton Site.

The other Cumulative Developments at Bumble Bee Farm, Field Farm and High Marnham are separated from the Scheme by the intervening settlements of Gainsborough, Lea, Blyton and Willingham by Stow.

The wider landscape is typified by The Settlements, Industry, Commerce and Leisure network is broadly defined to the southwest by the large settlement of Gainsborough. The nature of the predominantly rural and sparsely settled wider area with small villages and dispersed farms linked by quiet rural lanes, contrasting with the busy city of Lincoln and town of Gainsborough is the main spatial function of the landscape. This spatial function is tempered by the villages that have a broad landscape setting and the sequence of views towards churches, which is an important feature along with the other long views across the landscape that have scope for enhancement.

Overall Character of the Landscape and Settlement, Industry, Commerce and Leisure Overall, the character of the landscape and the settlement, industry, commerce, and leisure is shaped by the setting of settlements are more widely appreciated in long views east and west across the area rather than at close range due to the abundance of hedgerows. These relevant characteristics of the landscape and land use have some ability to accommodate change without undue adverse effects. The cumulative visibility for the Cottam 2 Site would not alter the overall character of the landscape and its land use features. Moreover, these features are often set within a wellvegetated context and the associated built form plays a positive role in reducing the overall cumulative effects.

Environmental Statement Landscape and Visual Impact Assessment Appendix 8.2.6: Settlement Analysis & Evaluation [Reference: EN010133/APP/C6.3.8.2.6.2] January 2023



	Construction: Very Low	Construction: Low
	Operation (Year 1): Very Low	Operation (Year 1): Low
Magnitude	Operation (Year 1) with only Embedded Mitigation: Very Low	Operation (Year 1) with only Embedded Mitigation: Low
•	Operation (Year 15): Very Low	Operation (Year 15): Very Low
	Decommissioning: Very Low	Decommissioning: Very Low
	Construction: Adverse & Short Term	Construction: Adverse & Short Term
Type of	Operation (Year 1): Adverse & Long Term	Operation (Year 1): Adverse & Long Term
	Operation (Year 1) with only Embedded Mitigation: Adverse & Long Term	Operation (Year 1) with only Embedded Mitigation: Adverse & Long Tern
Effect	Operation (Year 15): Beneficial & Long Term	Operation (Year 15): Neutral & Long Term
	Decommissioning: Neutral & Short Term	Decommissioning: Neutral & Short Term
	Construction: Negligible Not Significant	Construction: Minor Not Significant
Significance	Operation (Year 1): Negligible Not Significant	Operation (Year 1): Minor Not Significant
-	Operation (Year 1) with only Embedded Mitigation: Negligible Not Significant	Operation (Year 1) with only Embedded Mitigation: Minor Not Significan
of Effect	Operation (Year 15): Negligible Not Significant	Operation (Year 15): Negligible Not Significant
	Decommissioning: Negligible Not Significant	Decommissioning: Negligible Not Significant

* Potential exists to use targeted, low-density sheep grazing in appropriate areas of wildflower meadow under panelled areas for short periods once a suitable sward has established. This may allow for diversification of grazing management. Grazing of tussock seeded areas may be appropriate to reduce the sward every three years. Careful monitoring is however required to prevent overgrazing with conservation grazing densities used.

Environmental Statement Landscape and Visual Impact Assessment Appendix 8.2.6: Settlement Analysis & Evaluation [Reference: EN010133/APP/C6.3.8.2.6.2] January 2023

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Landscape Receptor – Settlements, Industry, Commerce, and Leisure (Cottam 3a and 3b Sites)

Receptor Baseline:

Within the Cottam 3a and 3b Sites, at a regional scale, landscape character is assessed within the East Midlands Regional Landscape Character Assessment as forming part of RLCT Profile: 4a Unwooded Vales, which is shown on Figure 8.5 [C6.4.8.5]. Unwooded Vales is located within the 2km Study Area, but only extending across its eastern most part, then sharing the western most part with RLCT Profile 4b: Wooded Vales. The landscape character type then occupies an eastern part of the 5km Study Area where it shares a boundary with Kirton in Lindsey. The western part of the 5km Study Area then comprises of a mixture of RLCT 2b: Planned and Drained Fens and Carrlands, RLCT 4a: Unwooded Vales and RLCT 4b: Wooded Vales, The Unwooded Vales is generally characterised by mixed agriculture set within an enclosed landscape of low, well-maintained hedgerows. The Sites within Cottam 3 (2km Study Area) can be sub-divided into two distinct land areas.

- Cottam 3a
- Cottam 3b

Key Features:

Cottam 3a:

This is an area of land that is broadly defined to the north by a sparse settlement pattern and a limited major road network that mainly comprises the A159, which connects to the larger settlement of Scotter and then beyond to Scunthorpe. There are the small settlements of Laughton (approximately 1.8km) to the northwest and Scotton (approximately 2.5km) to the north-east, otherwise there are scattered farmsteads and isolated dwellings across the area. The farmsteads include Hall Farm, Park Farm, Mount Pleasant Farm and Grange Farm. Some of these farmsteads are set by from the main road network and are assimilated into the landscape by their associated trees and woodland cover and so their presence in the landscape is not highly evident. To the south, Kirton Road runs in an east west straight alignment connecting to settlement of Blyton (approximately 970m) which is located to the south-west of the Site/Sites. This is a busy road which provides access to the occasional farmsteads that are set back along its route. These farmsteads include The Fields Farm, Grange Farm and Top Farm. Beyond this local collection of farmsteads to the south side of Kirton Road the mainline railway runs almost parallel with a minor tributary of the River Trent known as Laughton Highland Drain. The railway line crosses over Pilham Lane to the east at Blyton Level Crossing, which is an un-manned and un-automated rural level crossing. To the east, Kirton Road passes through the landscape with some right-angled bends and then beyond connects with the A15 (Ermine Street). Kirton Road provides access to the small settlements of Northorpe (approximately 1.8km) and Grayingham (approximately 5.4km) and the main settlement of Kirton in Lindsey (approximately 6km) and a number of farmsteads and agricultural businesses. The mainline railway takes a route to the north-west side of Kirton in Lindsey where the station is set away from the town centre. The railway therefore runs through the landscape to the east of the Site/Sites via a series of cuttings and embankments to take account of the more undulating landform and associated watercourses. The farmsteads to the east comprise of Southorpe Farm associated with the Medieval village of Southorpe, Cold Harbour Farm and Blenheim Farm. Residential properties are very scarce to the east and mainly occur to the east of Monson Road and Southorpe Lane to include Swinedyke Cottage, Parkside and Grayingham Lodge that are set close to the road frontage. To the west, the Site/Sites are defined by the A159, Laughton Road which passes north and skirts the eastern edge of Laughton Wood where settlement includes Blyton Grange, Willow Tree Farm and Pyewipe Hall Farm. These farmsteads are generally set back from the main roads are often associated with surface water reservoirs and assimilated into the landscape by their associated tree and woodland cover. To the central part of the Site/Sites, there are several tracks associated with the former airfield use and current use as the Blyton Park Driving Centre. There is also a collection of tracks that serve Blyton Grange and Blue Bell Farm at the northeast corner of the Site/Sites. The former airfield is interspersed with arable land use and a series of concrete roads and large open concrete areas are testament to its former use.

Cottam 3b:

This is an area of land that is mostly bordered to the north by the mainline railway that passes between Gainsborough and Grimsby via Kirton in Lindsey and Brigg. Beyond the railway line, the B1205 (Kirton Road) passes in a broad east west direction. This road provides access to several farmsteads including Grange Farm, The Fields Farm and Top Farm and is a busy road which provides a direct link to Blyton from the A15. Beyond the B1205 (Kirton Road), the former Blyton Airfield occupies the higher ground to the east of the A159 (Laughton Road) between Blyton and Northorpe villages. The airfield was constructed in 1942 and feature three runways, 35 parking lots for aircraft and three hangars and was a former Royal Force airfield used during the Second World War. It is now used for off-road racing cars, rally driving and test running for refurbished and/or new designs of trucks. To the south, Green Lane takes an east-west route and is part of the local road network between Pilham in the west and Pilham Lane in the east. This road takes an indirect alignment with several right-angled bends and serves a single property called Home Farm and forms a junction with Pilham Lane at Bonsdale Farm. Beyond Green Lane, the landscape comprises of minor networks of local lanes that lead from Pilham Lane in an east-west direction. These lanes provide access to the sites of a series of Medieval villages including Gilby Village and Dunstall Village. Other farmsteads are found to the south of the Site/Sites within this grid network of local lanes and include Northfield Farm, Westfield Farm, Mill Farm, Hall Farm, Corringham Grage Farm, Aisby House Farm and Moscar Farm. Beyond this grid network of roads, the settlement of Corringham (approximately 3km) is located to the east of Gainsborough. To the east, the Site/Sites are bordered by Pilham Lane, which takes a north south direction connecting Kirton Road in the north and with Aisby and Gilby in the south, via Pilham Lane. The landscape to the east is devoid of direct road connections east to west and so settlement is sparse consisting of only a few isolated properties known as Huckerby and Willoughton Grange. The small settlement of Yawthorpe (approximately 3.5km) is located to the south-east of the Site/Sites between Corringham and Willoughton. Otherwise, the only other main area of settlement is Willoughton (approximately 6km) perched on the limestone capped scarp slope to the east. To the west, the Site/Sites are defined by Pilham Lane which connects the settlements of Blyton and Corringham. Beyond Pilham Lane, the A159 (Thonock Road) is almost true in alignment with the mainline railway before they enter Morton, which is a northern suburb of Gainsborough. The small settlement of Wharton (approximately 2.8km) is also located to the west of the Site/Sites at just over 1km to the north of Wharton Wood. Further to the west, the River Trent and its associated flood plain settlements of Walkerith and East Stockwith with the east-west lanes and associated drainage patterns are a strong feature of the landscape. To the central part of the Site/Sites, there is only one track which runs in an east west direction, and this is also a public right of way (PRoW). The track serves Glebe Farm and runs through to Pilham Lane as a narrow green lane with bordering hedgerows to each side.

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SOLAR PROJECT			
Receptor susceptibility to change	Value of Receptor	Sensitivity	Embedded Mitigation
Receptor susceptibility to change In terms of forces for change for the Cottam 3a and 3b Sites (Settlements, Industry, Commerce, and Leisure), recent trends have shown that large urban expansions can be expected on the edges of Gainsborough as an area for growth. Other proposals for development including industrial developments could increase traffic levels. The landscape to the north-east of Gainsborough is noted for its distinct absence of large-scale features. This is possibly due to the presence of Laughton Forest and other areas to the south-west that are well-wooded (Wharton Wood and Birch Wood) with the market town of Gainsborough beyond. The area is also host to the Laughton Area of Greater Landscape Value (AGLV). The impacts on the road networks that cross this area from an increase in traffic could be a major consideration. Overall , the susceptibility of the Settlements, Industry, Commerce, and Leisure for the Cottam 3a and 3b Sites is potentially conditioned by the sensitivity of the villages/hamlets and that the area is relatively sparsely populated with a network of local lanes throughout the surrounding countryside. However, there is an opportunity to protect and enhance the character of these settlements to ensure that these features continue to be perceived as 'islands' of buildings and trees in the flat landscape where churches are landmarks. The relevant characteristics of the landscape therefore have some ability to accommodate change without undue adverse effects given there is	Value of Receptor Scenic: The B1398 (Middle Street) runs almost parallel alignment with Ermine Street where a string of smaller settlements including Hemswell, Willoughton, Blyborough and Grayingham are perched on the higher ground providing significant interest in the scenic quality of the area. These settlements are different in character to the string of small linear settlements that line the Trent. Cultural: Gainsborough which is Britain's most inland port and one of the main market towns within the area along with Newark-on-Trent and Grantham, and the cities of Nottingham and Lincoln. Natural: The landscape is remote due to the poorly connected road networks. As a result, the area is defined by compact villages and dispersed farmsteads as far as the limestone capped scarp slope and this in turn helps with the protection and enhancement of the natural character of the landscape. Recreation and Enjoyment: Laughton Forest is a key focus for recreation. The forest is managed by the Forestry Commission and mainly comprises Laughton Woods and Scotton Common. Local Distinctiveness and Sense of Place: To the north and south of the area, the major road network. Is limited and connections via the minor lanes are disjointed. As a result, the landscape is devoid of large-scale landscape features and development associated with a poorly connected transport network. Health and Wellbeing: The A15 (Ermine Street), follows the scarp slope in a distinctive straight alignment and connects the with city of Lincoln. The long views west towards the power stations are a key aspect of health and well-being. Important Spatial Function: Smaller settlements provide an important spatial function, where they mainly comprise villages, farmsteads, and isolated residential	SensitivityCharacter: This is shaped by the B1398 (Middle Street) runs almost parallel alignment with Ermine Street where a string of smaller settlements including Hemswell, Willoughton, Blyborough and Grayingham are perched on the higher ground providing significant interest.Quality: The landscape shows evidence of historic settlement with farms and nucleated villages and small hamlets such as the Medeival village of Southorpe. The landscape surrounding these settlements retain some rural and tranquil character with farms, but minor lanes and roads are interrupted by the presence the former airfield in parts.Value: Areas have a positive landscape character, particularly around the edges of settlements.Capacity: The landscape benefits from high levels of visual containment due to the local landform, hedgerows, and shelter belts and this helps tolerance for landscape charage change.	Embedded Mitigation would be taken into account at the construction, operation (Year 1 and Year 15) and decommissioning stages of the Scheme. This Embedded Mitigation is also referred to as primary mitigation and would include the following measures: Panels to be set a minimum of 3m from Site boundaries. Site boundary fencing to be set back 5m from adjacent existing hedgerows to allow for proposed thickening and growth. Existing hedges are to be allowed to grow out and will be managed to a height of 5m. Hedgerow trees will be encouraged to grow out to add further thickening and growth to the field boundaries with the addition of new hedgerow trees as appropriate, randomly spaced along the length of existing hedges. Lighting will be limited to downlights within substations and battery banks only and used when maintenance or security is required. Lighting will be PIR operated and will be calibrated to vehicle and personnel movements. All visible lighting would be 50W, installed at a maximum height of 4m with cowls fitted to prevent light spillage. Lighting required within panelled areas will be manually operated. There will be no lighting on perimeter fencing. The landscape effects with only the
		shelter belts and this helps	The landscape effects with only the Embedded Mitigation taken into account equate to those effects set out for the operation stage (Year 1) and this includes
fields		their settings add to the vulnerability of the landscape to change.	secondary mitigation which will have been carried out but will have had limited physical or landscape character impact at this Embedded Mitigation stage.
Medium to High (5km Study Area)	Medium to High (5km Study Area)	Medium to High	
Medium (Site/Sites)	Medium (Site/Sites)	Medium	



Landscape Receptor – Settlements, Industry, Commerce, and Leisure (Cottam 3a and 3b Sites)

Environmental Statement Landscape and Visual Impact Assessment Appendix 8.2.6.3: Settlement Analysis & Evaluation [Reference: EN010133/APP/C6.3.8.2.6.3] Jan 2023

mmissioning

ar process to that of construction stage, but with neme being no longer operational. This is an ment of the Site in winter but assumes retention ting vegetation and builds upon the proposed ry and secondary mitigation that had been shed as the future baseline. Effects are those from activities for the duration of the missioning to include site traffic, noise and on from decommissioning activities, dust ation and site runoff.

ing decommissioning, the land is likely to be ed to arable production. The Site will however from the significantly enhanced tree and row planting that has been carried out and has ed to create a much stronger and robust ape, retaining, and enhancing the overall ter and providing considerable biodiversity ts over the years. Bird mitigation fields and nd grazing marshes are likely to be retained and tential may exist to retain grass margins to in some varied land use and a high level of ersity in the local area.

ut Secondary Mitigation having been applied hout the scheme, the only change to the landscape following decommissioning would be isting hedgerows which will have been allowed w out and will have been managed to a height of is assumed that these will be retained.

litigation, the negative effects of the physical missioning will be balanced out by the long andscape and visual effects of this mitigation.



Level of Effect	Auverse & Short Term	Beneficial & Long Term	Beneficial & Long Term	Neutr
Magnitude	Adverse & Short Term			
	rea: Very Low	Low	Low	Very
5km Study A	rea:	 existing hedgerows to be managed at 5m. Hedgerow trees to be added to existing hedges to further screen views. Enhancements to the overall level of tree cover will have a minor but beneficial effect on the setting of the settlements locally. Although proposed vegetation will be immature at this point it will have established, and existing planting will have been allowed to start growing out. These settlements (as landscape receptors) are able to accommodate the development without undue adverse effects and there will be beneficial effects in terms of local tree/hedge cover and biodiversity net gains. Between Years 1 and 15, the following beneficial effects will be achieved in terms of Settlements, Commerce and Industry: Grassland reversion around settlements A more varied landscape in terms of management and vegetation Less intensively managed land around settlement edges Potential for grazing around settlement edges General water quality improvements Soil improvements Increased woodland/vegetation cover Significantly improved biodiversity Improved carbon retention/capture Enhancement and strengthening of the Local Character Area Adverse effects (mitigated): Panels and structures across the landscape Increased traffic through local routes and some settlements The effects at the Operational Phase at Year 15 without Embedded Mitagation equate to those effects at the beginning of Year 1 before secondary mitigation has been applied. The Effects set out below include secondary mitigation which will have been carried out but will have had limited physical impact at this stage. 	without undue adverse effects on landscape character. The proposed development will have no adverse effects in the physical integrity of the settlements adjacent to the Site and there will be beneficial effects in terms of local tree/hedge cover and biodiversity net gains enhancing the local character. Overall , in terms of mitigation for the Cottam 3a and 3b Sites, the landscape is sensitive due to the area being relatively sparsely populated with isolated individual residential properties and farmsteads distributed along lanes throughout the surrounding countryside. The landscape to the south of the railway line is part of the grid pattern of minor roads that is closely related to the sites of Medieval settlements across the area. To the north of the railway line the landscape is heavily influenced by the airfield, the landscape is therefore sensitive to change. The associated settlements vary in character. Some of these settlements in more open locations such as adjacent to former airfields would benefit from hedgerow and tree planting; this could contribute a stronger sense of identity. Planting groups of deciduous trees adjacent to prominent farm buildings will also help integrate these features within the wider landscape.	
		and a belt of successional scrub to the western boundary to mitigate views from this direction. New native hedgerow planting to the field boundaries will be introduced where appropriate and existing hedges will be allowed to grow out. Proposed and	additional planting creating more intimate and less exposed routes. The local settlement and commercial/industrial facilities are able to accommodate the development	

'y Low

utral & Short Term



Significance	Negligible Not Significant	Minor-Moderate Not Significant	Minor-Moderate Not Significant	Neglig
of Effect				
Site/Sites and	l Cable Route Corridor:			
Magnitude	Very Low	Low	Low	Very L
Level of	Adverse & Short Term	Beneficial & Long Term	Beneficial & Long Term	Neutra
Effect				
Significance	Negligible Not Significant	Minor Not Significant	Minor Not Significant	Neglig
of Effect				

Landscape Receptor - Settlements, Industry, Commerce, and Leisure (Cottam 3a and 3b Sites)

In-Combination Effects [Cumulative Sites]	Cumulative Effects [Cumulative Developments]
In Summary	In Summary
The In-combination effects of the Cottam 3a and 3b Sites with the other Cumulative Sites (Cottam 1 and	The Cumulative Effects of the Scheme with the other Cumulative Developm
2) is Minor at year 1 of operation and Negligible at year 15 with mitigation. This is due to the limited	and adverse, giving rise to no likely Significant effects at year 1 of operation
mpact as a result of the low-level nature of the Scheme together with the quantum of mitigation. There	with the embedded and additional mitigation. This betterment is due to th
vill be positive changes to the settlements, industry, commerce and leisure due to the scope for	the improvements to the margins of the road and local lane network with
additional vegetation enhancing the local landscape character and likewise the setting of the local	the vegetative layering of the landscape across the Sites and Study Area, al
settlements and their approaches, and particularly in the context of the church spires. The existing	effect.
indscape character associated with the outer edges of these settlements of the Cumulative Sites and	
tudy Area is predominantly woodland and tree cover around the margins and the change to grassland	Fabric of the Landscape
vith scattered trees and a significantly improved hedgerow networks would give rise to overall benefits	There would not be the removal of, or changes in individual settlement ele
o landscape character in the combination of all the Cumulative Sites.	Cottam 3a and 3b Sites. The wider landscape is typified by area that is related
	residential properties and farmsteads dotted throughout the surrounding
<u>Fabric of the Landscape</u>	settlements where their settings contribute to the character of the landsca
here would not be the removal of, or changes in individual settlement elements or features of the	
andscape within Cottam 3a and 3b. The wider landscape is typified by area that is relatively sparsely	There would be the introduction of new elements and features comprising
oopulated with isolated residential properties and farmsteads dotted throughout the surrounding	Cable Route Corridor extending between the Cottam 1 Site/Sites and the C
ountryside. There is a series of rural settlements where their settings contribute to the character of the	and 3b Sites (the 'Cable Route Corridors').
andscape to the east. This spatial function is tempered by the villages that have a broad landscape	
etting and the sequence of views towards churches, which is an important feature along with the other	Aesthetic Aspects of the Landscape
ong views across the landscape and have scope for enhancement.	Refer to Figure 8.15.1.3 [C6.4.8.15.1.3] which shows that with the Cottam
	cumulative developments would not be experienced across the majority of
here would be the introduction of new elements and features comprising the solar panel areas, the	distance, the intervening woodlands, hedgerows, and tree cover between t
ubstation area and Cable Route Corridor extending between the Cottam 1 Site/Sites and the Cottam 2	built form would also curtail cumulative visibility between these Site/Sites.
Site and the Cottam 2 and Cottam 3a and 3b Sites (the 'Cable Route Corridors').	
	There are local patches of cumulative visibility which may be focus of likely
esthetic Aspects of the Landscape	and Tillbridge Solar. This cumulative visibility is set out in further detail with
Refer to Figure 8.15.1.3 [C6.4.8.15.1.3] which shows that with the Cottam 3a Site, cumulative visibility	
vith the Cottam 1 Site/Sites, Cottam 2 Site and Cottam 3b Site would not be experienced across the	Figure 8.15.2.6 Cottam 1, 2, 3a and 3b Gate Burton Cumulative Developme
najority of the 2km study area. This is due to the distance, the intervening woodlands, hedgerows, and	Gate Burton to the west of Cottam 1, where the intervening settlements of
ree cover between the Site/Sites. The intervening settlements and built form would also curtail	between, where their presence will impair any associated landscape conte
umulative visibility between these Site/Sites.	
	Figure 8.15.2.8 Cottam 1, 2, 3a and 3b Tillbridge Solar Cumulative Develop
here are local patches of intervisibility between Cottam 3a and 3b Site/Sites, extending from the:	shows Tillbridge to the south of the Cottam 1 Site, where their boundaries'
Northeast boundary of the Cottam 3a Site/Sites, defined to the west by the Green Respect	to the south of Kexby Road and to the west of the settlement of Fillingham
Burial Park and Park House Farm, and reaching as far as Northorpe in the east	woodlands or major topography, such that the presence of Tillbridge Deve
East boundary of Cottam 3a Site/Sites, and stopping short of Cold Harbour Farm; and	direct and compounded relationship in terms of the landscape context of
• North boundary of the Cottam 3b Site/Sites, extending for a short distance as far as Grange	Development would also add to coalescence between the Cottam 1 and th
Farm and Top Farm.	mitigation would however ensure that all existing features would be retain
	stage (Year 15) of the watercousres across the Sites and Study Area.

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ligible Not Significant

Low

tral & Short Term

ligible Not Significant

ments is Minor with the Tillbridge Development on. The effects would be Negligible at year 15 he low-level nature of the Scheme, together with new hedgerows and tree planting, giving rise to all in helping reduce to reduce the cumulative

lements or features of the landscape within the latively sparsely populated with isolated ng countryside. There is a series of rural cape to the east.

ng the solar panel areas, the substation area and Cottam 2 Sites and the Cottam 2 and Cottam 3a

3a and 3b Sites, cumulative visibility with the of the 5km study area. This is due to the the Site/Sites. The intervening settlements and 5.

ely significant effects, between the Cottam 3a Site ithin the following figures:

nents Augmented ZTV [C6.4.8.15.2.6]. This shows of Kexby, Willingham by Stow and Stow lie text with the Gate Burton Site.

opments Augmented ZTV [C6.4.8.15.2.8]. This es' are located directly adjacent to each other, just m. There are no intervening settlements, velopment with the Scheme would give rise to a of the settlements. The presence of the Tillbridge the Cottam 2 Sites. The primary and secondary ined leading to an improvement at the operation





Smaller settlements provide an important spatial function, where they mainly comprise villages, farmsteads, and isolated residential dwellings. The course of the River Trent also exerts a spatial influence over the area, particularly where the land drains and minor roads which lead to the river corridor from the west show a marked change in the landscape.

There are local patches of intervisibility between the Cottam 3a, 3b and Cottam 2 Sites, extending from the:

- South boundary of the Cottam 3b Site, bordered by Pilham to the west and the medieval settlement of Dunstall to the east, and reaching as far as Springthorpe in the south
- South boundary of the Cottam 3a Site, bordered by the eastern edge of Blyton to the west, ٠ reaching Grange Farm and stopping short of the mainline railway; and
- North boundary of the Cottam 3a Site, following the alignment of the A159 (Laughton Road) and stopping short to the west of the Green Respect Burial Park.

These areas have a positive landscape character but include some areas of degradation where agricultural intensification has eroded landscape character, particularly around the edges of settlements.

There is a local patch of intervisibility between all Sites, located to the:

 East of the Cottam 3b Site and north of the Bonsdale Farm at Pilham, extending across the landscape to the north of the medieval village of Dunstall as far as the medieval village of Southorpe.

This is shaped by the B1398 (Middle Street) runs almost parallel alignment with Ermine Street where a string of smaller settlements including Hemswell, Willoughton, Blyborough and Grayingham are perched on the higher ground providing significant interest.

Users of linear routes, especially footpaths or other rights of way, or transport routes, may potentially experience the aesthetic aspects of the cumulative sites revealed in succession as a series of sequential views. For further details refer to the following detailed visual receptor sheets:

Appendix 8.3.2.2 Individual Viewpoint Receptor Sheets [C6.3.8.3.2.2] Appendix 8.3.2.3 Individual Viewpoint Receptor Sheets [C6.3.8.3.2.3] Appendix 8.3.2.4 Individual Viewpoint Receptor Sheets [C6.3.8.3.2.4]

Appendix 8.3.3.2 Individual Residential Receptor Sheets [C6.3.8.3.3.2] Appendix 8.3.3.3 Individual Residential Receptor Sheets [C6.3.8.3.3.3]

Appendix 8.3.4.2 Individual Transport Receptor Sheets [C6.3.8.3.4.2] Appendix 8.3.4.3 Individual Transport Receptor Sheets [C6.3.8.3.4.3]

Appendix 8.3.5.2 Individual PRoW Receptor Sheets [C6.3.8.3.5.2] Appendix 8.3.5.3 Individual PRoW Receptor Sheets [C6.3.8.3.4.3]

Overall Character of the Landscape and Settlements, Industry, Commerce and Leisure

Overall, the character of the landscape and settlements, industry, commerce, and leisure is shaped by from high levels of visual containment due to the local landform, hedgerows, and shelter belts and this helps tolerance for landscape change. Smaller settlements provide an important spatial function, in providing enclosure in the landscape. These relevant characteristics of the landscape have some ability to accommodate change without undue adverse effects. The cumulative visibility for the Cottam 3a and 3b Sites would not alter the character of the landscape and its land use features. Moreover, these features are often set within a well-vegetated context and the associated built form plays a positive role in reducing the overall cumulative effects.

The difference in effect between the addition of the Scheme to the cumulative baseline is very low and very for the Cumulative Sites because there are minor patches of small cumulative change to a limited

Figure 8.15.2.9 Cottam 1, 2, 3a and 3b West Burton Cumulative Developments Augmented ZTV [C6.3.4.15.2.9]. This shows the West Burton Development located to the southwest of the Cottam 1 Site where the intervening settlements of Stow, Sturton by Stow and Bransby lie between, where their presence will impair any associated landscape context with the West Burton Site.

The other Cumulative Developments at Bumble Bee Farm, Field Farm and High Marnham are separated from the Scheme by the intervening settlements of Gainsborough, Lea, Blyton and Willingham by Stow.

The wider landscape is typified by area that is relatively sparsely populated with isolated residential properties and farmsteads dotted throughout the surrounding countryside. There is a series of rural settlements where their settings contribute to the character of the landscape to the east. This spatial function is tempered by the villages that have a broad landscape setting and the sequence of views towards churches, which is an important feature along with the other long views across the landscape and have scope for enhancement.

Overall Character of the Landscape and Settlements, Industry, Commerce and Leisure Overall, the character of the landscape and settlements, industry, commerce, and leisure are shaped by from high levels of visual containment due to the local landform, hedgerows, and shelter belts and this helps tolerance for landscape change. Smaller settlements provide an important spatial function, in providing enclosure in the landscape. These relevant characteristics of the landscape have some ability to accommodate change without undue adverse effects. The cumulative visibility for the Cottam 3a and 3b Sites would not alter the character of the landscape and its land use features. Moreover, these features are often set within a well-vegetated context and the associated built form plays a positive role in reducing the overall cumulative effects.

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	area of medium sensitivity, affecting some characteristics without altering the overall impression of its	
	character.	
	Constructions Versil out	Construction Low
	Construction: Very Low	Construction: Low
	Operation (Year 1): Very Low	Operation (Year 1): Low
Magnitude	Operation (Year 1) with only Embedded Mitigation: Very Low	Operation (Year 1) with only Embedded Mitigation: Low
	Operation (Year 15): Very Low	Operation (Year 15): Very Low
	Decommissioning: Very Low	Decommissioning: Very Low
	Construction: Adverse & Short Term	Construction: Adverse & Short Term
Type of	Operation (Year 1): Adverse & Long Term	Operation (Year 1): Adverse & Long Term
	Operation (Year 1) with only Embedded Mitigation: Adverse & Long Term	Operation (Year 1) with only Embedded Mitigation: Adverse & Long Term
Effect	Operation (Year 15): Beneficial & Long Term	Operation (Year 15): Neutral & Long Term
	Decommissioning: Neutral & Short Term	Decommissioning: Neutral & Short Term
	Construction: Negligible Not Significant	Construction: Minor Not Significant
Significance	Operation (Year 1): Negligible Not Significant	Operation (Year 1): Minor Not Significant
-	Operation (Year 1) with only Embedded Mitigation: Negligible Not Significant	Operation (Year 1) with only Embedded Mitigation: Minor Not Significan
of Effect	Operation (Year 15): Negligible Not Significant	Operation (Year 15): Negligible Not Significant
	Decommissioning: Negligible Not Significant	Decommissioning: Negligible Not Significant

* Potential exists to use targeted, low-density sheep grazing in appropriate areas of wildflower meadow under panelled areas for short periods once a suitable sward has established. This may allow for diversification of grazing management. Grazing of tussock seeded areas may be appropriate to reduce the sward every three years. Careful monitoring is however required to prevent overgrazing with conservation grazing densities used.

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Landscape Receptor – Public Rights of Way and Access (Cottam 1 Site/Sites)

Receptor Baseline:

Within the Cottam 1 Site/Sites to Cottam 2 Site, at a regional scale, landscape character is assessed within the East Midlands Regional Landscape Character Assessment as forming part of RLCT Profile: 4a Unwooded Vales, which is shown on Figure 8.5 [C6.4.8.5].

The Site/Sites within Cottam 1 (2km Study Area) can be sub-divided into two distinct land areas:

- Cottam 1 North
- Cottam 1 South •

Key Features:

The Public Rights of Way (PRoW) and Access network is broadly defined to the north by the open arable and pastoral farmland to the east of the villages of Stow, Normanby by Stow, Willingham by Stow, Kexby and Upton. This landscape supports larger field systems that are regular and geometric as a result the PRoW network follows a similar pattern, some of which are crossed by ditches and dykes. In contrast, there are smaller scale field systems to the west of Stow Road and Normanby Road where the landscape is more pastoral with thickly hedged fields, and the footpath network is more intimate and informal with shorter routes that lead in several directions. Small tributaries of the River Till form crossing points at the junction with the local lanes and these are often the only access points to the river corridor for enjoyment and recreation. There are fewer watercourses and PRoW to the east of the area around Glentworth, Fillingham and Ingham as this is where the landscape becomes more elevated towards the distinct Jurassic Limestone Scarp. Finally, to the south, the footpath network is mainly restricted to north-south routes that generally follow the pattern of watercourses, tracks, and woodlands across the area. The PRoW network is mainly aligned along field boundaries connecting with the local road network and to nearby settlements and farmsteads across the area. The network is generally intermittent because there are few landscape features to help form continuous links. The footpath network is particularly sporadic in the landscape to the west of the Site/Sites and due to these inconsistent links, the local lanes are used to supplement for recreation and the lack of connectivity. The routes mainly follow an east-west and north-south direction to reflect the prevailing landscape pattern and to connect the local lanes with nearby settlements. These footpaths can be divided into the following four clusters across the landscape:

To the north-west around Willingham by Stow, there are several footpaths within the settlement, which comprise Wlgm/59/1, Wlgm/59/3, Wlgm/62/1, Wlgm/63/1, Wlgm/64/1, Wlgm/515/1, Wlgm/515/1, Wlgm/538/1, Wlgm/881/1, and Wlgm/976/1. The majority of these footpaths are within the built part of the settlement apart from Wlgm/59/1, which takes a route north to join with the nearby settlement of Kexby.

To the north-east, around Fillingham, the majority of routes are bridleways to the north and west of the settlement, which comprise, Ingh/24/1, Fill 86/1, Fill/85/1, Fill/85/1, Fill/88/1, Gltw/88/1. There are also footpaths, which comprise Gltw/90/2, Gltw/90/3 within Glentworth.

To the south-west around Stow there are a number of footpaths which are mainly within the built part of the settlement, which comprise, Brox/196/1, Scmp/32/1, Scmp/196/1, Stur71/1, Stur71/2, Stur/71/3, Stur/71/4, Stur/72/1, Stur/74/2, Stur/75/1, Stur/76/1, Stur/70/2, Stur/79/2, Stur/80/1, Stur/82/1, TLFe/32/1, and there are also bridleways which comprise Camm/28/1, Camm/31/1, Stow/70/1, TFLe/31/1 and TLFe/31/2.

To the south-east around Igham and Brattleby there are a number of footpaths around Ingham that comprise, Brtl/33/1, Fill/87/1, Ingh/17/2, Ingh/18/1, Ingh/18/2, Ingh/20/1, Ingh/20/2, Ingh/20/3, Ingh/20/3, Ingh/21/1, Ingh/21/2, Ingh/21/3, Ingh/22/1, Ingh/25/1, Ingh/26/1, Ingh/26/3, Ingh/27/1, Ingh/27/2, Ingh/27/3, Ingh/27/4, Ingh/27/5, Ingh/238/1 and Stow/83/1.

There are several footpaths that pass directly within, adjacent to, or very close proximity to boundary of the Site/Sites and these include:

Cottam North:

Bridleway (Fill/85/1) which passes in a north-south direction linking Kexby Road to Willingham Road and bridleway (Fill/767/1) which joins with this bridleway to form a right-angled bend and then continues in an easterly direction (Fill/85/2) before heading south to meet with Willingham Road. Bridleway (Fill/86/1) that takes a north-south route from Willingham Road close to Glebe Farm, before heading southwest along a 600m stretch of Short Lane stopping in Ingham at the junction with the main route within the village known as West End. Footpath (Ingh/26/3) which then takes and east-west route (Stow/83/1) towards and through the small settlement of Coates to join with Ingham Road at Squire's Bridge.

Cottam South:

Bridleway (Camm/31/1 that takes a route from Ingham Road at Furze Hill then making at a dogleg turn to the west of the woodland at Brattleby Thorns and heading south (TLFe/31/2) to join Thorpe Lane at Thorpe le Fallows. A further bridleway (TLFe/31/1) that takes a north-south route from Thorpe Lane at Thorpe le Fallows and then (Scmp/31/1) to join the A1500 (Tillbridge Lane) in the south at Till Bridge Farm. Footpath (TLFe/32/1) that takes a north-south informal route along the eastern bank of the River Till at Thorpe Bridge then (Scmp/32/1) connecting with the A1500 at Till Bridge Farm. Footpath (Stur/73/1) that takes an east-west route connecting the settlement of Sturton by Stow in the west with Fleet Lane in the east.

(Stow/83/1) that runs through the Cottam 1 North site. It cuts across the development horizontally and offers views to both north and south parcels. There is a PRoW bridleway that connects Willingham Road to Ingham through Arable land. This PRoW (Fill/86/1) runs along a small section of the eastern boundary of the Cottam 1 North parcel. Another PRoW bridleway that runs through the middle of Cottam 1 South Site is TLFE/31/2. This PRoW runs through the site in a vertical direction and connects Thorpe Lane to Ingham Road. In addition to this there are multiple Prow footpaths that run up to the boundary of the Cottam sites.



Environmental Statement Landscape and Visual Impact Assessment Appendix 8.2.7: PRoW Analysis & Evaluation [Reference: EN010133/APP/C6.3.8.2.7.1] Jan 2023



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Receptor susceptibility to change	Value of Receptor	Sensitivity	Embedded Mitigation
In terms of forces for change for the Cottam 1 Site/Sites (Public Rights of Way and Access), recent trends have shown that the landscape has a strong rural character, but tranquility levels are being disturbed by development pressures from the larger scale settlements and major routes across the area. Tranquility is however associated with the winding lanes and landscape-scale projects such as the Trent Vale Landscape Partnership which can help by offering increased recreational and educational opportunities within these areas. Overall , the susceptibility of the Public Rights of Way and Access for the Cottam 1Site/Sites is conditioned by the limited network of footpaths and bridleways and the availability of the rural roads and minor tracks for extended access. The relevant characteristics therefore have some scope to accommodate change without undue adverse effects. There is however scope to increase recreation opportunities including where there are natural features and historical elements to draw interest from residents and tourists.	 Scenic: The network of footpaths and bridleways offer a sequence of views to landmark churches, particularly along the B1241. Cultural: Some of the villages have a broad landscape setting where the minor roads lead across this area as access for recreation, particularly as a landscape with long views. Natural: The management of hedgerows (and hedgerow trees) on the margins of villages and lining footpaths and bridleways will help retain the characteristic sense of enclosure and contrast with open areas. Recreation and Enjoyment: Recreation is provided by the numerous local lanes and public rights of way, especially along the Trent corridor, including the Trent Valley Way. Local Distinctiveness and Sense of Place: Some views from the footpaths and bridleways offer long westward views to the power stations on the River Trent, and eastward views to the scarp face of Lincoln 'Cliff'. Health and Wellbeing: The landscape feels exposed in parts, but the combination of the bends in the local lanes and small blocks of woodlands provide a stronger sense of enclosure. This landscape pattern is important in invigorating the senses of well-being and matters of health. Important Spatial Function: Roads and minor farm tracks are bordered by wide verges and hedgerows, and this controitbutes to their function in providing an open setting to villages. Access for recreation is an important factor in these locations. Overall, the value of Public Rights of Way and Access for the Cottam 1 Site/Sites is shaped by the network of footpaths and bridleways that offer a sequence of views to landmark churches, particularly along the B1241. Some views from the footpaths also offer westward views to the power stations on the Trent, and eastward views to the scarp face of Lincoln 'Cliff'. 	Character: The interruptions at bridge crossings are a significant component of the landscape that provide local points of interest at crossings with PRoW. Quality: Some of the villages have a broad landscape setting where the minor roads lead across this area as access for recreation, particularly as a landscape with long views and this is a substitute for the sparse network of PRoW. Value: Wide panoramic views are possible from the low hills and ridges that form watersheds between watercourses. Where PRoW occur in these locations their value is enhanced. Capacity: The landscape has some vulnerability to unsympathetic development. The footpaths and bridleways are key features especially where they offer a sequence of views to landmark churches, particularly along the B1241. Some views from the footpaths also offer westward views to the power stations on the Trent, and eastward views to the scarp face of Lincoln 'Cliff'.	Embedded Mitigation would be taken into account at the construction, operation (Year 1 and Year 15) and decommissioning stages of the Scheme. This Embedded Mitigation is also referred to as primary mitigation and would include the following measures: Panels to be set back 15m from PRoW. Site boundary fencing to be set back 5m from adjacent existing hedgerows to allow for proposed thickening and growth. Existing hedges are to be allowed to grow out and will be managed to a height of 5m Hedgerow trees will be encouraged to grow out to add further thickening and growth to the field boundaries with the addition of new hedgerow trees as appropriate, randomly spaced along the length of existing hedges. Lighting will be limited to downlights withi substations and battery banks only and used when maintenance or security is required. Lighting will be PIR operated and will be calibrated to vehicle and personnel movements. All visible lighting would be 50W, installed at a maximum height of 4m with cowls fitted to prevent light spillage. Lighting required within panelled areas wi be manually operated. There will be no lighting on perimeter fencing. The landscape effects with only the Embedded Mitigation taken into account equate to those effects set out for the operation stage (Year 1) and this includes secondary mitigation which will have beer carried out but will have had limited physical or landscape character impact at this Embedded Mitigation stage.
High (5km Study Area)	High (5km Study Area)	High	



High to Medium (Site/Sites)

High to Medium (Site/Sites)

High to Medium

Visual Receptor – Public Rights of Way and Access (Cottam 1 Site/Sites)

Visual Effects

The visual effects for the Public Right of Way (PRoW) Receptors are set out within the Individual PRoW Receptor Sheets at Appendix 8.3.5.2 [C6.3.8.3.5.2] and Appendix 8.3.5.3 [C6.3.8.3.5.3].

Landscape Receptor - Public Rights of Way and Access (Cottam 1 Site/Sites)

Construction	Operation (Year 1)	Operation (Year 15)	Deco
Activities during site preparation / enabling works, construction, and commissioning with effects such as construction traffic, noise and vibration from construction activities, dust generation, site runoff, mud on roads, and the visual intrusion of plant and machinery on site. At the early stages of the construction stage, ground, and lower-level activities such as the construction of the solar panel areas and associated infrastructure and inverters would be predominantly screened by existing vegetation. During the latter part of the construction stage, views would become available of the elevated activities above the hedgerows, but this would be short term. Other works would be undertaken in connection with the construction including fencing, gates, boundary treatment and other means of enclosure and works for the provision of security and monitoring measures such as CCTV and the laying down of internal tracks. There would also be landscape and biodiversity mitigation works, including planting and the improvement of existing hedgerows to all boundaries of the Site/Sites. These short-lived construction activities would not affect any of the landscape receptors in this area. There would be a change to the arable land use, but the field boundaries and the associated tree cover would remain intact and help with layering and the integration of the new panels. Although there would be an alteration to the views and setting of PROW Fill/86/1, Fill/767/1, Stow/83/1, TLFe/31/2, and Camm/31/1, in terms of these features as a landscape receptor, their overall quality would be enhanced in the medium to long term and construction generally would have no adverse effects on the integrity of the landscape character of these routes.	 PRoW Fill/86/1: Lies to eastern boundary of the Cottam 1 North Site adjacent to Fields C29 and C30 running in a broadly north/south direction and joining the Willingham Road adjacent to the Site. This PRoW is a bridleway. A new hedgerow with irregularly spaced hedgerow trees is proposed adjacent to this route creating a minimum 10m wide grassed lane with a tall herb grassland mix to create a pleasant and interesting route. PRoW Stow/83/1: Lies to the north of field C26 at the south of the Cottam 1 North Site and is a footpath that runs through the Site adjacent to an area proposed for bird mitigation. Passing through the Site boundary, this route has an existing hedgerow to the north, but this is to be augmented by a shelterbelt between the PRoW and the panelled area to the north providing both visual mitigation and additional biodiversity gains and varying the character of the route as it passes west towards the Stow. PRoW Fill/767/1: Lies adjacent to the Cottam 1 North Site/Sites but passes at right angles adjacent to the boundary. This boundary has an existing hedgerow, and this is to be augmented with intermittent tree cover to the side of the route and this will curtail visibility and enhance landscape character by improving the level of enclosure at this location. PRoW TLFe/31/2: The only PRoW going through the Site at the Cottam 1 South Site that joins with Camm/31/1, a bridleway that runs broadly north south from the Inham Road to Thorpe Le Fallows. This route, running through The Grange, will be enhanced to provide a new hedgerow to the east of the route north and south of The Grange and an enhanced hedgerow to its western boundary south of this property. To the east of field D16, a block of scattered trees is to be provided and this will also enhance the PROW, making this part of the route varied and interesting, A tussock grassland mix around this bridleway will maintain the biodiversity of this route. 	The effects at the Operational Phase at Year 15 without Mitigation equate to those effects at the beginning of Year 1 before any secondary mitigation has been applied. Mitigation embedded in the design will apply as will the growing out of the existing hedges. With secondary mitigation such as planting and grass seeding being taken into account at the operational stage (Year 15) the following changes to the landscape would occur and the effects are set out below. Views from the adjacent PRoW will be screened in the close to mid-range proximity through the new hedgerows, scattered tree, and shelterbelt planting together with the enhancement of existing hedges which will be managed to a height of 5m. These new and augmented hedgerows will provide a series of good quality field boundaries both formally strengthening the existing and historical field pattern and creating a multi-layered landscape. Views of the longer distance, where hedgerows do not block these, will be of a layered, well treed landscape with the addition of shelterbelt and scattered tree planting around the Site with a backdrop of some wooded vegetation in places on the horizon. Both new and existing vegetation will have established and begun to mature, creating a much stronger structure to the landscape, and retaining its overall character of the area. Growth of existing and proposed vegetation is assumed to be: Woodland/trees and shelterbelts: 2.5m max at Year 1, 7.5m max at Year 15. New hedgerows: 0.6m at Year 1 and 3.5m at Year 15. Existing hedgerows: 0.9m at Year 1 and 5m at Year 15.	A simil the Sch assess of exis primar establi arising decom vibratio genera Follow return benefit hedget mature landsc charac benefit wetlan the po mainta biodive Witho throug views// the exit to grov 5m. It i With N decom

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commissioning

nilar process to that of construction stage, but with Scheme being no longer operational. This is an ssment of the Site in winter but assumes retention kisting vegetation and builds upon the proposed ary and secondary mitigation that had been blished as the future baseline. Effects are those ng from activities for the duration of the ommissioning to include site traffic, noise and ation from decommissioning activities, dust eration and site runoff.

wing decommissioning, the land is likely to be rned to arable production. The Site will however efit from the significantly enhanced tree and gerow planting that has been carried out and has ured to create a much stronger and robust scape, retaining, and enhancing the overall acter and providing considerable biodiversity efits over the years. Bird mitigation fields and and grazing marshes are likely to be retained and potential may exist to retain grass margins to ntain some varied land use and a high level of iversity in the local area.

nout Secondary Mitigation having been applied ughout the scheme, the only change to the s/landscape following decommissioning would be existing hedgerows which will have been allowed ow out and will have been managed to a height of It is assumed that these will be retained.

Mitigation, the negative effects of the physical mmissioning will be balanced out by the long landscape and visual effects of this mitigation.





SOLAR PROJECT	
The remainder of Order Limits and improve their rou enhancement, ne hedgerow trees a and 3b Site/Sites - development into mitigate any view Secondary mitigat seeding would be include the follow New native hedge will be introduced existing hedges w and existing hedges Hedgerow trees to further screen view established, and allowed to start ge These PRoW land accommodate the adverse effects ar terms of local tree gains. Between Years 1 effects will be ach - Grasslam - Improver with less - PRoW - A more w with less - PRoW - Increased - Increased - Increased - Improver with less - PRoW - Increased - Improver with ess - PRoW - Increased - Improver with ess - PRoW - Increased - Improver wither PR - No adver - Improver wither PR - No adver - Improver wither PR	PROW FII/767/1: The hedgerow trees will screen views of the Site for horse riders using PRoW and by Year 15, the hedge will have established to an approximate height of 3.5m mitigating views. The creation of permanent grassland will also provide additional biodiversity benefits. PROW TLFe/31/2 and Camm/31/1: New hedgerows with hedgerow trees will have established and reached a height of some 3.5m with hedgerow trees reaching some 7.5 and helping to obscure views towards the panel areas from the bridleway. The local PROW network is able to accommodate the development without undue d there will be beneficial eved in terms of PROW: I reversion around PROW ents to a small number of valuable aried landscape setting to the PROW management of exiting vegetation intensively managed land around visibility/definition of watercourses a landscape. Visibility/definition a defined PROW vith some benefit in terms of vegetation across the landscape
Adverse effects (n	itigated):



been applied. The Effects set out below in secondary mitigation which will have been but will have had limited physical impact at	lude carried out	
Embedded Mitigation equate to those effect beginning of Year 1 before secondary mitig		
The effects at the Operational Phase at Yea	15 without	
- Panels and structures across the la but set away from PRoW.	ndscape	

JKIII Study A	icu.			
Magnitude	Very Low	Low	Low	Very L
Level of	Adverse & Short Term	Beneficial & Long Term	Beneficial & Long Term	Neutr
Effect				
Significance	Negligible Not Significant	Minor-Moderate Not Significant	Minor-Moderate Not Significant	Neglig
of Effect				
Site/Sites and	d Cable Route Corridor:			
Magnitude	Very Low	Low	Low	Very L
Level of	Adverse & Short Term	Beneficial & Long Term	Beneficial & Long Term	Neutra
Effect				
Significance	Negligible Not Significant	Minor-Moderate Not Significant	Minor-Moderate Not Significant	Neglig
of Effect				

In-Com	ination Effects [Cumulative Sites]	Cumulative Effects [Cumulative Development
<u>In Summa</u>	Υ	In Summary
of operati nature of scope for with these with a cha	bination effects of the Cottam 1 Site with the other Cumulative Sites (Cottam 2, 3a and 3b) is Minor at year 1 on and Negligible at year 15 with mitigation. This is due to the limited impact as a result of the low-level the Scheme together with the quantum of mitigation. There will be positive changes to the PRoW due to the additional vegetation enhancing the local landscape character. The existing landscape character associated PRoW of the Cumulative Sites and Study Area would predominantly provide tree cover along their margins nge to grassland with scattered trees and a significantly improved hedgerow networks, which would give rise penefits to landscape character in the combination of all the Cumulative Sites.	The Cumulative Effects of the Scheme with the other Cumula Development and adverse, giving rise to no likely Significant would be Negligible at year 15 with the embedded and addir low-level nature of the Scheme, together with the improvem network with new hedgerows and tree planting, giving rise t across the Sites and Study Area, all in helping reduce to redu
<u>Fabric of t</u>	<u>e Landscape</u>	Fabric of the Landscape
The lands churches,	Id not be the removal of, or changes to the Public Rights of Way (PRoW) and Access features within Cottam 1. cape is shaped by the network of footpaths and bridleways that offer a sequence of views to landmark particularly along the B1241. Some views from the footpaths also offer westward views to the power stations nt, and eastward views to the scarp face of Lincoln 'Cliff'.	There would not be the removal of, or changes to the Public within Cottam 1. The landscape is shaped by the network of sequence of views to landmark churches, particularly along also offer westward views to the power stations on the Tren Lincoln 'Cliff'.
There wo	ld be the introduction of new elements and features comprising the solar panel areas, the substation areas	
and Cable between t	Route Corridor extending between the Cottam Power Station and the Cottam 1 Site/Sites and extending ne Cottam 1 Site/Sites and the Cottam 2 Site (the 'Cable Route Corridors').	There would be the introduction of new elements and featu substation areas and Cable Route Corridor extending betwee Site/Sites and extending between the Cottam 1 Site/Sites an
	spects of the Landscape	
	gure 8.15.1.1 [C6.4.8.15.1.1] which shows that with the Cottam 1 Site/Sites, cumulative visibility with the te Corridor, Cottam 2, and Cottam 3a and 3b Sites and the Cable Route Corridor s would not be experienced	Aesthetic Aspects of the Landscape Refer to Figure 8.15.2.1 [C6.4.8.15.2.1] which shows that wit
	majority of the 2km study area. This is due to the distance, the intervening woodlands, hedgerows, and tree	with the cumulative developments would not be experience
cover bet	veen the Site/Sites. The intervening settlements and built form would also curtail cumulative visibility nese cumulative sites and the Cable Route Corridors.	This is due to the distance, the intervening woodlands, hedg The intervening settlements and built form would also curta

/ Low

itral & Short Term

ligible Not Significant

Low

Itral & Short Term

ligible Not Significant

nts]

ulative Developments is Minor with the Tillbridge ant effects at year 1 of operation. The effects dditional mitigation. This betterment is due to the ements to the margins of the road and local lane se to the vegetative layering of the landscape educe the cumulative effect.

blic Rights of Way (PRoW) and Access features of footpaths and bridleways that offer a ng the B1241. Some views from the footpaths rent, and eastward views to the scarp face of

atures comprising the solar panel areas, the ween the Cottam Power Station and the Cottam 1 and Cottam 2 Site (the 'Cable Route Corridors').

with the Cottam 1 Site/Sites, cumulative visibility nced across the majority of the 5km study area. dgerows, and tree cover between the Site/Sites. rtail cumulative visibility.



There are local patches of cumulative visibility which may be focus of likely significant effects, between the There are very minor patches of cumulative intervisibility between the Cottam 1 Site/Sites and Cottam 2 Site, located to Cotton 1 Site/Sites and Gate Burton Energy Park, Tillbridge Solar and West Burton Solar Park. This the: cumulative visibility is set out in further detail within the following figures: • east of Upton and to the south of Sturgate Airfield south of Kexby in the locality of Valley Farm Figure 8.15.2.6 Cottam 1, 2, 3a and 3b Gate Burton Cumulative Developments Augmented ZTV east of Willingham by Stow in the locality of the residential property known as Carisbrooke [C6.4.8.15.2.6]. This shows Gate Burton to the west of Cottam 1, where the intervening settlements of • east of Stow, just to the east of the property known as Tam Howes; and Kexby, Willingham by Stow and Stow lie between, where their presence will impair any associated • west of Sturton by Stow, extending from West Syke Lane as far as Normanby by Stow. landscape context with the Gate Burton Site. The PRoW within these areas are generally focused around the settlements where their edges support a strong Figure 8.15.2.8 Cottam 1, 2, 3a and 3b Tillbridge Solar Cumulative Developments Augmented ZTV hedgerow network with a good level of tree and small woodlands, which helps in curtailing visibility from these routes. [C6.4.8.15.2.8]. This shows Tillbridge to the south of the Cottam 1 Site, where their boundaries' are located There are PRoW that extend from Willingham by Stow, linking with the settlements of Kexby, Upton, Heapham and directly adjacent to each other, just to the south of Kexby Road and to the west of the settlement of Sturgate, which pass across well-treed landscapes. There is also a link west towards Gainsborough from Upton passing Fillingham. There are no intervening settlements, woodlands or major topography, such that the presence across a landscape that supports numerous small woodlands including Thurlby Wood, Lea Wood and Bass Wood. of Tillbridge Development with the Scheme would give rise to a direct and compounded relationship in There is a particular concentration of cumulative visibility to the northeast of Willingham by Stow and Kexby, but the terms of the landscape context of the settlements. The presence of the Tillbridge Development would also local concentration of woodlands comprising Top Wood, Heaton's Wood, and Big Wood help to curtail visibility in this add to coalescence between the Cottam 1 and the Cottam 2 Sites. The primary and secondary mitigation area. would however ensure that all existing features would be retained leading to an improvement at the operation stage (Year 15) of the watercousres across the Sites and Study Area. There are very minor patches of cumulative intervisibility between the Cottam 1 Site/Sites, Cottam 2, and Cottam 3a Sites, located to the: Figure 8.15.2.9 Cottam 1, 2, 3a and 3b West Burton Cumulative Developments Augmented ZTV northeast of Sturton by Stow, extending between Tillbridge Road and Ingham Road. [C6.3.4.15.2.9]. This shows the West Burton Development located to the southwest of the Cottam 1 Site where the intervening settlements of Stow, Sturton by Stow and Bransby lie between, where their The PRoW (Stow/83/1) in this location follows the edge of the settlement, but there are woodlands in the outlying presence will impair any associated landscape context with the West Burton Site. landscape between Fleet's Lane and the edge of the settlement that help curtail some visibility. There are also local undulations in landform found to each side of the River Till that adds layering to this location along with the riparian The other Cumulative Developments at Bumble Bee Farm, Field Farm and High Marnham are separated vegetation along the watercourse, which also helps break down visibility in this area. from the Scheme by the intervening settlements of Gainsborough, Lea, Blyton and Willingham by Stow. There are very minor patches of cumulative intervisibility between the Cottam 1 Site/Sites, Cottam 2, and Cottam 3b The landscape is shaped by the network of footpaths and bridleways that offer a sequence of views to Sites, located to the: landmark churches, particularly along the B1241. Some views from the footpaths also offer westward northeast of Sturton by Stow, extending between School Lane Farm and Ingham Road. views to the power stations on the Trent, and eastward views to the scarp face of Lincoln 'Cliff'. This sequence of views within a landscape setting is tempered by the minor roads lead across this area as The PRoW (Stow/83/1) in this location follows the edge of the settlement, but there are woodlands in the outlying access for recreation, particularly where the PRoW network is limited. Besides. the PRoW network is often landscape between Fleet's Lane and the edge of the settlement that help curtail some visibility. There are also local confined to the settlement edges where the woodland and tree cover closes down views of this broad undulations in landform found to each side of the River Till that adds layering to this location along with the riparian landscape setting. These relevant characteristics of the landscape have some ability to accommodate vegetation along the watercourse, which also helps break down visibility in this area. change with key beneficial effects and there is scope to bring forward improvements as part of the PRoW network. There are local patches of intervisibility between All Sites comprising the landscape to the: east boundary of the Cottam 1 North Site/Sites, extending from Glentworth in the north as far as Ingham in the Overall Character of the Landscape and Public Rights of Way and Access Overall, the character of the landscape and the Public Rights of Way and Access is shaped by the villages south. and isolated settlement that have a broad landscape setting where the minor roads lead across this area The PRoW within these areas are focused on the settlement pattern to the east that includes Ingham, Cammeringham as access for recreation, particularly as a landscape with long views. The PRoW network is often confined and Brattleby. The PRoW generally follow the ridgeline where built form and woodland help curtail any visibility. to the settlement edges where the woodland and tree cover closes down views of this broad landscape Woodland is mainly concentrated to the west of Cammeringham and Brattleby and includes geometric shaped setting. These relevant characteristics of the landscape have some ability to accommodate change without shelterbelts and woodland plantations consisting of predominantly native species with large poplar specimens in undue adverse effects. The cumulative visibility for the Cottam 1 Site/Sites would not alter the overall shelterbelts, which help break up the landscape. Some PRoW extend west from the ridgeline into the Till Vale such as character of the landscape and its PRoW and Access features. Moreover, these features are often set between Ingham and Fillingham where there is a high concentration of local woodlands to help curtail visibility. These within a well-vegetated context or associated with built form that plays a positive role in reducing the woodlands include Coates Gorse, Fox Covert and New Plantation. overall cumulative effects. Users of linear routes, especially footpaths or other rights of way, or transport routes, may potentially experience the aesthetic aspects of the cumulative sites revealed in succession as a series of sequential views. For further details refer to the following detailed visual receptor sheets: Appendix 8.3.2.2 Individual Viewpoint Receptor Sheets [C6.3.8.3.2.2] Appendix 8.3.2.3 Individual Viewpoint Receptor Sheets [C6.3.8.3.2.3] Appendix 8.3.2.4 Individual Viewpoint Receptor Sheets [C6.3.8.3.2.4]

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	Appendix 8.3.3.2 Individual Residential Receptor Sheets [C6.3.8.3.3.2]	
	Appendix 8.3.3.3 Individual Residential Receptor Sheets [C6.3.8.3.3.3]	
	Appendix 8.3.4.2 Individual Transport Receptor Sheets [C6.3.8.3.4.2]	
	Appendix 8.3.4.3 Individual Transport Receptor Sheets [C6.3.8.3.4.3]	
	Appendix 8.3.5.2 Individual PRoW Receptor Sheets [C6.3.8.3.5.2]	
	Appendix 8.3.5.3 Individual PRoW Receptor Sheets [C6.3.8.3.4.3]	
	Overall Character of the Landscape and Public Rights of Way and Access	
	Overall, the character of the landscape and the Public Rights of Way and Access is shaped by the villages and isolated	
	settlement that have a broad landscape setting where the minor roads lead across this area as access for recreation,	
	particularly as a landscape with long views. The PRoW network is often confined to the settlement edges where the woodland and tree cover closes down views of this broad landscape setting. These relevant characteristics of the	
	landscape have some ability to accommodate change without undue adverse effects. The cumulative visibility for the	
	Cottam 1 Site/Sites would not alter the overall character of the landscape and its PRoW and Access features. Moreover,	
	these features are often set within a well-vegetated context or associated with built form that plays a positive role in	
	reducing the overall cumulative effects.	
	The difference in effect between the addition of the Scheme to the cumulative baseline is low and very low for the	
	Cumulative Sites because there would be a small-scale alteration of the aesthetic and perceptual aspects of the	
	landscape such as the removal of existing components and the addition of new ones.	Constructions Low
	Construction: Low Operation (Year 1): Low	Construction: Low Operation (Year 1): Low
Magnitude	Operation (Year 1) with only Embedded Mitigation: Low	Operation (Year 1) with only Embedded Mitigation: Low
Magintude	Operation (Year 15): Very Low	Operation (Year 15): Very Low
	Decommissioning: Very Low	Decommissioning: Very Low
	Construction: Adverse & Short Term	Construction: Adverse & Short Term
Type of	Operation (Year 1): Adverse & Long Term	Operation (Year 1): Adverse & Long Term
Effect	Operation (Year 1) with only Embedded Mitigation: Adverse & Long Term	Operation (Year 1) with only Embedded Mitigation: Advers
Ellect	Operation (Year 15): Beneficial & Long Term	Operation (Year 15): Neutral & Long Term
	Decommissioning: Neutral & Short Term	Decommissioning: Neutral & Short Term
	Construction: Minor Not Significant	Construction: Minor Not Significant
Significance	Operation (Year 1): Minor Not Significant	Operation (Year 1): Minor Not Significant
of Effect	Operation (Year 1) with only Embedded Mitigation: Minor Not Significant	Operation (Year 1) with only Embedded Mitigation: Minor I
	Operation (Year 15): Negligible Not Significant Decommissioning: Negligible Not Significant	Operation (Year 15): Negligible Not Significant Decommissioning: Negligible Not Significant

lverse & Long Term

nor Not Significant



Landscape Receptor – Public Rights of Way and Access (Cottam 2 Site)

Receptor Baseline:

Within the Cottam 2 to Cottam 3a and 3b Sites, at a regional scale, landscape character is assessed within the East Midlands Regional Landscape Character Assessment as forming part of RLCT Profile: 4a Unwooded Vales, which is shown on Figure 8.5 [C6.4.8.5].

The landscape is characterized by the dynamic broad valley of the River Trent which is bordered by large urban areas including the cities of Nottingham and Lincoln connected by a strategic road network in a mostly north south direction. There are also scattered rural settlements perched on the edge of the floodplain that are linked by a smaller network of minor roads and local lanes which generally follow an east west alignment.

Key Features:

The Public Rights of Way (PRoW) and Access network is broadly defined to the north by the open arable and pastoral farmland to the east of the villages of Blyton and Laughton. This landscape supports medium to large field systems that are irregular in parts but used for intensive agriculture, as a result the PRoW is limited. In contrast, there are smaller scale field systems to the west of Stow Road and Normanby Road where the landscape is more pastoral with thickly hedged fields, and the footpath network gives better access around the villages with shorter routes that lead in several directions. Small tributaries of the River Till and the River Trent including Corringham Beck form crossing points at the junction with the local lanes and these are often the only access points to the watercourses for enjoyment and recreation. There are fewer watercourses and PRoW to the east of the area around Willoughton and Hemswell as this is where the landscape becomes more elevated towards the distinct Jurassic Limestone Scarp. Finally, to the south, the footpath network is mainly restricted to the settlements of Upton, Sturgate and Kexby.

The PRoW network is mainly aligned along field boundaries connecting with the local road network and to nearby settlements and farmsteads across the area. The network is generally intermittent because there are few landscape features to help form continuous links. The footpath network is particularly sporadic in the landscape to the west of the Site/Sites and due to these inconsistent links, the local lanes are used to supplement for recreation and the lack of connectivity. The routes mainly follow a north-south direction to reflect the prevailing landscape pattern and to connect the local lanes with nearby settlements. These footpaths can be divided into the following five clusters across the landscape:

To then central parts, around Corringham, there are two footpaths that takes routes from the built area of the settlement. The footpath (Corr/22/1) takes a north-south route leading from East Lane along Church Lane then leaving the settlement to the west of properties known as The Old Hall and Hall Farm and then joining with Pilham Lane at Moscar Farm and Aisby House Farm. The footpath (Corr/23/1) takes a short route to the south-west of the village from Polar Lane to meet with The Street close to The Old Chapel.

To the north-east around Grayingham and Blyborough there are no footpaths or bridleways.

To the south-west around Gainsborough, there are no footpaths or bridleways.

To the southeast around Yawthorpe, there are no footpaths or bridleways.

To the north-west, around Blyton and Pilham there is one footpath (Pilh/20/1) which takes and east-west route from Pilham Lane passing Glebe Farm and then continuing as a green lane with hedgerows to both sides before joining Pilham Lane to the south of Blyton Level Crossing.

Environmental Statement Landscape and Visual Impact Assessment Appendix 8.2.7: PRoW Analysis & Evaluation [Reference: EN010133/APP/C6.3.8.2.7.2] Jan 2023



Receptor susceptibility to change	Value of Receptor	Sensitivity	Embedded Mitigation
In terms of forces for change for the Cottam 2 Site (Public Rights of Way and Access), recent trends have shown that the landscape has a strong rural character, but tranquility levels are being disturbed by development pressures from the larger scale settlements and major routes across the area. Tranquility is however associated with the winding lanes and landscape-scale projects such as the Trent Vale Landscape Partnership can help by offering increased recreational and educational opportunities within these areas. Overall , the susceptibility of the Public Rights of Way and Access for the Cottam 2 Site is conditioned by the limited network of footpaths and bridleways and the availability of the rural roads and minor tracks for extended access. The relevant characteristics therefore have some scope to accommodate change without undue adverse effects. There is however scope to increase recreation opportunities including where there are natural features and historical elements to draw interest from residents and tourists.	 Scenic: The small villages have distinctive landscape elements which contribute to the special identity of the surrounding landscape and its value to the PRoW and network. This includes their approaches and well-integrated edges. Cultural: The sequence of views to landmark churches are a key feature, especially the Corringham Grade 1 St Lawrence Church with its distinctive buttressed square tower. Natural: The landscape feels exposed in parts, but the combination of the bends in the local lanes and small blocks of woodlands provide a stronger sense of enclosure. The woodlands within this landscape pattern are important as natural features. Recreation and Enjoyment: This landscape is important as an invigorating backdrop for recreation and enjoyment. Local Distinctiveness and Sense of Place: Roads and minor farm tracks are bordered by wide verges and hedgerows, and this contributes to local distinctiveness and sense of place. Health and Wellbeing: The tranquility associated with the winding lanes is important for health and well-being. Important Spatial Function: The local roads offer long westward views to the power stations on the River Trent, and eastward views to the scarp face of Lincoln 'Cliff', particularly along the A631. Overall, the value of Public Rights of Way and Access for the Cottam 2 Site is shaped by the limited network of footpaths and bridleways giving rise to the importance of the local lanes and approaches to settlements are sensitive features. The close proximity to two AGLVs (comprising AGLV1 The Ridge to the east and AGLV2 Gainsborough to the west) help shape the attractiveness of the landscape and raise its overall value. 	Character: The interruptions at the bridge crossing provide local points of interest where they intersect with the PRoW.Quality: The woodlands within the landscape pattern are important as natural features in providing enclosure and intimacy especially where they occur in context with the PRoW.Value: The tranquility associated with the winding lanes is important for health and well- being, and where they connect with the PRoW this is important to their value.Capacity: The most widespread change has been in agricultural intensification and the change from pastoral to arable cropping that has resulted in the loss of hedges. Consequently, an increase in field size which borders PRoW affects the capacity of the landscape to absorb change.	Embedded Mitigation would be taken into account at the construction, operation (Year 1 and Year 15) and decommissioning stages of the Scheme. This Embedded Mitigation is also referred to as primary mitigation and would include the following measures: Panels to be set back 15m from PRoW. Site boundary fencing to be set back 5m from adjacent existing hedgerows to allow for proposed thickening and growth. Existing hedges are to be allowed to grow out and will be managed to a height of 5m Hedgerow trees will be encouraged to grow out to add further thickening and growth to the field boundaries with the addition of new hedgerow trees as appropriate, randomly spaced along the length of existing hedges. Lighting will be limited to downlights withi substations and battery banks only and used when maintenance or security is required. Lighting will be PIR operated and will be calibrated to vehicle and personnel movements. All visible lighting would be 50W, installed at a maximum height of 4m with cowls fitted to prevent light spillage. Lighting required within panelled areas wi be manually operated. There will be no lighting on perimeter fencing. The landscape effects with only the Embedded Mitigation taken into account equate to those effects set out for the operation stage (Year 1) and this includes secondary mitigation which will have been carried out but will have had limited physical or landscape character impact at this Embedded Mitigation stage.
High (5km Study Area)	High (5km Study Area)	High	Not Applicable
Medium (Site/Sites)	High to Medium (Site/Sites)	High to Medium	Not Applicable



Visual Receptor – Public Rights of Way and Access (Cottam 2 Site)

Visual Effects

The visual effects for the Public Right of Way (PRoW) Receptors are set out within the Individual PRoW Receptor Sheets at Appendix 8.3.5.2 [C6.3.8.3.5.2] and Appendix 8.3.5.3 [C6.3.8.3.5.3].

Landscape Receptor – Public Rights of Way and Access (Cottam 2 Site)

Construction	Operation (Year 1)	Operation (Year 15)	Decom
Activities during site preparation / enabling works, construction, and commissioning with effects such as construction traffic, noise and vibration from construction activities, dust generation, site runoff, mud on roads, and the visual intrusion of plant and machinery on site. At the early stages of the construction stage, ground, and lower-level activities such as the construction of the solar panel areas and associated infrastructure and inverters would be predominantly screened by existing vegetation. During the latter part of the construction stage, views would become available of the elevated activities above the hedgerows, but these would not affect the PRoW to any degree and would be short term. Other works would be undertaken in connection with the construction including fencing, gates, boundary treatment and other means of enclosure and works for the provision of security and monitoring measures such as CCTV and the laying down of internal tracks. There would also be landscape and biodiversity mitigation works, including planting and the improvement of existing hedgerows to all boundaries of the Site/Sites. These short-lived construction activities would not affect any of the landscape receptors in this area. There would be a change to the arable land use, but the field boundaries and the associated tree cover would remain intact and help with layering and the integration of the new panels. There would not be a fundamental change to the surroundings to the views and settings of these landscape receptors.	 There are no Public Rights of Way within the Cottam 2 Site. The closest PRoW (Corr/22/1) lies to the west of Hall Farm, Old Hall and Corringham village running north/south. Secondary mitigation such as planting, and grass seeding would be taken into account at this stage to include the following measures: Shelterbelts, new hedgerows, and a belt of scattered trees are all proposed to the northwestern and western boundaries of the Cottam 2 Site/Sites. These measures will screen views from the ProW. The PRoW is not within the Order limits and no further mitigation is therefore proposed to improve this route. To the north of the Cottam 2 Site, within the Cottam 3b Site, Pilh/20/1 (footpath) has no particular association with the Cottam 2 Site but will be enhanced as part of the Cottam 3b Site mitigation, creating an enclosed walkway with limited views out to the south towards the Site. New native hedgerow planting will be introduced to the field boundaries as appropriate and existing hedgerows will be allowed to grow out. Proposed and existing hedgerows to be managed at 5m. Hedgerow trees to be added to existing hedges to further screen views. Enhancements to the overall level of tree cover will have a minor but beneficial effect on the setting of the PRoW locally, and although proposed vegetation will be immature at this point it will have established, and existing planting will have been allowed to start growing out. 	 Cyperation (real 15) The effects at the Operational Phase at Year 15 without Mitigation equate to those effects at the beginning of Year 1 before any secondary mitigation has been applied. Mitigation embedded in the design will apply as will the growing out of the existing hedges. With secondary mitigation such as planting and grass seeding being taken into account at the operational stage (Year 15) the following changes to the landscape would occur and the effects are set out below. Views to the north and west of the Site will be screened in the mid-range proximity due to the introduction of the new hedgerows, scattered tree and shelterbelt planting together with the enhancement of existing hedges which will be managed to a height of 5m. These new and augmented hedgerows will provide a series of good quality field boundaries both formally strengthening the existing and historical field pattern and creating a multi-layered landscape. Views of the longer distance, where hedgerows do not block these, will be of a layered, well treed landscape with the addition of shelterbelt and scattered tree planting around the Site with a backdrop of some wooded vegetation in places on the horizon. Both new and existing vegetation will have established and begun to mature, creating a much stronger structure to the landscape, and retaining its overall character of the area. Growth of existing and proposed vegetation is assumed to be: Woodland/trees and shelterbelts: 2.5m max at Year 1, 7.5m max at Year 15. 	A similar the Sche assessm of existir primary establish arising fi decomm vibration generati Followin returned benefit fi hedgero matured landscap characte benefits wetland the pote maintair biodivers Without through views/lai the exist to grow 5 5m. It is
	The cultural heritage of the farmed landscape will be retained around these local PRoW with the proposals will create a more varied mix of land use and significantly enhanced grassland areas in line with a more historic field pattern.	New hedgerows: 0.6m at Year 1 and 3.5m at Year 15. Existing hedgerows: 0.9m at Year 1 and 5m at Year 15. Shrubs: 0.9m at Year 1 and 5m at Year 15.	
	The cultural heritage of the farmed landscape surrounding the settlement of Corringham will be retained and enhanced. The mitigation proposals for the PRoW network within the Order limits will bring forward a more varied mix of land use and significantly	By Year 15, the shelterbelt and enhanced hedgerows will have fully established and will have begun to mature. Existing hedges will have reached a height of some 3.5m whilst the shelterbelt planting and hedgerow trees will be some 7.5m high screening any	

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mmissioning

lar process to that of construction stage, but with heme being no longer operational. This is an sment of the Site in winter but assumes retention sting vegetation and builds upon the proposed ry and secondary mitigation that had been ished as the future baseline. Effects are those g from activities for the duration of the missioning to include site traffic, noise and ion from decommissioning activities, dust ation and site runoff.

ving decommissioning, the land is likely to be ed to arable production. The Site will however fit from the significantly enhanced tree and row planting that has been carried out and has ed to create a much stronger and robust cape, retaining, and enhancing the overall cter and providing considerable biodiversity its over the years. Bird mitigation fields and nd grazing marshes are likely to be retained and otential may exist to retain grass margins to ain some varied land use and a high level of ersity in the local area.

out Secondary Mitigation having been applied ghout the scheme, the only change to the landscape following decommissioning would be isting hedgerows which will have been allowed w out and will have been managed to a height of is assumed that these will be retained.

Mitigation, the negative effects of the physical missioning will be balanced out by the long andscape and visual effects of this mitigation.



of Effect

			[IV	(erere
		 enhanced grassland areas that will aim to reinforce the historic field pattern in this farmed landscape, where applicable. Between Years 1 and 15, the following beneficial effects will be achieved in terms of PRoW: Grassland reversion around PRoW Improvements to a small number of valuable PRoW A more varied landscape setting to the PRoW Improved management of exiting vegetation with less intensively managed land around PRoW Increased visibility/definition of watercourses across the landscape. Increased visibility/definition cover Increased riparian species vegetation Improved user experience – less exposed where PRoW and adjacent boundaries are enhanced No adverse effects on the wider PRoW network with some benefit in terms of increased vegetation across the landscape setting Adverse effects (mitigated): Panels and structures across the landscape but set away from PRoW. The effects at the Operational Phase at Year 15 without Embedded Mitigation equate to those effects at the beginning of Year 1 before secondary mitigation has been applied. The Effects set out below include secondary mitigation which will have been carried out but will have had limited physical impact at this stage. 	south and the west. Views from the east will be screened by the scattered tree planting bordering Yawthorpe Beck, which will have reached a height of 7.5m. The local PRoW network is able to accommodate the development without undue adverse effects. The proposed development will have no adverse effects in the physical integrity of the PRoW within the Cottam 2 Site/Sites and there will be beneficial effects in terms of improvement to local tree/hedge cover and biodiversity net gains to benefit the local character. Overall, in terms of mitigation for the Cottam 2 Site, due to the limited network of public rights of way (PRoW) across the area the aim is to enhance the connectivity to the wider landscape including the river corridors and their flood plains for their recreational importance. The Trent is the main river providing a valuable link and The Trent Valley Way in particular, provides a notable long-distance route. The other notable river is the upper parts of the Witham of which the River Till is a tributary. The aims are also to extend the non-road network, especially where it can link people to both woodlands and these river corridors.	
5km Study A	rea:			
Magnitude	Very Low	Low	Low	Ver
Level of Effect	Adverse & Short Term	Beneficial & Long Term	Beneficial & Long Term	Neu
Significance of Effect	Negligible Not Significant	Minor-Moderate Not Significant	Minor-Moderate Not Significant	Neg
Site/Sites an	d Cable Route Corridor:	1.	1.	1
Magnitude	Very Low	Low	Low	Ver
Level of Effect	Adverse & Short Term	Beneficial & Long Term	Beneficial & Long Term	Neu
Significance	Negligible Not Significant	Minor-Moderate Not Significant	Minor-Moderate Not Significant	Neg

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ery Low

leutral & Short Term

legligible Not Significant

ery Low

leutral & Short Term

Negligible Not Significant



In-Combination Effects [Cumulative Sites]	Cumulative Effects [Cumulative Developments]
In Summary	In Summary
The In-combination effects of the Cottam 2 Site with the other Cumulative Sites (Cottam 1 and 3a and 3b) is Minor at year 1 of operation and Negligible at year 15 with mitigation. This is due to the limited	The Cumulative Effects of the Scheme with the other Cumulative Development and adverse, giving rise to no likely Significant effects at year 1 of operation
impact as a result of the low-level nature of the Scheme together with the quantum of mitigation. There	with the embedded and additional mitigation. This betterment is due to the
will be positive changes to the PRoW due to the scope for additional vegetation enhancing the local	with the improvements to the margins of the road and local lane network w
landscape character. The existing landscape character associated with these PRoW of the Cumulative Sites and Study Area would predominantly provide tree cover along their margins with a change to grassland with scattered trees and a significantly improved hedgerow networks, which would give rise	rise to the vegetative layering of the landscape across the Sites and Study A cumulative effect.
to overall benefits to landscape character in the combination of all the Cumulative Sites.	Fabric of the Landscape
Entric of the Landscape	There would not be the removal of, or changes to the PRoW and Access fea
<u>Fabric of the Landscape</u> There would not be the removal of, or changes to the PRoW and Access features of the landscape within	Site. The wider landscape is typified by arable fields, hedgerows, and water footpaths and bridleways and the availability of the rural roads and minor t
Cottam 2. The wider landscape is typified by arable fields, hedgerows, and watercourses where there is a limited network of footpaths and bridleways and the availability of the rural roads and minor tracks	There would be the introduction of new elements and features comprising
for extended access is also limited.	the Cable Route Corridor extending between the Cottam 1 Site/Sites and th
	3a and 3b Sites (the 'Cable Route Corridors').
There would be the introduction of new elements and features comprising the solar panel areas, the	
substation area and the Cable Route Corridor extending between the Cottam 1 Site/Sites and the	Aesthetic Aspects of the Landscape
Cottam 2 Site and the Cottam 2 and Cottam 3a and 3b Sites (the 'Cable Route Corridors').	Refer to Figure 8.15.2.2 [C6.4.8.15.2.2] which shows that with the Cottam 2 developments would not be experienced across the majority of the 5km str
Aesthetic Aspects of the Landscape	intervening woodlands, hedgerows, and tree cover between the Site/Sites.
Refer to Figure 8.15.1.2 [C6.4.8.15.1.2] which shows that with the Cottam 2 Site, cumulative visibility with the Cottam 1 Site/Sites and the Cottam 3a and 3b Sites would not be experienced across the	would also curtail cumulative visibility.
entirety of the 2km study area. This is due to the distance, the intervening woodlands, hedgerows, and tree cover between the Site/Sites. The intervening settlements and built form would also curtail	There are local patches of cumulative visibility which may be focus of likely and Tillbridge Solar. This cumulative visibility is set out in further detail with
cumulative visibility.	Figure 0.45.2.6 Catters 1.2.2a and 2b Cata Duritan Currulative Davidance
There are local patches of intervisibility between the Cottam 2 Site and with the Cottam 3a and 3b Sites	Figure 8.15.2.6 Cottam 1, 2, 3a and 3b Gate Burton Cumulative Developme Gate Burton to the west of Cottam 2, where the intervening settlements of
extending from the:	between, where their presence will impair any associated landscape conte
• South boundary of the Cottam 2 Site, starting at the eastern edge of Corringham and reaching	
as far as Yawthorpe Beck and Yawthorpe	Figure 8.15.2.8 Cottam 1, 2, 3a and 3b Tillbridge Solar Cumulative Developed
West boundary of the Cottam 2 Site, extending as far as Pilham Lane	shows Tillbridge to the south of the Cottam 2 Site, where their boundaries'
 East boundary of the Cottam 2 Site, extending as far Yawthorpe and Yawthorpe Fox Covert Northwest boundary of the Cottam 2 Site, extending as far as the Cottam 2a and 2b Sites 	to the south of Kexby Road and to the west of the settlement of Fillingham.
• Northwest boundary of the Cottam 2 Site, extending as far as the Cottam 3a and 3b Sites.	woodlands or major topography, such that the presence of Tillbridge Devel direct and compounded relationship in terms of the landscape context of t
The study area supports only two PRoW, comprising public footpath (Pilh/20/1) that is located where	Development would also add to coalescence between the Cottam 1 and the
visibility of the Cottam 2 Site is experienced with the Cottam 3a and 3b Sites, but this intervisibility is	mitigation would however ensure that all existing features would be retain
closed down by the vegetation bordering the mainline railway and tree cover and woodland associated with Top Farm and Grange Farm. With public footpath (Corr/22/1) there is no intervisibility between any	stage (Year 15) of the watercousres across the Sites and Study Area.
of the Site/Sites along this PRoW.	Figure 8.15.2.9 Cottam 1, 2, 3a and 3b West Burton Cumulative Developme
There is a local patch of intervisibility between the Cottam 2 Site and with the Cottam 3b Site,	the West Burton Development located to the southwest of the Cottam 2 Sit Sturton by Stow and Bransby lie between, where their presence will impair
comprising the:	West Burton Site.
Northern-most tip of the Cottam 2 Site extending across the medieval village of Dunstall as far as the medieval village of Southerney and	The other Cumulative Developments at Rumble Ree Farm Field Farm and
 as the medieval village of Southorpe; and Southeast of the River Eau, extending as far as Huckerby Farm and Huckerby Bungalows. 	The other Cumulative Developments at Bumble Bee Farm, Field Farm and I by the intervening settlements of Gainsborough, Lea, Blyton and Willingham
There are small roads forming part of the local road network running in a predominantly east west and	The landscape is shaped by the network of footpaths and bridleways that o
north south direction across the landscape that are within the immediate context of the PRoW within	churches, particularly along the B1241. Some views from the footpaths also
the study area. To the north/northwest, Green Lane runs in an east west direction and then changes	on the Trent, and eastward views to the scarp face of Lincoln 'Cliff'. This see
direction at the right-angled bend to meet with Pilham Lane and then Bonsdale Lane. The changes of	tempered by the minor roads lead across this area as access for recreation

ents is Minor with the Tillbridge Development n. The effects would be Negligible at year 15 e low-level nature of the Scheme, together vith new hedgerows and tree planting, giving rea, all in helping reduce to reduce the

tures of the landscape within the Cottam 2 courses where there is a limited network of racks for extended access is also limited.

the solar panel areas, the substation area and e Cottam 2 Site and the Cottam 2 and Cottam

Site, cumulative visibility with the cumulative udy area. This is due to the distance, the The intervening settlements and built form

significant effects, between the Cottam 2 Site in the following figures:

nts Augmented ZTV [C6.4.8.15.2.6]. This shows Kexby, Willingham by Stow and Stow lie xt with the Gate Burton Site.

ments Augmented ZTV [C6.4.8.15.2.8]. This are located directly adjacent to each other, just There are no intervening settlements, opment with the Scheme would give rise to a he settlements. The presence of the Tillbridge e Cottam 2 Sites. The primary and secondary ed leading to an improvement at the operation

ents Augmented ZTV [C6.3.4.15.2.9]. This shows e where the intervening settlements of Stow, any associated landscape context with the

ligh Marnham are separated from the Scheme n by Stow.

ffer a sequence of views to landmark offer westward views to the power stations uence of views within a landscape setting is particularly where the PRoW network is ges where the woodland and tree cover closes



		[Kere
	direction in the road network provide more intimacy and interest in views across the area, add intimacy at the junctions and close down views across the landscape.	down views of this broad landscape setting. These relevant character accommodate change with key beneficial effects and there is scope t
		network.
	There are local patches of intervisibility between All Sites comprising the:	
	 North of the Bonsdale Farm at Pilham, extending across the landscape to the north of the medieval village of Dunstall as far as the medieval village of Southorpe West of the settlement of Corringham, extending from Staplegate House as far Windy Ridge on Pilham Lane 	<u>Overall Character of the Landscape and PRoW and Access</u> Overall, the character of the landscape and the PRoW and Access is s bridleways. There is however a good network of local roads and mine wide verges and hedgerows, which contribute to local distinctiveness routes helps to close down the sumulative visibility acress the areas
	 West of Springthorpe, extending across the landscape as far as Harpswell Low Farm; and East of Yawthorpe, extending as far as Hemswell. 	routes helps to close down the cumulative visibility across the area, s and east west direction. These relevant characteristics of the landsca without undue adverse effects. The cumulative visibility for the Cotta
	Public footpath (Pilh/20/1) is located within the patch of intervisibility that is located to the north of the Bonsdale Farm at Pilham, extending across the landscape to the north of the medieval village of Dunstall as far as the medieval village of Southorpe. At this location there would be no intervisibility between the Cottam 3a and 3b Sites due to the intervening vegetation bordering the mainline railway. Any intervisibility between the Cottam 3a and 3b Sites and Cottam 1 Site/Sites and Cottam 2 Site would be curtailed by distance and intervening settlement and vegetation.	landscape and its PRoW and Access features. Moreover, there are or vegetated context or associated with built form that plays a positive r
	Users of linear routes, especially footpaths or other rights of way, or transport routes, may potentially experience the aesthetic aspects of the cumulative sites revealed in succession as a series of sequential views. For further details refer to the following detailed visual receptor sheets:	
	Appendix 8.3.2.2 Individual Viewpoint Receptor Sheets [C6.3.8.3.2.2] Appendix 8.3.2.3 Individual Viewpoint Receptor Sheets [C6.3.8.3.2.3] Appendix 8.3.2.4 Individual Viewpoint Receptor Sheets [C6.3.8.3.2.4]	
	Appendix 8.3.3.2 Individual Residential Receptor Sheets [C6.3.8.3.3.2] Appendix 8.3.3.3 Individual Residential Receptor Sheets [C6.3.8.3.3.3]	
	Appendix 8.3.4.2 Individual Transport Receptor Sheets [C6.3.8.3.4.2] Appendix 8.3.4.3 Individual Transport Receptor Sheets [C6.3.8.3.4.3]	
	Appendix 8.3.5.2 Individual PRoW Receptor Sheets [C6.3.8.3.5.2] Appendix 8.3.5.3 Individual PRoW Receptor Sheets [C6.3.8.3.4.3]	
	Overall Character of the Landscape and PRoW and Access Overall, the character of the landscape and the PRoW and Access is shaped by the sparse network of footpaths and bridleways. There is however a good network of local roads and minor farm tracks for recreation that are bordered by wide verges and hedgerows, which contribute to local distinctiveness and sense of place. The vegetation bordering these routes helps to close down the cumulative visibility across the area, since the road network runs in both a north south and east west direction. These relevant characteristics of the landscape have some ability to accommodate change without undue	
	adverse effects. The cumulative visibility for the Cottam 2 Site would not alter the overall character of the landscape and its PRoW and Access features. Moreover, there are only two PRoW, and these are set within a well-vegetated context or associated with built form that plays a positive role in reducing the overall cumulative effects.	
	The difference in effect between the addition of the Scheme to the cumulative baseline is low and very low for the Cumulative Sites because there would be a small-scale alteration of the aesthetic and perceptual aspects of the landscape such as the removal of existing components and the addition of new ones.	
	Construction: Low	Construction: Low
	Operation (Year 1): Low	Operation (Year 1): Low
Magnitude	Operation (Year 1) with only Embedded Mitigation: Low	Operation (Year 1) with only Embedded Mitigation: Low
	Operation (Year 15): Very Low	Operation (Year 15): Very Low
	Decommissioning: Very Low	Decommissioning: Very Low

> teristics of the landscape have some ability to e to bring forward improvements as part of the PRoW

> s shaped by the sparse network of footpaths and inor farm tracks for recreation that are bordered by ess and sense of place. The vegetation bordering these , since the road network runs in both a north south cape have some ability to accommodate change ttam 2 Site would not alter the overall character of the only two PRoW and these are set within a wellve role in reducing the overall cumulative effects.



	Type of	Construction: Adverse & Short Term	Construction: Adverse & Short Term
		Operation (Year 1): Adverse & Long Term	Operation (Year 1): Adverse & Long Term
	-	Operation (Year 1) with only Embedded Mitigation: Adverse & Long Term	Operation (Year 1) with only Embedded Mitigation: Adverse & Long Terr
	Effect	Operation (Year 15): Beneficial & Long Term	Operation (Year 15): Neutral & Long Term
		Decommissioning: Neutral & Short Term	Decommissioning: Neutral & Short Term
		Construction: Minor Not Significant	Construction: Minor Not Significant
	Significance of Effect	Operation (Year 1): Minor Not Significant	Operation (Year 1): Minor Not Significant
		Operation (Year 1) with only Embedded Mitigation: Minor Not Significant	Operation (Year 1) with only Embedded Mitigation: Minor Not Significa
		Operation (Year 15): Negligible Not Significant	Operation (Year 15): Negligible Not Significant
		Decommissioning: Negligible Not Significant	Decommissioning: Negligible Not Significant

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Landscape Receptor – Public Rights of Way and Access (Cottam 3a and 3b Sites)

Receptor Baseline:

Within the Cottam 3a and 3b Sites, at a regional scale, landscape character is assessed within the East Midlands Regional Landscape Character Assessment as forming part of RLCT Profile: 4a Unwooded Vales, which is shown on Figure 8.5 [C6.4.8.5]. Unwooded Vales is located within the 2km Study Area, but only extending across its eastern most part, then sharing the western most part with RLCT Profile 4b: Wooded Vales. The landscape character type then occupies an eastern part of the 5km Study Area where it shares a boundary with Kirton in Lindsey. The western part of the 5km Study Area then comprises of a mixture of RLCT 2b; Planned and Drained Fens and Carrlands, RLCT 4a: Unwooded Vales and RLCT 4b: Wooded Vales, The Unwooded Vales is generally characterised by mixed agriculture set within an enclosed landscape of low, well-maintained hedgerows.

The sites within Cottam 3 can be sub-divided into two distinct land areas.

- Cottam 3a
- Cottam 3b •

Key Features:

The Public Rights of Way (PRoW) and Access network is broadly defined to the north by the presence of Laughton Forest, which comprises Laughton Woods and Scotton Common. The woodland is managed by the Forestry Commission and is publicly accessible. In contrast, to the south of the Site/Sites, the landscape is more open, and the field systems are more regular reflected by the grid pattern of local roads. Towards the east there are smaller scale field systems where the footpath network is more intimate and informal with shorter routes that lead in several directions from the small settlements. To the west, the footpath network is sparse and mainly confined to the River Trent corridor and bridleways are only present in Laughton Forest. Small tributaries of the River Trent such a Laughton Highland Drain form crossing points at the junction with the local lanes and these are often the only access points to the river corridor for enjoyment and recreation. There are more minor watercourses and PRoW to the east of the area around Gravingham and Blyborough, however the footpath and bridleway network is very limited. The PRoW network is generally concentrated around settlements of Laughton, Blyton and Pilham, mostly focused along field boundaries and drainage features. Overall, the landscape to the south-west and west (around Blyton and Laughton) has a higher number of footpaths and bridleways in contrast to the landscape to the north and east around Northorpe and Scotton. The B1205 (Kirton Road) is a significant route as it connects Blyton to Northorpe and passes east-west across the area. This is a busy road with little refuge as a recreation route. Green Lane however is an attractive local lane that almost runs parallel with the footpath (Pilh/20/1) to the north. The mainline railway connects Gainsborough to Kirton in Lindsey and beyond. Overall, the Cottam 3b Site is crossed by a footpath in contrast to Cottam 3a Site which supports no footpaths or other recreation networks. An unnamed road borders the eastern boundary of the Cottam 3a Site that connects to Grange Farm from the B1205 (Kirton Road).

The PRoW network is mainly aligned along field boundaries connecting with the local road network and to nearby settlements and farmsteads across the area. The network is generally intermittent because there are few landscape features to help form continuous links. The footpath network is particularly sporadic in the landscape to the west of the Site/Sites and due to these inconsistent links, the local lanes are used to supplement for recreation and the lack of connectivity. The routes mainly follow an east-west and north-south direction to reflect the prevailing landscape pattern and to connect the local lanes with nearby settlements. These footpaths can be divided into the following five clusters across the landscape:

To the north-west around Laughton and Laughton Forest, there is a scattering of footpaths. The footpath network within Laughton includes two short routes within the settlement. The footpath (Laugh/34/1) takes an eastwest direction to link Church Road with Blyton Road and the footpath (Laugh/35/1) leads from Scotter Road to connect with Morton Road.

To the north-east around Northorpe, there is a route (Nthp/504/1) which is a Byway Open to All Traffic (BOAT) that takes a north-south route from Grange Farm, crossing Northorpe Beck and a further land drain to then link with a minor track to the south-west of Scotton.

To the south-west around Blyton, there are several footpaths within the settlement that lead in all directions. The footpath (Blyt/32/1) takes a route from Sandbeck Lane passing to the east of Willow Tree Farm. The footpath (Blyt/24/1, Blyt/24/2, and Blyt/26/1) takes an almost north-south direction from Saxon Court to cross the mainline railway to the east of Lineside Farm and then meet with Pilham Lane to the east of Pilham. There are other footpaths within the settlement of Blyton that include Blyt/25/1, Blyt/25/3, Blyt/28/1, Blyt/28/2, Blyt/29/1, Blyt/29/2, Blyt/30/1, Blyt/30/2, Blyt/30/3, and Blyt/31/1,

To the south-east around Yawthorpe, there is one footpath (Corr/22/1) that takes a north-south route just south of Aisby House Farm and Moscar Farm.

Within the central part of the Site/Sites around Pilham, the footpath (Pilh/20/1) takes an east-west route from Pilham Lane, passing to the south of Glebe Farm. The footpath then continues along a green track to join Pilham Lane to the north of Bonsall Farm.

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Interms of forces for during for the Cottam Science Science Control Contro Contro Contro	AR PROJECT				
Jame at Base Ises (Public Rights Access) creat threads have shown that character, but matcaces has a strong rural character, but has a strong rural character, but has but but be strong rural character, but has but but be strong rural character of place.He bridge creasing, stuch as Byton Books particip but but but but but but but but but but	Receptor susceptibility to change	Value of Receptor	Sensitivity	Embedded Mitigation	
	Receptor susceptibility to change	Scenic: Some views from the footpaths and bridleways offer long westward views to the power stations on the River Trent, and eastward views to the scarp face of Lincoln 'Cliff'. Cultural: The area offers opportunity to create more links between settlements and the surrounding countryside since many afford wide countryside settings. Natural: Finding links between accessible sites and semi-natural habitats, especially woodlands, for use by walkers, cyclists, and horse riders. For example, the pockets of birch-fringed heathland within and on the margins of the plantations, including the nature reserve of Scotton Common. Recreation and Enjoyment: Laughton Woods provides an area of open access land that could be better connected, where appropriate to provide more choice of routes. Local Distinctiveness and Sense of Place: Tranquility is associated with the winding lanes, and this creates a particular sense of place. Health and Wellbeing: Roads and minor farm tracks are bordered by wide verges and hedgerows, and this contributes to their function in providing an open setting to villages and the overall contribution to health and well-being. Important Spatial Function: The winding lanes add to the strong rural character of the area that also contributes to its spatial function. Overall, the value of Public Rights of Way and Access for the Cottam 3a and 3b Sites is shaped by the landscape that has a strong rural character, but tranquility levels are being disturbed by development pressures from the larger scale settlements and major routes across the area.	Character: The interruptions at the bridge crossings, such as Blyton Beck, provide local points of interest and the opportunity to capture views across the landscape in addition to the PRoW network.Quality: The landscape surrounding the settlements retain some rural and tranquil character with farms, and when in combination with PRoW this adds to their quality.Value: Areas have a positive landscape character but include some areas of degradation where agricultural intensification has eroded landscape character, and where this occurs with PRoW this impacts on value.Capacity: The landscape benefits from high levels of visual containment due to the local landform, hedgerows, and shelter belts and this helps	Embedded Mitigation would be taken into account at the construction, operation (Year 1 and Year 15) and decommissioning stages of the Scheme. This Embedded Mitigation is also referred to as primary mitigation and would include the following measures: Panels to be set a minimum of 3m from Site boundaries. Panels to be set back 15m from PRoW. Site boundary fencing to be set back 5m from adjacent existing hedgerows to allow for proposed thickening and growth. Existing hedges are to be allowed to grow out and will be managed to a height of 5m. Hedgerow trees will be encouraged to grow out to add further thickening and growth to the field boundaries with the addition of new hedgerow trees as appropriate, randomly spaced along the length of existing hedges. Lighting will be limited to downlights withir substations and battery banks only and used when maintenance or security is required. Lighting will be PIR operated and will be calibrated to vehicle and personnel movements. All visible lighting would be 50W, installed at a maximum height of 4m with cowls fitted to prevent light spillage. Lighting required within panelled areas wil be manually operated. There will be no	
	High (Elem Study Aroa)	High (Elem Study Aroa)	High		
	High (5km Study Area) High to Medium (Site/Sites)	High (5km Study Area) High to Medium (Site/Sites)	High High to Medium		



Existing hedgerows: 0.9m at Year 1 and 5m

at Year 15.

ignificance of Effect	The landscape and visual effects	for the Public Right of Way (PRoW) Receptors are set out within the Ir	ndividual PRoW Receptor Sheets at Append	lix 8.3.5.2 [C6.3.8.]	
	Construction	Operation (Year 1)	Operation (Year 15)	Decommission	
	Activities during site preparation / enabling works, construction, and commissioning with effects such as construction traffic, noise and vibration from construction activities, dust generation, site runoff, mud on roads, and the visual intrusion of plant and machinery on site. At the early stages of the construction stage, ground, and lower-level activities such as the construction of the solar panel areas and associated infrastructure and inverters would be predominantly screened by existing vegetation. During the latter part of the construction stage, views would become available of the elevated activities above the hedgerows, but this would be short term. Other works would be undertaken in connection with the construction including fencing, gates, boundary treatment and other means of enclosure and works for the provision of security and monitoring measures such as CCTV and the laying down of internal tracks. There would also be landscape and biodiversity mitigation works, including planting and the improvement of existing hedgerows to all boundaries of the Site/Sites. These short-lived construction activities would not affect any of the landscape receptors in this area. There would be a change to the	There are limited PRoW that have any close association with this Site either visually or physically. Prow Corr/22/1 lies to the west of the Cottam 2 Site and lies to the southwest of the Cottam 3b Site. The PRoW is not within the Order limits and no further mitigation is proposed to improve this route. Within the Cottam 3b Site, Pilh/20/1 (footpath) runs east/west across the centre of the Site. The PRoW is currently very open in parts and provides a somewhat windswept route from Pilham Lane across to Bonsall Farm. Secondary mitigation such as planting, and grass seeding would be taken into account at this stage to include the following measures: For PRoW Pilh/20/01, mitigation is in the form of creating a 10m wide enclosed route with a tussock grass mix along its length. A new hedge to the north of the PRoW will be provided together with irregularly spaced hedgerow trees to create a much more pleasant walkway. This hedgerow will extend west to join existing vegetation along the route. The existing hedgerow to the south of the route will be enhanced as necessary with the hedge being allowed to grow out and managed to a height of 5m with hedgerow trees added. New native hedgerow planting to the field boundaries will be introduced generally as appropriate and existing hedges will be allowed to grow out. Proposed and existing hedgerows to be managed at 5m. Hedgerow trees to be added to existing hedges to further screen views. Enhancements to the overall level of tree cover will have a minor but beneficial effect on the setting of the PRoW locally, and although proposed vegetation will be immature at this point it will have established, and existing planting will have been allowed to start growing out. The cultural heritage of the farmed landscape surrounding the settlement of Blyton will be retained and enhanced. The mitigation proposals for the PRoW network within the Order limits will bring forward a more varied mix of land use and significantly enhanced grassland areas that will aim to reinforce the historic fie	The effects at the Operational Phase at Year 15 without Mitigation equate to those effects at the beginning of Year 1 before any secondary mitigation has been applied. Mitigation embedded in the design will apply as will the growing out of the existing hedges. With secondary mitigation such as planting and grass seeding being taken into account at the operational stage (Year 15) the following changes to the landscape would occur and the effects are set out below. Views to the north and west of the Site will be screened in the mid-range proximity due to the new hedgerows, scattered tree, and shelterbelt planting together with the enhancement of existing hedges which will be managed to a height of 5m. These new and augmented hedgerows will provide a series of good quality field boundaries both formally strengthening the existing and historical field pattern and creating a multi- layered landscape. Views of the longer distance, where hedgerows do not block these, will be of a layered, well treed landscape with the addition of shelterbelt and scattered tree planting around the Site with a backdrop of some wooded vegetation in places on the horizon. Both new and existing vegetation will have established and begun to mature, creating a much stronger structure to the landscape, and retaining its overall character of the area. Growth of existing and proposed vegetation is assumed to be: Woodland/trees and shelterbelts: 2.5m max at Year 1, 7.5m max at Year 15.	A similar process to Scheme being no lo Site in winter but a builds upon the pri had been establish arising from activiti include site traffic, activities, dust gen Following decomm arable production significantly enhar carried out and ha landscape, retainin providing consider mitigation fields ai retained and the p maintain some van the local area. Without Seconda the scheme, the oi decommissioning been allowed to gr of 5m. It is assume With Mitigation, th decommissioning and visual effects of	

- Improvements to a small number of valuable PRoW - A more varied landscape setting to the PRoW

cover would remain intact and help

with layering and the integration of

would be an alteration to the views

the new panels. Although there

- Improved management of exiting vegetation with less intensively managed land around PRoW

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3.3.5.2] and Appendix 8.3.5.3 [C6.3.8.3.5.3].

oning

to that of construction stage, but with the longer operational. This is an assessment of the assumes retention of existing vegetation and proposed primary and secondary mitigation that ished as the future baseline. Effects are those vities for the duration of the decommissioning to ic, noise and vibration from decommissioning eneration and site runoff.

nmissioning, the land is likely to be returned to on. The Site will however benefit from the anced tree and hedgerow planting that has been has matured to create a much stronger and robust ing, and enhancing the overall character and lerable biodiversity benefits over the years. Bird and wetland grazing marshes are likely to be potential may exist to retain grass margins to varied land use and a high level of biodiversity in

lary Mitigation having been applied throughout only change to the views/landscape following g would be the existing hedgerows which will have grow out and will have been managed to a height ned that these will be retained.

the negative effects of the physical g will be balanced out by the long term landscape s of this mitigation.



			tree/hedgerow cover. The biodiversity net gains will also enhance the local character. Overall , in terms of mitigation for the Cottam 3a and 3b Sites, due to limited connectivity of footpath and bridleway networks the aim is to provide more interpretation and access through good green infrastructure links. There is also scope for improving links between the settlements and the countryside. Providing better access to the landscapes, and the habitats and species they support will improve understanding of their importance. Ensuring that green infrastructure is incorporated into new development will enhance access and recreational	
			gains will also enhance the local character. Overall , in terms of mitigation for the Cottam 3a and 3b Sites, due to limited connectivity of footpath and bridleway networks the aim is to provide more interpretation and access through good green infrastructure links. There is also scope for improving links between the settlements and the countryside. Providing better access to the landscapes, and the habitats and species they support will improve understanding of their importance.	
			reached a height of 7.5m. The local PRoW network is able to accommodate the development without undue adverse effects. The proposed development will have no adverse effects in the physical integrity of the PRoW within the Cottam 3a and 3b Site/Sites and there will be beneficial effects in terms of additional	
		setting Adverse effects (mitigated): - Panels and structures across the landscape but set away from PRoW. The effects at the Operational Phase at Year 15 without Embedded Mitigation equate to those effects at the beginning of Year 1 before secondary mitigation has been applied. The Effects set out below include secondary mitigation which will have been carried out but will have had limited physical impact at this stage.	 hedges will also provide considerable biodiversity benefits since these features are very limited at present. Within the wider landscape, the shelterbelt and enhanced hedgerows will have fully established and will have begun to mature. Existing hedges will have reached a height of some 3.5m whilst the shelterbelt planting and hedgerow trees will be some 7.5m high screening any potential views into the Site from both the south and the west. Views from the east will be screened by the scattered tree planting which will have 	
term rece be ei term woul	setting of PRoW Pilh/20/1, in as of this feature as a landscape ptor, its overall quality would nhanced in the medium to long and construction generally ld have no adverse effects on ntegrity of this route.	 Increased visibility/definition of watercourses across the landscape. Increased woodland/vegetation cover Increased riparian species vegetation Improved biodiversity around enhanced PRoW Improved user experience – less exposed where PRoW and adjacent boundaries are enhanced No adverse effects on the wider PRoW network with some benefit in terms of increased vegetation across the landscape 	Shrubs: 0.9m at Year 1 and 5m at Year 15. At Year 15, the hedgerows will be established, and the hedgerow trees will have begun to mature creating a pleasant and intimate walk. Views into the Cottam 3b Site/Sites from PRoW Pilh/20/1 will be predominantly obscured. The grassland margins around the proposed and existing	



				Т
Level of	Adverse & Short Term	Beneficial & Long Term	Beneficial & Long Term	Neutral & Short
Effect				
Significance	Negligible Not Significant	Minor-Moderate Not Significant	Minor-Moderate Not Significant	Negligible Not S
of Effect				
Magnitude	Very Low	Low	Low	Very Low
Level of	Adverse & Short Term	Beneficial & Long Term	Beneficial & Long Term	Neutral & Short
Effect				
Significance	Negligible Not Significant	Minor-Moderate Not Significant	Minor-Moderate Not Significant	Negligible Not S
of Effect				

In-Combination Effects [Cumulative Sites]	Cumulative Effects [Cumulative Developments]
In Summary	In Summary
The In-combination effects of the Cottam 3a and 3b Sites with the other Cumulative Sites (Cottam 1 and	The Cumulative Effects of the Scheme with the other Cumulative Developm
2) is Minor at year 1 of operation and Negligible at year 15 with mitigation. This is due to the limited	and adverse, giving rise to no likely Significant effects at year 1 of operation
impact as a result of the low-level nature of the Scheme together with the quantum of mitigation. There	with the embedded and additional mitigation. This betterment is due to the
will be positive changes to the PRoW due to the scope for additional vegetation enhancing the local	the improvements to the margins of the road and local lane network with r
landscape character. The existing landscape character associated with these PRoW of the Cumulative	the vegetative layering of the landscape across the Sites and Study Area, all
Sites and Study Area would predominantly provide tree cover along their margins with a change to	effect.
grassland with scattered trees and a significantly improved hedgerow networks, which would give rise	
to overall benefits to landscape character in the combination of all the Cumulative Sites.	Fabric of the Landscape
	There would not be the removal of, or changes to the PRoW and Access fea
<u>Fabric of the Landscape</u>	3b. The wider landscape is typified by roads and watercourses that combin
There would not be the removal of, or changes to the PRoW and Access features of the landscape within	interruptions at the bridge crossings, such as Blyton Beck, provide local poi
Cottam 3a and 3b. The wider landscape is typified by roads and watercourses that combine to give a	views across the area.
subtle grain to the landscape. The interruptions at the bridge crossings, such as Blyton Beck, provide	
local points of interest and the opportunity to capture views across the area.	There would be the introduction of new elements and features comprising
	Cable Route extending between the Cottam 1 Site/Sites and the Cottam 2 S
There would be the introduction of new elements and features comprising the solar panel areas, the	Site/Sites (the 'Cable Route Corridors').
substation area and Cable Route Corridor extending between the Cottam 1 Site/Sites and the Cottam 2	
Site and the Cottam 2 and Cottam 3a and 3b Sites (the 'Cable Route Corridors').	<u>Aesthetic Aspects of the Landscape</u>
	Refer to Figure 8.15.1.3 [C6.4.8.15.1.3] which shows that with the Cottam 3
<u>Aesthetic Aspects of the Landscape</u>	cumulative developments would not be experienced across the majority of
Refer to Figure 8.15.1.3 [C6.4.8.15.1.3] which shows that with the Cottam 3a Site, cumulative visibility	distance, the intervening woodlands, hedgerows, and tree cover between t
with the Cottam 1 Site/Sites, Cottam 2 Site and Cottam 3b Site would not be experienced across the	built form would also curtail cumulative visibility between these Site/Sites.
majority of the 2km study area. This is due to the distance, the intervening woodlands, hedgerows, and	
tree cover between the Site/Sites. The intervening settlements and built form would also curtail	There are local patches of cumulative visibility which may be focus of likely
cumulative visibility between these Site/Sites.	and Tillbridge Solar. This cumulative visibility is set out in further detail with
There are local patches of intervisibility between Cottam 3a and 3b Site/Sites, extending from the:	Figure 8.15.2.6 Cottam 1, 2, 3a and 3b Gate Burton Cumulative Developme
	Gate Burton to the west of Cottam 3a and 3b, where the intervening settler
Northeast boundary of the Cottam 3a Site/Sites, defined to the west by the Green Respect	lie between, where their presence will impair any associated landscape con
Burial Park and Park House Farm, and reaching as far as Northorpe in the east	
 East boundary of Cottam 3a Site/Sites, and stopping short of Cold Harbour Farm; and 	Figure 8.15.2.8 Cottam 1, 2, 3a and 3b Tillbridge Solar Cumulative Developed
North boundary of the Cottam 3b Site/Sites, extending for a short distance as far as Grange	shows Tillbridge to the south of the Cottam 3a and 3b Site, where their bou
Farm and Top Farm.	other, just to the south of Kexby Road and to the west of the settlement of
	settlements, woodlands or major topography, such that the presence of Til
Despite the local concentration of intervisibility to the northeast of the Cottam 3a Site/Sites, there are	give rise to a direct and compounded relationship in terms of the landscape
some minor undulations of landform between the settlements of Northorpe and Scotton that follow	the Tillbridge Development would also add to coalescence between the Con

rt Term

Significant

rt Term

Significant

oments is Minor with the Tillbridge Development ion. The effects would be Negligible at year 15 the low-level nature of the Scheme, together with new hedgerows and tree planting, giving rise to all in helping reduce to reduce the cumulative

eatures of the landscape within Cottam 3a and ine to give a subtle grain to the landscape. The points of interest and the opportunity to capture

ng the solar panel areas, the substation area and Site and the Cottam 2 and Cottam 3a and 3b

3a and 3b Sites, cumulative visibility with the of the 5km study area. This is due to the the Site/Sites. The intervening settlements and 5.

ely significant effects, between the Cottam 3a Site ithin the following figures:

nents Augmented ZTV [C6.4.8.15.2.6]. This shows lements of Kexby, Willingham by Stow and Stow ontext with the Gate Burton Site.

opments Augmented ZTV [C6.4.8.15.2.8]. This oundaries' are located directly adjacent to each of Fillingham. There are no intervening Tillbridge Development with the Scheme would ape context of the settlements. The presence of Cottam 1 and the Cottam 2 Sites. The primary and



around the flood plain of the River Eau and its various tributaries. These local undulations help to close down visibility across the landscape where there is also one PRoW (Nthp/504/1), comprising a Byway Open to All Traffic (BOAT) heading north from Grange Farm. This BOAT has no intervisibility between the Cottam 3a and 3b Site/Sites.

There are local patches of intervisibility between Cottam 3a, 3b and Cottam 2 Site/Sites, extending from the:

- South boundary of the Cottam 3b Site/Sites, bordered by Pilham to the west and the medieval settlement of Dunstall to the east, and reaching as far as Springthorpe in the south
- South boundary of the Cottam 3a Site/Sites, bordered by the eastern edge of Blyton to the west, reaching Grange Farm and stopping short of the mainline railway; and
- North boundary of the Cottam 3a Site/Sites, following the alignment of the A159 (Laughton Road) and stopping short to the west of the Green Respect Burial Park.

The natural features however, such as the meandering watercourses and smaller scale field systems bring a tighter grain and added layers to the landscape, which helps curtail views across these areas of intervisibility. There is one PRoW (Pilh/20/1), comprising a public footpath heading from Pilham in the direction of Bonsdale Farm, which only has visibility towards the Cottam 3b Site/Sites.

There is a local patch of intervisibility between All Sites, located to the:

• East of the Cottam 3b Site/Sites and north of the Bonsdale Farm at Pilham, extending across the landscape to the north of the medieval village of Dunstall as far as the medieval village of Southorpe.

To the south of the railway line (and south of Cottam 3b), the primary watercourse comprises the tributaries of the River Till which run in all directions and are divided by areas of geometric woodland, and this enhances the guality of the landscape and its ability to provide enclosure and intimacy, in contrast to the landscape to the north of the railway line. This local patch of intervisibility for All Sites is located to the south of the railway line which benefits from a higher level of enclosure and woodland cover than the landscape to the north of the railway line.

Users of linear routes, especially footpaths or other rights of way, or transport routes, may potentially experience the aesthetic aspects of the cumulative sites revealed in succession as a series of sequential views. For further details refer to the following detailed visual receptor sheets:

Appendix 8.3.2.2 Individual Viewpoint Receptor Sheets [C6.3.8.3.2.2] Appendix 8.3.2.3 Individual Viewpoint Receptor Sheets [C6.3.8.3.2.3] Appendix 8.3.2.4 Individual Viewpoint Receptor Sheets [C6.3.8.3.2.4]

Appendix 8.3.3.2 Individual Residential Receptor Sheets [C6.3.8.3.3.2] Appendix 8.3.3.3 Individual Residential Receptor Sheets [C6.3.8.3.3.3]

Appendix 8.3.4.2 Individual Transport Receptor Sheets [C6.3.8.3.4.2] Appendix 8.3.4.3 Individual Transport Receptor Sheets [C6.3.8.3.4.3]

Appendix 8.3.5.2 Individual PRoW Receptor Sheets [C6.3.8.3.5.2] Appendix 8.3.5.3 Individual PRoW Receptor Sheets [C6.3.8.3.4.3]

Overall Character of the Landscape and Public Rights of Way and Access

Overall, the character of the landscape and the PRoW and Access is shaped by a landscape that benefits from high levels of visual containment due to the local landform, hedgerows, and shelter belts and this helps tolerance for landscape change. In contrast, the watercourses tend to have a more open setting making them more susceptible to change. These relevant characteristics of the landscape have some ability to accommodate change without undue adverse effects. The cumulative visibility for the Cottam 3a and 3b Site/Sites would not alter the overall character of the landscape and its PRoW and Access features. Moreover, the two PRoW that are subject to potential intervisibility, but these are set within a

secondary mitigation would however ensure that all existing features would be retained leading to an improvement at the operation stage (Year 15) of the watercousres across the Sites and Study Area.

Figure 8.15.2.9 Cottam 1, 2, 3a and 3b West Burton Cumulative Developments Augmented ZTV [C6.3.4.15.2.9]. This shows the West Burton Development located to the southwest of the Cottam 3a Site where the intervening settlements of Stow, Sturton by Stow and Bransby lie between, where their presence will impair any associated landscape context with the West Burton Site.

The other Cumulative Developments at Bumble Bee Farm, Field Farm and High Marnham are separated from the Scheme by the intervening settlements of Gainsborough, Lea, Blyton and Willingham by Stow.

Overall Character of the Landscape and Public Rights of Way and Access

Overall, the character of the landscape and the PRoW and Access is shaped by a landscape that benefits from high levels of visual containment due to the local landform, hedgerows, and shelter belts and this helps tolerance for landscape change. In contrast, the watercourses tend to have a more open setting making them more susceptible to change. These relevant characteristics of the landscape have some ability to accommodate change without undue adverse effects. The cumulative visibility for the Cottam 3a and 3b Sites would not alter the overall character of the landscape and its PRoW and Access features. Moreover, the two PRoW that are subject to potential intervisibility, but these are set within a wellvegetated context or associated with undulating landform that plays a positive role in reducing the overall cumulative effects.

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	well-vegetated context or associated with undulating landform that plays a positive role in reducing the overall cumulative effects.	
	The difference in effect between the addition of the Scheme to the cumulative baseline is low and very low for the Cumulative Sites because there would be a small-scale alteration of the aesthetic and perceptual aspects of the landscape such as the removal of existing components and the addition of new ones.	
	Construction: Low	Construction: Low
	Operation (Year 1): Low	Operation (Year 1): Low
Magnitude	Operation (Year 1) with only Embedded Mitigation: Low	Operation (Year 1) with only Embedded Mitigation: Low
	Operation (Year 15): Very Low	Operation (Year 15): Very Low
	Decommissioning: Very Low	Decommissioning: Very Low
	Construction: Adverse & Short Term	Construction: Adverse & Short Term
Type of	Operation (Year 1): Adverse & Long Term	Operation (Year 1): Adverse & Long Term
Effect	Operation (Year 1) with only Embedded Mitigation: Adverse & Long Term	Operation (Year 1) with only Embedded Mitigation: Adverse & Long Term
Eneci	Operation (Year 15): Beneficial & Long Term	Operation (Year 15): Neutral & Long Term
	Decommissioning: Neutral & Short Term	Decommissioning: Neutral & Short Term
	Construction: Minor Not Significant	Construction: Minor Not Significant
Significance of Effect	Operation (Year 1): Minor Not Significant	Operation (Year 1): Minor Not Significant
	Operation (Year 1) with only Embedded Mitigation: Minor Not Significant	Operation (Year 1) with only Embedded Mitigation: Minor Not Significar
	Operation (Year 15): Negligible Not Significant	Operation (Year 15): Negligible Not Significant
	Decommissioning: Negligible Not Significant	Decommissioning: Negligible Not Significant

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Landscape Receptor – National and Locally Designated Landscapes (Cottam 1 Site/Sites)

Receptor Baseline:

Within the Cottam 1 Site/Sites, at a regional scale, landscape character is assessed within the East Midlands Regional Landscape Character Assessment as forming part of RLCT Profile: 6a Limestone Scarps and Dipslopes, which is shown on Figure 8.5 [C6.4.8.5]. Limestone Scarps and Dipslopes only occupies the eastern most edge of the of the 2km Study Area where it shares a boundary with RLCT Profile: 4a Unwooded Vales, and an eastern section of the 5km Study Area. The northwestern extent of the 5km Study Area is also host to a small part of RLCT Profile 3a: Floodplain Valleys and RLCT Profile: 4b Wooded Vales. The Limestone Scarps and Dipslopes Landscape Character Type is part of the Jurassic Limestone belt that runs from Dorset to the Humber.

The Site/Sites within Cottam 1 (5km Study Area) can be sub-divided into two distinct land areas:

- Cottam 1 North
- Cottam 1 South

The Site/Sites do not include nationally or locally designated landscapes.

Within the 5km Study Area, there are locally designated landscapes comprising Areas of Greater Landscape Value (AGLV). West Lindsey District Council has bought forward these AGLV within their Local Plan. There are no policy criteria underpinning the AGLV and the composite areas/parts are not identified within the Local Plan. Therefore, for clarity of the descriptions of the AGLV below, are named as follows (as shown on Figure 8.6 [C6.4.8.6].

- AGLV1 The Ridge
- AGLV2 Gainsborough
- AGLV3 Laughton Wood

The Site/Sites for Cottam 1 fall within AGLV1 – The Ridge and AGLV2 – Gainsborough and these areas are likely to include the more sensitive receptors. These AGLV run in a north south direction to reflect the prevailing landscape pattern of the area that extends from Scunthorpe in the north to the city of Lincoln in the south.

Key Features:

AGLV1 The Ridge: This is centered on the landscape associated with the distinct landform ridge and around Glentworth, Fillingham, Ingham, Cammeringham and Brattleby to the east of the Site/Sites. The Ridge AGLV lies at the closest proximity to the Site/Sites as close as approximately 200m from the boundary to the north-west of the village of Fillingham. The adjoining escarpment of the Lincolnshire Edge defines this low-lying landscape to the east, and this is an important landscape feature for both the Cottam 1 North and South Sites. The landscape mainly comprises of open arable and pastoral farmland with good hedgerow boundaries. Fillingham is particularly a backdrop for views across the Till Vale due to the abundance of woodland cover associated with Fillgham Castle and Filingham Park that forms a strong feature on the crest of the ridge. The scarp slope then supports further woodlands around Manor Farm to the north of the AGLV at Fillingham that appear as a distinctive feature and help define landscape pattern. There are also further woodlands lining the scarp slopes to the south at Brattleby that include woodlands around Brattleby Hall and Half Acre Plantation. Most of these woodlands are associated with the historic halls and parkland landscapes. The landscape is crossed by minor roads and those that descend from the ridge-top route of the B1398 as steep lanes where valuable views can be experienced over the Till Vale. For example, views from Fillingham across the landscape towards Willingham by Stow are a key feature and views from the junction with the A1500 Roman road that offers extensive views across the scarp and over the Till Vale. The views from this location show the transition within the landscape from the trees and woodlands enclosing the string of historic springline villages at the foot of the slope. Village entrances are secluded and narrow at the top of the scarp slope. Views to the historic buildings and parkland at Glentworth are also a consideration from the northeastern part of the Cottam 1 North Site.

AGLV2 Gainsborough: This is centered on the landscape associated with the outskirts of Gainsborough to the west of the Site/Sites. The Gainsborough AGLV lies at the closest proximity to the Site/Sites at approximately 3.1km west to the east of Marton, Gate Burton and Knaith. This is the low-lying, gently undulating terrain that rises to the north-east of Gainsborough to around 30m AOD in the vicinity of Thonock Grove and Castle Hills. This relatively elevated land extends as far south as Marton and this eastern boundary of the AGLV marks a very distinct transition between the Trent Valley area and the Till Vale where significant blocks of woodland mark the boundary. Some of these woodlands are ancient woodland including Warren Wood, Lea Wood, Bass Wood, Thurlby Wood and Knaith Park. This combination of tree cover and undulating landform provides a sense of enclosure especially as the AGLV extends as far as the River Trent and its adjacent washlands to the west of Gate Burton, Knaith and Lea, which are more open in contrast. These Trent washlands extend further west towards Treswell, South Leverton and North Leverton adding to the sense of open character within this landscape. There are landmark ruins such as Torksey Castle that lies approximately 1.5km east of Cottam Power Station. The B1241 passes north south through to the east of the AGLV and other north-south routes such as the A156 (within the AGLV) pass through some important historic parklands and remnants of Medieval deer park at Knaith, Gate Burton and Kettlethorpe.

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Receptor susceptibility to change	Value of Receptor	Sensitivity	Embedded Mitigation
In terms of forces for change for the Cottam 1	Scenic: There are striking variations in character and scenic appeal across the differing AGLV, and	<u>Character:</u> There is a diverse	Embedded Mitigation would be taken into
Site/Sites (National and Local Designations),	this diversity is a key element of value. The main feature is how the narrow landscape band of	character with pasture, arable,	account at the construction, operation
recent trends have shown that the AGLV has	the ridge landscape contrasts with the wider Till Vale.	woodland and hedgerows that	(Year 1 and Year 15) and decommissioning
undergone rapid change in some areas and in		create an intricate and textured	stages of the Scheme. This Embedded
some parts, this is leading to homogenization	<u><i>Cultural:</i></u> The AGLV provides a culture of 'soft tourism', in the form of walking, cycling, and	landscape between the rolling	Mitigation is also referred to as primary
of the landscape and loss of hedgerows.	boating and short breaks and this is a key aspect of this strategy. The villages at the foot of the	fringes of Gainsborough and the	mitigation and would include the following
However, there is an opportunity to reinforce	scarp slope such as Cammeringham and Brattleby benefit from attractive settings due to the	expansive fields of the Till Vale.	measures:
landscape character and build in more	presence of woodland cover associated with the historic halls and associated parklands.		
diversity across the area especially in terms of		<u>Quality:</u> Areas have a positive	Panels to be set a minimum of 3m from
improvements to hedgerows but also in	<i><u>Natural</u></i> : The subtle variations in landform and landscape pattern are a feature that's merits	landscape character with some	Site boundaries.
changing the proportion of conifer to	recognition for example the contrast in enclosure and field pattern between the rolling fringes of	elements that could be	
broadleaved woodland and improvements to	Gainsborough and the expansive fields of the Till Vale.	described as unique such as the	Panels to be set minimum of 20m from
woodland edge species.		views from the distinctive ridge	major watercourses and minimum of 8m
	<u>Recreation and Enjoyment:</u> There is little direct linkage between the settlements to the east at the	of the AGLV1 towards the Trent	from minor watercourses.
Overall, the susceptibility of the National and	lower level, and so the B1398 as the ridge-top road provides the key linkage and dips down to	floodplain.	
Local Designations for the Cottam 1 Site/Sites	the bottom of the scarp in this location linking villages such as Ingham, Cammeringham and		Site boundary fencing to be set back 5m
is conditioned by the striking differences	Scampton.	Value: The Scarps and Dipslopes	from adjacent existing hedgerows to allow
across the varying elements of the AGLV and		provide a rural landscape that	for proposed thickening and growth.
that these can be appreciated across the	Local Distinctiveness and Sense of Place: There is a strong relationship between landscape	has remained largely intact	
landscape. There is an opportunity to use	character and settlement where many villages derive their sense of place from distinctive views,	where the landscape condition	Existing hedges are to be allowed to grow
landscape mitigation to build upon these	local landmarks, and features around their edges.	is generally good. The district	out and will be managed to a height of 5m.
differences and bolster this landscape	the shift and the line to the shift of the second stimule from the shift of the stimule descent shift on the shift of the	has relatively few tourist	Hedgerow trees will be encouraged to
diversity. Particular areas for focus include	<u>Health and Wellbeing:</u> The district has relatively few tourist 'attractions' and many visitors just	'attractions' and many visitors	grow out to add further thickening and
the proportion of pasture to arable fields in	simply enjoy the scenic drives, including the historic churches, the Till Vale, and the Lincolnshire Cliff.	just simply enjoy the scenic	growth to the field boundaries with the
particular those around the edges of		drives, including the historic churches, the Till Vale, and the	addition of new hedgerow trees as
settlements which are particularly important to their setting and form a subtle relationship.	Important Spatial Function: The 'nodec' of West Lindsov's waterways (bridges and crossing points)	Lincolnshire Cliff.	appropriate, randomly spaced along the
Within this AGLV, views are generally	<u>Important Spatial Function</u> : The 'nodes' of West Lindsey's waterways (bridges and crossing points) provide important opportunities for views and for appreciating the wider landscape context.		length of existing hedges.
contained by tall hedgerows, woodlands, and	provide important opportunities for views and for appreciating the wider landscape context.	<u><i>Capacity:</i></u> There are areas of	Lighting will be limited to downlights within
tree groups, giving the landscape very limited	Overall , the value of Nationally and Locally Designated Landscapes for the Cottam 1 Site/Sites is	pastoral landscape and wooded	substations and battery banks only and
capacity to accommodate change. The	shaped by the striking differences where there is a marked contrast between AGLV1- The Ridge	scarps interspersed with small	used when maintenance or security is
relevant characteristics therefore have a	and AGLV 2 - Gainsborough. The steep minor lanes that descend from the ridge-top route of the	stone-built villages within AGLV1	required. Lighting will be PIR operated and
limited susceptibility to accommodate change	B1398 offer valuable views over the Till Vale from The Ridge. The landscape settings of historic	and this helps retain a tangible	will be calibrated to vehicle and personnel
without undue adverse effects. There is,	parklands and built features within the Till Vale are often shrouded in woodland, shelterbelts, or	connection to the landscape	movements. All visible lighting would be
however, robust hedgerows with smaller	hedgerows at their edges. The skylines, key views, watercourses, and river corridors are key	character, but these features are	50W, installed at a maximum height of 4m
fields and many trees in these locations that	features, but they are particularly vulnerable to landscape change.	vulnerable and show less	with cowls fitted to prevent light spillage.
assist with mitigation.		tolerance for change.	Lighting required within panelled areas will
			be manually operated. There will be no
			lighting on perimeter fencing.
			The landscape effects with only the
			Embedded Mitigation taken into account
			equate to those effects set out for the
			operation stage (Year 1) and this includes
			secondary mitigation which will have been
			carried out but will have had limited
			physical or landscape character impact at
			this Embedded Mitigation stage.



High (5km Study Area)	High (5km Study Area)	High
Medium (Site/Sites)	Medium (Site/Sites)	Medium

Landscape Receptor – National and Locally Designated Landscapes (Cottam 1 Site/Sites)

Construction 0	Operation (Year 1)	Operation (Year 15)	Decom
construction, and commissioning with effects such as construction traffic, noise and vibration from construction activities, dust generation, site runoff, mud on roads, and the visual intrusion of plant and machinery on site. At the early stages of the construction stage, ground, and lower-level activities such as the construction of the solar panel areas and associated infrastructure and inverters would be screened due to existing vegetation, intervening settlements, and topography.During the latter part of the construction stage, views would become available of the elevated activities above the hedgerows. Some views from limited specific areas of the elevated land to the east are likely to occur, but these would not affect the integrity of the landscape receptor in itself and would be limited in their duration.Other works would be undertaken in connection with the construction including fencing, gates, boundary treatment and other means of enclosure and works for the provision of security and monitoring measures such as CCTV and the laying down of internal tracks. There would also be landscape and biodiversity mitigation works, including planting and the improvement of existing hedgerows to all boundaries of the Site/Sites.These short-lived construction activities would not affect any of the landscape receptors in this area. There would be a change to the arable land use, but the field boundaries and the associated tree cover would remain intact and help with layering and the integration of the new panels. There would not be a fundamental change to the surroundings to the views and settings of the landscape receptors.	n terms of mitigation for the two AGLV's associated with the Cottam 1 Site/Sites, due to their distance and varied relationship with the immediate landscape to heir boundaries, it is anticipated that the overall cheme of mitigation that will reinforce the landscape haracter where this has been lost or eroded in the last entury to intensive arable farming. There will be a much greater level of tree and nedgerow cover over the Cottam 1 Site/Sites although his will be immature at this point. Considerable biodiversity gains will be brought forward by the increase in tree and hedge cover as well as having the benefit of capturing carbon in the longer erm. The reversion of arable land to grassland will have considerable ecological benefits, widely increasing the biodiversity, resilience, and sustainability of the area generally and starting to improve soil structure and water quality. Varied grassland mixes and flower rich biolinator mixes will build in more diversity and begin o create visual interest across the landscape. Secondary mitigation such as planting, and grass eeding would be taken into account at this stage to nclude the following measures: Cottam 1 North Cottared tree belts are to run adjacent to existing watercourses with buffers of tall herb mix grassland. here will also be two lengths of shelterbelt planting which are intended to run east/west across the Cotton North Site adjacent to existing watercourses to einforce this feature in the wider landscape. New and inhanced hedgerows across the Site will also trengthen the historical field pattern. Sinhanced roadside verges along Willingham Road will mprove biodiversity. New and enhanced hedgerows iround all boundaries will further reinforce the field pattern and help to screen views from the immediate ind wider landscape, whilst bird mitigation fields and uccessional scrub around existing woodland will mprove biodiversity across the Cottam 1 North ite/Sites.	The effects at the Operational Phase at Year 15 without Mitigation equate to those effects at the beginning of Year 1 before any secondary mitigation has been applied. Mitigation embedded in the design will apply as will the growing out of the existing hedges. With secondary mitigation such as planting and grass seeding being taken into account at the operational stage (Year 15) the following changes to the landscape would occur and the effects are set out below. There will be a much greater level of tree cover over the Cottam 1 Site/Sites. This tree cover will have matured to integrate into the existing field boundary and woodland vegetation both locally and across the wider landscape setting of the two AGLVs. The reversion of arable land to grassland will have established to achieve a rich tapestry of habitats where grassland mixes have integrated into their natural environment and established their natural composition with the help of some appropriate management. Soil structure will be much improved through the lack of cultivation and water quality improvement will be seen. Views across the Cottam 1 Site/Sites from the two adjacent AGLV's will predominantly be maintained where necessary but will be enhanced to form a richer tapestry of heights, colours and texture. Growth of existing and proposed vegetation is assumed to be: Woodland/trees and shelterbelts: 2.5m max at Year 1, 7.5m max at Year 15. New hedgerows: 0.6m at Year 1 and 3.5m at Year 15. Existing hedgerows: 0.9m at Year 1 and 5m at Year 15. By Year 15, new tree cover in the form of scattered native tree belts and shelterbelts/woodlands will have established and begun to mature, reaching a height of some 7.5m. These elements will sit within the landscape and will begin to better define field	A similar the Scher assessme of existin primary a establish arising fr decomm vibration generatio Following returned benefit fr hedgerow begun to landscap character benefits o to be reta grass ma maintain Without throughov views/lan the existi to grow o 5m. It is a With Mit decomm

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mmissioning

ar process to that of construction stage, but with neme being no longer operational. This is an ment of the Site in winter but assumes retention ting vegetation and builds upon the proposed ry and secondary mitigation that had been ished as the future baseline. Effects are those from activities for the duration of the missioning to include site traffic, noise and on from decommissioning activities, dust ation and site runoff.

ing decommissioning, the land is likely to be ed to arable production. The Site will however from the significantly enhanced tree and row planting that has been carried out and has to mature to create a much stronger and robust ape, retaining and enhancing the overall ter and providing considerable biodiversity ts over the years. Bird mitigation fields are likely retaining and the potential may exist to retain margins to retain some varied land use and ain a high level of biodiversity in the local area.

ut Secondary Mitigation having been applied shout the scheme, the only change to the landscape following decommissioning would be isting hedgerows which will have been allowed w out and will have been managed to a height of is assumed that these will be retained.

Mitigation, the negative effects of the physical missioning will be balanced out by the long andscape and visual effects of this mitigation.



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	Cottam 1 South Scattered tree belts along the route of the River Till will enhance this feature across the wider landscape, whilst a tall herb mix grassland will improve biodiversity and enhance water quality across the Cottam 1 South Site/Sites.New and enhanced hedgerows around the boundary of the Cottam 1 South Site/Sites will help to define the historic field pattern and screen views towards the new panel areas.Enhanced hedgerows across the Site/Sites, together with areas of shelterbelt planting will further define the field pattern and help to link areas of existing woodland such as Thorpe Wood, Cammeringham Low Covert and Brattleby Gorse.Cottam 1 West Reinstatement of areas of wetland will occur around the River Till with scattered tree belts helping to define the course of this watercourse across the wider landscape. Tall herb mix grassland will also add biodiversity benefit.Shelterbelt planting to the western boundaries of the Cottam 1 West Site/Sites will also help to screen views from the west and large areas of bird mitigation planting in open fields will enhance the biodiversity and create a varied mosaic over this area close to the River Till.All vegetation will be immature at Year 1 but grasslands will have begun to establish and fill out.The cultural heritage of the farmed landscape and its importance in providing a wider setting to the two AGLV's associated with the Cottam 1 Site/Sites will be retained and enhanced. The mitigation proposals will bring forward a more varied mix of land use and significantly enhanced grassland areas that will aim to reinforce the historic field pattern in this farmed landscape, where applicable. To the east, along the Ridge AGLV1 and within the Limestone Scarps and Dipslopes Character Area 6a, the landscape will also<	boundaries and roadsides, with watercourses better presented by riparian species along their winding routes. Hedgerows will have established and outgrown, being managed to a height of 5m creating a layered vegetated scene across the landscape from the higher land and a more intimate environment from the lower levels. Strong lines of tree lined hedges will run across and down the landscape forming a rich pattern of colour and form. The two AGLV's are able to accommodate the proposed development without undue adverse effects with long term physical and visual benefits over the Sites as a whole. Overall , in terms of mitigation for the Cottam 1 Site/Sites, due to the exposed location of Ridge AGLV1, the aim is to retain as many trees as possible and plant native trees particularly where it forms a continuous line at the foot of the steep slopes at the junction with the Till Vale. The aim is also to keep any new routes at the lower elevations and follow natural breaks of slope where possible. The development and management of footpaths for short distance (2-3 mile) walks will also open up local areas of landscape within these locations. Any interventions at the junctions of footpaths should avoid straight alignments at angles to the natural grain in the land. Where waterways are enclosed by steep embankments there should be a priority to open up their presence in the landscape to enhance landscape character. With regards to the Gainsborough AGLV2, development on the higher ridges to the south and east can be accommodated providing it is associated with new tree and hedgerow planting and new development should not impinge on views towards the designed landscapes.



of Effect

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SOLAR PROJECT		and will enhance the character generally in the context of the two AGLVs.Between Years 1 and 15, the following beneficial effects will be achieved in terms of Designated Landscapes:-Grassland reversion across the Site (s)-A more varied landscape setting to the AGLVs-Improved management of exiting vegetation-Less intensively managed field boundaries-Increased visibility/definition of watercourses across the landscape setting-Protection of existing landscape receptors-Increased woodland/vegetation cover across the wider landscape setting-Increased riparian species vegetation-Significantly improved biodiversity-Improved carbon retention/capture-Overwintering opportunities for bird species-Improved green corridors across the landscape-Historic field pattern reinforcedAdverse effects (mitigated):-Panels and structures across the landscape setting of the AGLVs-Increased hard standing areas and infrastructure-The effects at the Operational Phase at Year 15 without Embedded Mitigation equate to those effects at the beginning of Year 1 before secondary mitigation has		
		been applied. The Effects set out below include secondary mitigation which will have been carried out but will have had limited physical impact at this stage.		
5km Study A				
Magnitude	Very Low	Very Low	Very Low	Very
Level of Effect	Adverse & Short Term	Beneficial & Long Term	Neutral & Long Term	Neu
Significance of Effect	Negligible Not Significant	Negligible Not Significant	Negligible Not Significant	Neg
Site/Sites an	d Cable Route Corridor:			
Magnitude	Low	Low	Medium	Very
Level of Effect	Adverse & Short Term	Beneficial & Long Term	Beneficial & Long Term	Neu
Significance	Minor Not Significant	Minor Not Significant	Moderate Significant	Neg

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ery Low

eutral & Short Term

egligible Not Significant

ery Low

eutral & Short Term

Negligible Not Significant



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In-Combination Effects [Cumulative Sites]	Cumulative Effects [Cumulative Developments]
'n Summary	In Summary
The In-combination effects of the Cottam 1 Site with the other Cumulative Sites (Cottam	2, 3a and 3b) is The Cumulative Effects of the Scheme with the other Cumulative Developr
Minor at year 1 of operation and Negligible at year 15 with mitigation. This is due to the	
a result of the low-level nature of the Scheme together with the quantum of mitigation.	There will be Negligible at year 15 with the embedded and additional mitigation. This be
positive changes to the wider setting of the AGLVs due to the additional vegetation enha	ancing the local the Scheme, together with the improvements to the margins of the AGLV
andscape character. The existing landscape character associated with these Cumulative	e Sites and Study rise to the vegetative layering of the landscape across the Sites and Study
Area would predominantly provide tree cover along the hedge lines and their margins v	÷
${\sf g}$ rassland with scattered trees, which would give rise to overall benefits to landscape ch	
combination of all the Cumulative Sites.	Fabric of the Landscape
	There would not be the removal of, or changes in Nationally and Locally D
Fabric of the Landscape	landscape within Cottam 1. The landscape is shaped by the striking differe
There would not be the removal of, or changes in Nationally and Locally Designated ele	
of the landscape within Cottam 1. The landscape is shaped by the striking differences w	
marked contrast between the locally designated Areas of Great Landscape Value (AGLV)	
Ridge and AGLV 2 - Gainsborough. The steep minor lanes that descend from the ridge-t	
B1398 offer valuable views over the Till Vale from The Ridge. The landscape settings of h	
and built features within the Till Vale are often shrouded in woodland, shelterbelts, or h	-
edges. The skylines, key views, watercourses, and river corridors are also key features.	There would be the introduction of new elements and features comprising
There would be the introduction of new elements and features comprising the solar par	and Cable Route Corridor extending between the Cottam Power Station and Cable Route Corridor extending between the Cottam 2 Site (the 'Cable Route C
substation area and Cable Route Corridor extending between the Cottam Power Station	
Site/Sites and extending between the Cottam 1 Site/Sites and Cottam 2 Site (the 'Cable F	
Site sites and extending between the cottain i site sites and cottain 2 site (the cable i	Refer to Figure 8.15.2.1 [C6.4.8.15.2.1] which shows that with the Cottam
Aesthetic Aspects of the Landscape	cumulative developments would not be experienced across the majority of
Refer to Figure 8.15.1.1 [C6.4.8.15.1.1] which shows that with the Cottam 1 Site/Sites, cu	
with the Cable Route Corridor, Cottam 2 Site, and Cottam 3a and 3b Sites and the Cable	
would not be experienced across the majority of the 2km study area. This is due to the	· · · · · · · · · · · · · · · · · · ·
ntervening woodlands, hedgerows, and tree cover between the Site/Sites. The interven	
and built form would also curtail cumulative visibility between these cumulative sites an	
Corridors.	in further detail within the following figures:
There are very minor patches of cumulative intervisibility between the Cottam 1 Site/Sit	es and Cottam 2 Figure 8.15.2.6 Cottam 1, 2, 3a and 3b Gate Burton Cumulative Developm
Site, located to the:	shows Gate Burton to the west of Cottam 1, where the intervening settlem
 east of Upton and to the south of Sturgate Airfield 	lie between, where their presence will impair any associated landscape co
 south of Kexby in the locality of Valley Farm 	
east of Willingham by Stow in the locality of the residential property known as (
 east of Stow, just to the east of the property known as Tam Howes; and 	shows Tillbridge to the south of the Cottam 1 Site, where their boundaries
 west of Sturton by Stow, extending from West Syke Lane as far as Normanby by 	
	woodlands or major topography, such that the presence of Tillbridge Deve
The Locally Designated features are situated outside these minor patches of intervisibili	
around the settlements where the land use at their edges supports a good level of tree	
cover to help in curtailing visibility across these areas. To the east, the Ridge AGLV1 is w	
he built form (that comprises the string of settlements extending between Scampton ir	
as Hemswell Cliff in the north) and the associated parklands, woodland cover and tree k	
extensive screening and enclosure. To the west, the Gainsborough AGLV2 is well- contai	
concentration of woodlands that extend from Knaith Park in the south as far north as th	
Wharton. These woodlands include Wharton Wood, Birch Wood and Thurlby Wood and	
evels of containment and separation within the landscape. There is a particular concen	
cumulative visibility to the northeast of Willingham by Stow, but the local concentration	
comprising Top Wood, Heaton's Wood, and Big Wood help to curtail visibility in this area	a. The other Cumulative Developments at Bumble Bee Farm, Field Farm and Scheme by the intervening settlements of Gainsborough, Lea, Blyton and

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> ppments is Minor with the Tillbridge /ear 1 of operation. The effects would be betterment is due to the low-level nature of V with new hedgerows and tree planting, giving dy Area, all in helping reduce to reduce the

> Designated elements or features of the erences where there is a marked contrast being AGLV1- The Ridge and AGLV 2 route of the B1398 offer valuable views over the d built features within the Till Vale are often kylines, key views, watercourses, and river

ing the solar panel areas, the substation area and the Cottam 1 Site/Sites and extending e Corridors').

m 1 Site/Sites, cumulative visibility with the of the 5km study area. This is due to the en the Site/Sites. The intervening settlements and

ely significant effects, between the Cotton 1 Solar Park. This cumulative visibility is set out

oments Augmented ZTV [C6.4.8.15.2.6]. This ements of Kexby, Willingham by Stow and Stow context with the Gate Burton Site.

lopments Augmented ZTV [C6.4.8.15.2.8]. This ies' are located directly adjacent to each other, ingham. There are no intervening settlements, evelopment with the Scheme would give rise to a of the settlements. The presence of the Tillbridge the Cottam 2 Sites. The primary and secondary ained leading to an improvement at the ly Area.

oments Augmented ZTV [C6.3.4.15.2.9]. This ottam 1 Site where the intervening settlements will impair any associated landscape context

nd High Marnham are separated from the d Willingham by Stow.



There are very minor patches of cumulative intervisibility between the Cottam 1 Site/Sites, Cottam 2 and Cottam 3a Sites, located to the:	<u>Overall Cha</u> Overall, th
 northeast of Sturton by Stow, extending between Tillbridge Road and Ingham Road. 	character a
There are no Locally Designated features within this patch of intervisibility. Besides, the landscape features within these areas comprise local undulations in landform found to each side of the River Till and where the presence of large-scale arable fields prevail.	how the na of the land the Cottam Moreover,
There are very minor patches of cumulative intervisibility between the Cottam 1 Site/Sites, Cottam 2 and Cottam 3b Sites, located to the:	a positive i
• northeast of Sturton by Stow, extending between School Lane Farm and Ingham Road. There are no Locally Designated features within this patch of intervisibility. Besides, the land use features within these areas are focused around local undulations in landform found to each side of the River Till and where the presence of large-scale arable fields prevail.	
 There are local patches of intervisibility between All Sites comprising the landscape to the: east boundary of the Cottam 1 North Site/Sites, extending from Glentworth in the north as far as Ingham in the south. 	
There are no Locally Designated features within this patch of intervisibility. Besides, the land use features within these areas are focused on the settlement pattern to the east that includes Ingham, Cammeringham and Brattleby. Woodland is mainly concentrated to the west of Cammeringham and Brattleby and includes geometric shaped shelterbelts and woodland plantations consisting of predominantly native species with large poplar specimens in shelterbelts. The woodlands and settlement help to curtail visibility in this area.	
Users of linear routes, especially footpaths or other rights of way, or transport routes, may potentially experience the aesthetic aspects of the cumulative sites revealed in succession as a series of sequential views. For further details refer to the following detailed visual receptor sheets:	
Appendix 8.3.2.2 Individual Viewpoint Receptor Sheets [C6.3.8.3.2.2] Appendix 8.3.2.3 Individual Viewpoint Receptor Sheets [C6.3.8.3.2.3] Appendix 8.3.2.4 Individual Viewpoint Receptor Sheets [C6.3.8.3.2.4]	
Appendix 8.3.3.2 Individual Residential Receptor Sheets [C6.3.8.3.3.2] Appendix 8.3.3.3 Individual Residential Receptor Sheets [C6.3.8.3.3.3]	
Appendix 8.3.4.2 Individual Transport Receptor Sheets [C6.3.8.3.4.2] Appendix 8.3.4.3 Individual Transport Receptor Sheets [C6.3.8.3.4.3]	
Appendix 8.3.5.2 Individual PRoW Receptor Sheets [C6.3.8.3.5.2] Appendix 8.3.5.3 Individual PRoW Receptor Sheets [C6.3.8.3.4.3]	
Overall Character of the National and Locally Designated Landscape	
Overall, the character of the landscape and the Locally Designated features is shaped by the striking variations in character and scenic appeal across the differing AGLV and this diversity is a key element of value. The main feature is how the narrow landscape band of the ridge landscape contrasts with the wider Till Vale. These relevant characteristics of the landscape have some ability to accommodate change without undue adverse effects. The cumulative visibility for the Cottam 1 Site/Sites would not alter the overall character of the landscape and its Locally Designated features. Moreover, these designations are set within a well-vegetated context or associated with undulating landform that plays a positive role in reducing the overall cumulative effects.	
The difference in effect between the addition of the Scheme to the cumulative baseline is low for the	

Cumulative Sites during the construction and operation(Year 1) stages, because there would be a barely

haracter of the National and Locally Designated Landscape the character of the landscape and the Locally Designated features is shaped by the striking variations in and scenic appeal across the differing AGLV and this diversity is a key element of value. The main feature is narrow landscape band of the ridge landscape contrasts with the wider Till Vale. These relevant characteristics ndscape have some ability to accommodate change without undue adverse effects. The cumulative visibility for am 1 Site/Sites would not alter the overall character of the landscape and its Locally Designated features. r, these designations are set within a well-vegetated context or associated with undulating landform that plays role in reducing the overall cumulative effects.

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	-	-
	perceptible change to the extent of landscape features and elements of importance. The baseline of the AGLV would not be affected but its wider setting would be improved with the landscape mitigation to yield beneficial effects.	
Magnitude	Construction: Low Operation (Year 1): Low Operation (Year 1) with only Embedded Mitigation: Low Operation (Year 15): Very LowDecommissioning: Very Low	Construction: Low Operation (Year 1): Low Operation (Year 1) with only Embedded Mitigation: Low Operation (Year 15): Very Low Decommissioning: Very Low
Type of Effect	Construction: Adverse & Short Term Operation (Year 1): Adverse & Long Term Operation (Year 1) with only Embedded Mitigation: Adverse & Long Term Operation (Year 15): Beneficial & Long Term Decommissioning: Neutral & Short Term	Construction: Adverse & Short Term Operation (Year 1): Adverse & Long Term Operation (Year 1) with only Embedded Mitigation: Adverse & Long Ter Operation (Year 15): Beneficial & Long Term Decommissioning: Neutral & Short Term
Significance of Effect	Construction: Minor Not Significant Operation (Year 1): Minor Not Significant Operation (Year 1) with only Embedded Mitigation: Minor Not Significant Operation (Year 15): Negligible Not Significant Decommissioning: Negligible Not Significant	Construction: Minor Not Significant Operation (Year 1): Minor Not Significant Operation (Year 1) with only Embedded Mitigation: Minor Not Significa Operation (Year 15): Negligible Not Significant Decommissioning: Negligible Not Significant

* Potential exists to use targeted, low-density sheep grazing in appropriate areas of wildflower meadow under panelled areas for short periods once a suitable sward has established. This may allow for diversification of grazing management. Grazing of tussock seeded areas may be appropriate to reduce the sward every three years. Careful monitoring is however required to prevent overgrazing with conservation grazing densities used.

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Landscape Receptor – National and Locally Designated Landscapes (Cottam 2 Site)

Receptor Baseline:

Within the Cottam 2 Site, at a regional scale, landscape character is assessed within the East Midlands Regional Landscape Character Assessment as forming part of RLCT Profile: 6a Limestone Scarps and Dipslopes, which is shown on Figure 8.5 [C6.4.8.5]. Limestone Scarps and Dipslopes only occupies the eastern most edge of the 5km Study Area where it shares a boundary with RLCT Profile: 4a Unwooded Vales. The Limestone Scarps and Dipslopes Landscape Character Type is part of the Jurassic Limestone belt that runs from Dorset to the Humber.

The landscape is characterized by the dynamic broad valley of the River Trent which is bordered by large urban areas including the cities of Nottingham and Lincoln connected by a strategic road network in a mostly north south direction. There are also scattered rural settlements perched on the edge of the floodplain that are linked by a smaller network of minor roads and local lanes which generally follow an east west alignment.

The Site/Sites do not include nationally or locally designated landscapes.

Within the 5km Study Area, there are locally designated landscapes comprising Areas of Greater Landscape Value (AGLV). West Lindsey District Council has bought forward these AGLV within their Local Plan. There are no policy criteria underpinning the AGLV and the composite areas/parts are not identified within the Local Plan. Therefore, for clarity of the descriptions of the AGLV below, are named as follows (as shown on Figure 8.6 [C6.4.8.6]

- AGLV1 The Ridge
- AGLV2 Gainsborough
- AGLV3 Laughton Wood

The Site/Sites for Cottam 2 are associated with the AGLV1 – The Ridge and AGLV2 – Gainsborough and these areas are likely to include the more sensitive receptors. These AGLV run in a north south direction to reflect the prevailing landscape pattern of the area that extends from Scunthorpe in the north to the city of Lincoln in the south.

Key Features:

AGLV1 The Ridge: This is centered on the landscape associated with the distinct landform ridge and around Grayingham, Blyborough, Willhoughton, Hemswell and Harpswell, to the east of the Site/Sites. The Ridge AGLV lies at the closest proximity to the Site/Sites as close as approximately 3.7km from the boundary between the settlements of Willhougton and Hemswell. The adjoining escarpment of the Lincolnshire Edge defines this low-lying landscape to the east, and this is an important landscape feature for the Cottam 2 Site. The landscape mainly comprises open arable and pastoral farmland with good hedgerow boundaries. Blyborough is particularly a backdrop for views across the Till Vale due to the abundance of woodland cover associated with Blyborough Hall that forms a strong feature on the ascending scarp slope. The scarp slope then supports further woodlands around Glentworth that also appear as a distinctive feature on the scarp slope and help to define landscape pattern. The landscape is crossed by minor roads and those that descend from the ridge-top route of the B1398 as steep lanes provide valuable views over the Till Vale. For example, views from Hemswell across the landscape towards Corringham and Pilham are a key feature that offers extensive views across the scarp and over the Till Vale. The views from this location show the transition from the trees and woodlands within the landscape enclosing the string of historic springline villages at the foot of the slope. Village entrances are secluded and narrow at the top of the scarp slope.

AGLV2 Gainsborough: This is centered on the landscape associated with the outskirts of Gainsborough to the west of the Site/Sites. The Gainsborough AGLV lies at the closest proximity to the Site/Sites at approximately 3.1km west to the north-east of Gainsborough. This is the low-lying, gently undulating terrain that rises to the north-east of Gainsborough to around 30m AOD in the vicinity of Thonock Grove and Castle Hills. This relatively elevated land extends as far south as Marton and this eastern boundary of the AGLV marks a very distinct transition between the Trent Valley area and the Till Vale where significant blocks of woodland mark the boundary. Some of these woodlands are ancient woodland including Wharton Wood, Birch Wood, Somerby Wood, and Whites Wood. This combination of tree cover and undulating landform provides a sense of enclosure especially since the AGLV does not include the River Trent and its adjacent washlands. The AGLV is further contained to the west by urban edge of Gainsborough adding to the sense of enclosure within this landscape. There are landmark features such as Castle Hills Wood ringwork and baileys that overlooks the Trent valley that is thought to date from the 11th or mid-12th century. The A631Corringham Road passes east west and joins the northern section of the AGLV. Other east west routes pass to the north of the AGLV such as the A159 (outside the AGLV) and the Gainsborough to Grimsby mainline railway.

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Site (National and Local Designations), recent trends have shown that the AGLV has undergone rapid change in some areas, that in some parts is leading to homogenization of the landscape and loss of hedgerows. However, there is an opportunity to reinforce landscape character and build in more diversity across the landscape especially in terms of retaining as many trees as possible and planting native trees to help screen and accommodate built development. There is also scope to build in landscape mitigation, particularly where the Ridge AGLV forms a continuous line at the foot of the steep slope and where the Gainsborough AGLV has an enclosed intimate character that meets with the more open character of the Till Vale. Overall, the susceptibility of the National and Local Designations for the Cottam 2 Site is conditioned by the striking differences across the varying elements of the AGLV and that these can be appreciated across the landscape from both the higher land of the ridge and the adjoining Till Vale. Particular areas for focus include the proportion of pasture to arable fields in particular those around the edges of settlements which are particularly important to landscape setting	ng relationship between scenic quality and settlement where many villages from distinctive views, local landmarks, and features around their edges. settlements such as Yawhthorpe, Pilham and Aisby are small and compact, cal evidence suggests they may once have been larger. These small ble in contrast to the larger villages of Saxilby and Sturton by Stow.	Sensitivity <u>Character:</u> This is a landscape of long views, particularly to the east comprising the scarp face of the Lincoln Cliff which features in many combinations/directions. To the west, the views towards the	Embedded Mitigation Embedded Mitigation would be taken into account at the construction, operation (Year 1 and Year 15) and decommissioning stages of the Scheme. This Embedded Mitigation is also referred to as primary mitigation and would include the following measures:
Site (National and Local Designations), recent trends have shown that the AGLV has undergone rapid change in some areas, that in some parts is leading to homogenization of the landscape and loss of hedgerows. However, there is an opportunity to reinforce landscape character and build in more diversity across the landscape especially in terms of retaining as many trees as possible and planting native trees to help screen and accommodate built development. There is also scope to build in landscape mitigation, particularly where the Ridge AGLV forms a continuous line at the foot of the steep slope and where the Gainsborough AGLV has an enclosed intimate character that meets with the more open character of the Till Vale. Overall, the susceptibility of the National and Local Designations for the Cottam 2 Site is conditioned by the striking differences across the varying elements of the AGLV and that these can be appreciated across the landscape from both the higher land of the areas for focus include the proportion of pasture to arable fields in particular those around the edges of settlements which are particularly important to landscape setting and form a subtle relationship. Within this AGLV, views are generally contained by tall	from distinctive views, local landmarks, and features around their edges. settlements such as Yawhthorpe, Pilham and Aisby are small and compact, cal evidence suggests they may once have been larger. These small	long views, particularly to the east comprising the scarp face of the Lincoln Cliff which features in many combinations/directions. To the	account at the construction, operation (Year 1 and Year 15) and decommissioning stages of the Scheme. This Embedded Mitigation is also referred to as primary mitigation and would include the following
giving the landscape a very limited capacity to accommodate change. The relevant characteristics therefore have a limited susceptibility to accommodate change without undue adverse effects.	nt Washlands are important for nature conservation along with the ancient ibute to the natural character of the landscape. <u>ent:</u> The district has relatively few tourist 'attractions' and many visitors scenic drives, including the historic churches, and the long views between ncolnshire Cliff. <u>ad Sense of Place:</u> This is a landscape of long views, particularly to the west face of the Lincoln Cliff which features in many combinations/directions. To wards the power stations are curtailed by the settlement of Gainsborough, ng land and associated woodland. The landscape accommodates a variety of land uses and features is and the wider footpath and bridleway network associated with the River <u>tion:</u> The historic parklands of Blyborough and other woodland associated the east and the woodlands at the edge of Gainsborough in the west	power stations are curtailed by the settlement of Gainsborough, its relative area of rising land and associated woodland. <u>Quality:</u> The pressures are centered around existing woodlands and the combination of tree cover that provides a sense of enclosure in the context of AGLV2. The AGLV is further contained to the west by urban edge of Gainsborough. <u>Value:</u> Pressure from arable cultivation has resulted in field enlargement, removing boundaries, and creating a more open landscape that has caused alteration/degradation/ or erosion of some features that form the wider setting to the AGLVs. <u>Capacity:</u> The landscape benefits from its low elevation, and the views from these lowlands towards the elevated areas of AGLV1, which acts as a strong backdrop, and this affects the tolerance of the landscape to change.	 Panels to be set a minimum of 3m from Site boundaries. Panels to be set minimum of 20m from major watercourses and minimum of 8m from minor watercourses. Site boundary fencing to be set back 5m from adjacent existing hedgerows to allow for proposed thickening and growth. Existing hedges are to be allowed to grow out and will be managed to a height of 5m Hedgerow trees will be encouraged to grow out to add further thickening and growth to the field boundaries with the addition of new hedgerow trees as appropriate, randomly spaced along the length of existing hedges. Lighting will be limited to downlights withi substations and battery banks only and used when maintenance or security is required. Lighting will be PIR operated and with cowls fitted to prevent light spillage. Lighting required within panelled areas wi be manually operated. There will be no lighting on perimeter fencing. The landscape effects with only the Embedded Mitigation taken into account equate to those effects set out for the operation stage (river1) and this includes secondary mitigation which will have beer carried out but will have had limited
ligh (5km Study Area) High (5km Study Area		High	physical or landscape character impact at this Embedded Mitigation stage.



Medium (Site/Sites)

Medium (Site/Sites)

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Medium

Landscape Receptor - National and Locally Designated Landscapes (Cottam 2 Site)

Construction	Operation (Year 1)	Operation (Year 15)	Decon
Activities during site preparation / enabling works,	In terms of mitigation for the two AGLV's associated	The effects at the Operational Phase at Year 15	A simila
construction, and commissioning with effects such as	with the Cottam 2 Site/Sites, due to their distance and	without Mitigation equate to those effects at the	the Sche
construction traffic, noise and vibration from	varied relationship with the immediate landscape to	beginning of Year 1 before any secondary mitigation	assessm
construction activities, dust generation, site runoff,	their boundaries, it is anticipated that the overall	has been applied. Mitigation embedded in the design	of existi
mud on roads, and the visual intrusion of plant and	scheme of mitigation that will reinforce the landscape	will apply as will the growing out of the existing	primary
machinery on site. At the early stages of the	character where this has been lost or eroded in the last	hedges.	establis
construction stage, ground, and lower-level activities	century to intensive arable farming.		arising f
such as the construction of the solar panel areas and	,	With secondary mitigation such as planting and grass	decomn
associated infrastructure and inverters would be	There will be a much greater level of tree cover and	seeding being taken into account at the operational	vibratio
predominantly screened by the existing vegetation	hedgerow cover the Cottam 2 Site/Sites.	stage (Year 15) the following changes to the landscape	generat
cover.		would occur and the effects are set out below.	
	Considerable biodiversity gains will be brought about		Followin
During the latter part of the construction stage, views	by the increase in tree and hedge cover as well as	There will be a much greater level of tree cover over	returne
would become available of the elevated activities	having the benefit of capturing carbon.	the Cottam 2 Site/Sites. This tree cover will have	benefit
above the hedgerows, some views from limited specific		matured to integrate into the existing field boundary	hedgero
areas of the elevated land to the east are likely to	The reversion of arable land to grassland will have	and woodland vegetation both locally and across the	begun t
occur, but these would not affect the integrity of the	considerable ecological benefits, widely increasing the	wider landscape setting.	landsca
landscape receptor in itself and would be limited in	biodiversity, resilience, and sustainability of the area		characte
their duration.	generally and starting to improve soil structure and	The reversion of arable land to grassland will have	benefits
	water quality. Varied grassland mixes and flower rich	established to achieve a rich tapestry of habitats where	to be re
Other works would be undertaken in connection with	pollinator mixes will build in more diversity and create	grassland mixes have integrated into their natural	grass m
the construction including fencing, gates, boundary	visual interest across the landscape.	environment and established their natural	maintai
treatment and other means of enclosure and works for		composition with the help of some appropriate	
the provision of security and monitoring measures	Secondary mitigation such as planting, and grass	management. Soil structure will be much improved	Withou
such as CCTV and the laying down of internal tracks.	seeding would be taken into account at this stage to	through the lack of cultivation and water quality	through
There would also be landscape and biodiversity	include the following measures:	improvement will be seen.	views/la
mitigation works, including planting and the			the exist
improvement of existing hedgerows to all boundaries	The western boundary of the Cottam 2 Site is to be	Views across the Cottam 2 Site/Sites from the adjacent	to grow
of the Site/Sites.	planted with a strong shelterbelt along its length,	AGLV's will predominantly be maintained where	5m. lt is
These short lived construction activities would not	augmenting a few areas where vegetation already	necessary but will form a richer tapestry of heights,	
These short-lived construction activities would not unduly affect any of the landscape receptors in the	exists.	colours and texture.	With Mi decomn
surrounding area. There would be a change to the	To the south of the Cottam 2 Site/Sites, enhanced	Growth of existing and proposed vegetation is	term lar
arable land use, but the field boundaries and the	hedgerows along the boundary will help to provide a	assumed to be:	
associated tree cover would remain intact and help	denser form of enclosure generally.		
with layering and the integration of the new panels.	denser form of enclosure generally.	Woodland/trees and shelterbelts: 2.5m max at Year 1,	
There would not be a fundamental change to the	A scattered tree belt, with riparian species, to the	7.5m max at Year 15.	
surroundings to the views and settings of these	eastern boundaries of the Cottam 2 Site/Sites and		
landscape receptors.	bordering the Yawthorpe Beck will mitigate any views	New hedgerows: 0.6m at Year 1 and 3.5m at Year 15.	
	towards the Site from the east and the settlement of		
	Yawthorpe and begin to add some structure to the	Existing hedgerows: 0.9m at Year 1 and 5m at Year 15.	
	river course across the wider landscape, helping to		
	better define this feature.	Shrubs: 0.9m at Year 1 and 5m at Year 15.	
	To the north of the Cottam 2 Site/Sites, scattered trees	By Year 15, new tree cover in the form of scattered	
	will enhance the character in the wider landscape.	native tree belts and shelterbelts/woodlands will have established and begun to mature, reaching a height of	
	The cultural heritage of the farmed landscape and its	some 7.5m. These elements will sit within the	
	importance in providing a wider setting to the two	landscape and will begin to better define field	
	AGLV's associated with the Cottam 2 Site/Sites will be	boundaries and roadsides, with watercourses better	1

commissioning

nilar process to that of construction stage, but with Scheme being no longer operational. This is an essment of the Site in winter but assumes retention kisting vegetation and builds upon the proposed hary and secondary mitigation that had been blished as the future baseline. Effects are those ong from activities for the duration of the commissioning to include site traffic, noise and ation from decommissioning activities, dust eration and site runoff.

wing decommissioning, the land is likely to be rned to arable production. The Site will however efit from the significantly enhanced tree and gerow planting that has been carried out and has un to mature to create a much stronger and robust scape, retaining and enhancing the overall acter and providing considerable biodiversity efits over the years. Bird mitigation fields are likely e retaining and the potential may exist to retain s margins to retain some varied land use and htain a high level of biodiversity in the local area.

nout Secondary Mitigation having been applied ughout the scheme, the only change to the s/landscape following decommissioning would be existing hedgerows which will have been allowed row out and will have been managed to a height of It is assumed that these will be retained.

• Mitigation, the negative effects of the physical ommissioning will be balanced out by the long • landscape and visual effects of this mitigation.



Magnitude	Very Low	Very Low	Very Low	Very
5km Study A				
5km Study A	rea:	retained and enhanced. The mitigation proposals will bring forward a more varied mix of land use and significantly enhanced grassland areas that will aim to reinforce the historic field pattern in this farmed landscape, where applicable. To the east, along the Ridge AGLV1 and within the Limestone Scarps and Dipslopes Character Area 6a, the landscape will also benefit from the improvements to the farmed landscape in the Till Vale with this being part of their wider setting. To the west, the landscape is centered on the Gainsborough AGLV2, and the woodlands associated with the outskirts of the settlement will benefit from an improved setting. Enhancements to the overall level of tree cover, although immature at this stage will have a very minor but beneficial effect on the setting of the local villages and will enhance the character generally in the context of the two AGLVs. Between Years 1 and 15, the following beneficial effects will be achieved in terms of Designated Landscapes: Grassland reversion across the Site (s) A more varied landscape setting to the AGLVs Improved management of exiting vegetation Less intensively managed field boundaries Increased visibility/definition of watercourses across the landscape setting Protection of existing landscape receptors Increased woodland/vegetation cover across the wider landscape setting Increased riparian species vegetation Significantly improved biodiversity Improved green corridors across the landscape Historic field pattern reinforced Adverse effects (mitgated): Panels and structures across the landscape setting of the AGLVs Increased hard standing areas and infrastructure The effects at the Operational Phase at Year 15 without Embedded Mitigation equate to those effects at the beginning of Year 1 before secondary mitigation has been applied. The Effects set out below include secondary mitigation which will have been carried out but will have had limited physical impact at	presented by riparian species along their winding routes. Hedgerows will have established and outgrown, being managed to a height of 5m creating a layered vegetated scene across the landscape from the higher land an d a more intimate environment from the lower levels. Strong lines of tree lined hedges will run across and down the landscape forming a rich pattern of colour and form. The two AGLV's are able to accommodate the proposed development without undue adverse effects with long term physical and visual benefits over the Site as a whole. Overall , in terms of mitigation for the Cottam 1 Site/Sites, due to the exposed location of Ridge AGLV1, the aim is to retain as many trees as possible and plant native trees particularly where it forms a continuous line at the foot of the steep slopes at the junction with the Till Vale. The aim is also to keep any new routes at the lower elevations and follow natural breaks of slope where possible. The development and management of footpaths for short distance (2-3 mile) walks will also open up local areas of landscape within these locations. Any interventions at the junctions of footpaths should avoid straight alignments at angles to the natural grain in the land. Where waterways are enclosed by steep embankments there should be a priority to open up their presence in the landscape to enhance landscape character. With regard to the Gainsborough AGLV2, development on the higher ridges to the south and east can be accommodated providing it is associated with new tree and hedgerow planting and new development should not impinge on views towards the designed landscapes.	



Level of	Adverse & Short Term	Beneficial & Long Term	Neutral & Long Term	Neutra
Effect				
Significance	Negligible Not Significant	Negligible Not Significant	Negligible Not Significant	Neglig
of Effect				
Site/Sites and	l Cable Route Corridor:			
Magnitude	Low	Low	Medium	Very L
Level of	Adverse & Short Term	Beneficial & Long Term	Beneficial & Long Term	Neutra
Effect				
Significance	Minor Not Significant	Minor Not Significant	Moderate Significant	Neglig
of Effect				

In-Combination Effects [Cumulative Sites]	Cumulative Effects [Cumulative Developments]
In Summary	In Summary
The In-combination effects of the Cottam 2 Site with the other Cumulative Sites (Cottam 1, 3a and 3b) is	The Cumulative Effects of the Scheme with the other Cumulative Develop
Minor at year 1 of operation and Negligible at year 15 with mitigation. This is due to the limited impact	and adverse, giving rise to no likely Significant effects at year 1 of opera
as a result of the low-level nature of the Scheme together with the quantum of mitigation. There will be	with the embedded and additional mitigation. This betterment is due to
positive changes to the wider setting of the AGLVs due to the additional vegetation enhancing the local	with the improvements to the margins of the AGLV with new hedgerows
landscape character. The existing landscape character associated with these Cumulative Sites and Study Area would predominantly provide tree cover along the hedge lines and their margins with a change to	layering of the landscape across the Sites and Study Area, all in helping r
grassland with scattered trees, which would give rise to overall benefits to landscape character in the	Fabric of the Landscape
combination of all the Cumulative Sites.	There would not be the removal of, or changes to the Nationally and Loo
	Cottam 2. The landscape is shaped by the striking differences where the
Fabric of the Landscape	designated Areas of Great Landscape Value (AGLV) being AGLV1- The Ri
There would not be the removal of, or changes to the Nationally and Locally Designated Landscape	landscape is shaped by relationship with the adjoining settlement of Ga
features within Cottam 2. The landscape is shaped by the striking differences where there is a marked	blocks. There are also robust hedgerows with smaller fields and many tr
contrast between the locally designated Areas of Great Landscape Value (AGLV) being AGLV1- The Ridge	down of views across the area adding to the intimacy of the landscape of
and AGLV 2 - Gainsborough. The wider landscape is shaped by relationship with the adjoining	
settlement of Gainsborough and its associated strong woodland blocks. There are also robust	There would be the introduction of new elements and features compris
hedgerows with smaller fields and many trees in these locations that assist with closing down of views	the Cable Route Corridor extending between the Cottam 1 Site/Sites and
across the area adding to the intimacy of the landscape overall.	3a and 3b Sites (the 'Cable Route Corridors').
There would be the introduction of new elements and features comprising the solar panel areas, the	Aesthetic Aspects of the Landscape
substation area and the Cable Route Corridor extending between the Cottam 1 Site/Sites and the	Refer to Figure 8.15.2.2 [C6.4.8.15.2.2] which shows that with the Cottar
Cottam 2 Site and the Cottam 2 and Cottam 3a and 3b Sites (the 'Cable Route Corridors').	developments would not be experienced across the majority of the 5km
	intervening woodlands, hedgerows, and tree cover between the Site/Site
Aesthetic Aspects of the Landscape	would also curtail cumulative visibility.
Refer to Figure 8.15.1.2 [C6.4.8.15.1.2] which shows that with the Cottam 2 Site, cumulative visibility	
with the Cottam 1 Site/Sites and the Cottam 3a and 3b Sites would not be experienced across the	There are local patches of cumulative visibility which may be focus of lik
entirety of the 2km study area. This is due to the distance, the intervening woodlands, hedgerows, and	Tillbridge Solar. This cumulative visibility is set out in further detail withi
tree cover between the Site/Sites. The intervening settlements and built form would also curtail	
cumulative visibility.	Figure 8.15.2.6 Cottam 1, 2, 3a and 3b Gate Burton Cumulative Develop
	Gate Burton to the west of Cottam 2, where the intervening settlements
There are local patches of intervisibility between the Cottam 2 Site and with the 3a and Cottam 3b Sites	between, where their presence will impair any associated landscape con
extending from the:	
• South boundary of the Cottam 2 Site, starting at the eastern edge of Corringham and reaching	Figure 8.15.2.8 Cottam 1, 2, 3a and 3b Tillbridge Solar Cumulative Devel
as far as Yawthorpe Beck and Yawthorpe	shows Tillbridge to the south of the Cottam 2 Site, where their boundari
West boundary of the Cottam 2 Site, extending as far as Pilham Lane	to the south of Kexby Road and to the west of the settlement of Fillingh
• East boundary of the Cottam 2 Site, extending as far Yawthorpe and Yawthorpe Fox Covert	woodlands or major topography, such that the presence of Tillbridge De
Northwest boundary of the Cottam 2 Site, extending as far as the Cottam 3a and 3b Sites.	direct and compounded relationship in terms of the landscape context of

itral & Short Term

ligible Not Significant

/ Low

tral & Short Term

ligible Not Significant

opments is Minor with the Tillbridge Development ation. The effects would be Negligible at year 15 the low-level nature of the Scheme, together and tree planting, giving rise to the vegetative reduce to reduce the cumulative effect.

ally Designated Landscape features within ere is a marked contrast between the locally idge and AGLV 2 - Gainsborough. The wider insborough and its associated strong woodland rees in these locations that assist with closing overall.

ing the solar panel areas, the substation area and d the Cottam 2 Site and the Cottam 2 and Cottam

m 2 Site, cumulative visibility with the cumulative study area. This is due to the distance, the es. The intervening settlements and built form

ely significant effects, between the Cottam 2 and in the following figures:

ments Augmented ZTV [C6.4.8.15.2.6]. This shows of Kexby, Willingham by Stow and Stow lie ntext with the Gate Burton Site.

lopments Augmented ZTV [C6.4.8.15.2.8]. This ies' are located directly adjacent to each other, just am. There are no intervening settlements, evelopment with the Scheme would give rise to a of the settlements. The presence of the Tillbridge



The Locally Designated features are situated outside these local patches of intervisibility and is focused around the settlement of Gainsborough where the land use at the edges supports a good level of tree and woodland cover to help in curtailing visibility across these areas. The Gainsborough AGLV2 is wellcontained by a local concentration of woodlands that extend from Knaith Park in the south as far north as the A159 at Wharton. These woodlands include Wharton Wood, Birch Wood and Thurlby Wood and provide significant levels of containment and separation within the landscape. There is a particular concentration of cumulative visibility to the northeast of Willingham by Stow, but the local concentration of woodlands comprising Top Wood, Heaton's Wood, and Big Wood help to curtail visibility in this area.

There is a local patch of intervisibility between the Cottam 2 Site and with the Cottam 3b Site, comprising the:

- Northern-most tip of the Cottam 2 Site extending across the medieval village of Dunstall as far as the medieval village of Southorpe; and
- Southeast of the River Eau, extending as far as Huckerby Farm and Huckerby Bungalows.

There are no Locally Designated features within this patch of intervisibility. Besides, the landscape features within these areas comprise local undulations in landform found to each side of the Aisby Beck and Yawthorpe Beck where the presence of large-scale arable fields prevail but small-scale woodland blocks help to close down visibility across the landscape.

The abundance of farmsteads and their associated agricultural buildings also make a significant contribution in breaking down the visibility between the cumulative sites across this section of the landscape.

There are local patches of intervisibility between All Sites comprising the:

- North of the Bonsdale Farm at Pilham, extending across the landscape to the north of the medieval village of Dunstall as far as the medieval village of Southorpe
- West of the settlement of Corringham, extending from Staplegate House as far Windy Ridge on • Pilham Lane
- West of Springthorpe, extending across the landscape as far as Harpswell Low Farm; and •
- East of Yawthorpe, extending as far as Hemswell.

There are no Locally Designated features within this patch of intervisibility. Besides, the presence of settlement in the open landscape such as Yawthorpe brings mature trees and woodland cover to the landscape setting of the cumulative sites, and this helps in providing separation and screening between them.

Users of linear routes, especially footpaths or other rights of way, or transport routes, may potentially experience the aesthetic aspects of the cumulative sites revealed in succession as a series of sequential views. For further details refer to the following detailed visual receptor sheets:

Appendix 8.3.2.2 Individual Viewpoint Receptor Sheets [C6.3.8.3.2.2] Appendix 8.3.2.3 Individual Viewpoint Receptor Sheets [C6.3.8.3.2.3] Appendix 8.3.2.4 Individual Viewpoint Receptor Sheets [C6.3.8.3.2.4]

Appendix 8.3.3.2 Individual Residential Receptor Sheets [C6.3.8.3.3.2] Appendix 8.3.3.3 Individual Residential Receptor Sheets [C6.3.8.3.3.3]

Appendix 8.3.4.2 Individual Transport Receptor Sheets [C6.3.8.3.4.2] Appendix 8.3.4.3 Individual Transport Receptor Sheets [C6.3.8.3.4.3]

Appendix 8.3.5.2 Individual PRoW Receptor Sheets [C6.3.8.3.5.2] Appendix 8.3.5.3 Individual PRoW Receptor Sheets [C6.3.8.3.4.3]

Overall Character of the National and Locally Designated Landscape

Development would also add to coalescence between the Cottam 1 and the Cottam 2 Sites. The primary and secondary mitigation would however ensure that all existing features would be retained leading to an improvement at the operation stage (Year 15) of the watercousres across the Sites and Study Area.

Figure 8.15.2.9 Cottam 1, 2, 3a and 3b West Burton Cumulative Developments Augmented ZTV [C6.3.4.15.2.9]. This shows the West Burton Development located to the southwest of the Cottam 2 Site where the intervening settlements of Stow, Sturton by Stow and Bransby lie between, where their presence will impair any associated landscape context with the West Burton Site.

The other Cumulative Developments at Bumble Bee Farm, Field Farm and High Marnham are separated from the Scheme by the intervening settlements of Gainsborough, Lea, Blyton and Willingham by Stow.

Overall Character of the National and Locally Designated Landscape

Overall, the character of the landscape and the Locally Designated features is shaped by the striking variations in character and scenic appeal across the differing AGLV and this diversity is a key element of value. The main feature is how the narrow landscape band of the ridge landscape contrasts with the wider Till Vale. These relevant characteristics of the landscape have some ability to accommodate change without undue adverse effects. The cumulative visibility for the Cottam 2 Site would not alter the overall character of the landscape and its Locally Designated features. Moreover, these designations are set within a well-vegetated context or associated with undulating landform that plays a positive role in reducing the overall cumulative effects.

Environmental Statement Landscape and Visual Impact Assessment Appendix 8.2.8: Designation Analysis & Evaluation [Reference: EN010133/APP/C6.3.8.2.8.2] Jan 2023



	Overall, the character of the landscape and the Locally Designated features is shaped by the striking variations in character and scenic appeal across the differing AGLV and this diversity is a key element of value. The main feature is how the narrow landscape band of the ridge landscape contrasts with the wider Till Vale. These relevant characteristics of the landscape have some ability to accommodate change without undue adverse effects. The cumulative visibility for the Cottam 2 Site would not alter the overall character of the landscape and its Locally Designated features. Moreover, these designations are set within a well-vegetated context or associated with undulating landform that plays a positive role in reducing the overall cumulative effects.	
	The difference in effect between the addition of the Scheme to the cumulative baseline is low for the Cumulative Sites during the construction and operation(Year 1) stages, because there would be a barely perceptible change to the extent of landscape features and elements of importance. The baseline of the AGLV would not be affected but its wider setting would be improved with the landscape mitigation to yield beneficial effects.	
Magnitude	Construction: Low Operation (Year 1): Low Operation (Year 1): with only Embedded Mitigation: Low Operation (Year 15): Very Low Decommissioning: Very Low	Construction: Low Operation (Year 1): Low Operation (Year 1): with only Embedded Mitigation: Low Operation (Year 15): Very Low Decommissioning: Very Low
Type of Effect	Construction: Adverse & Short Term Operation (Year 1): Adverse & Long Term Operation (Year 1): with only Embedded Mitigation: Adverse & Long Term Operation (Year 15): Beneficial & Long Term Decommissioning: Neutral & Short Term	Construction: Adverse & Short Term Operation (Year 1): Adverse & Long Term Operation (Year 1): with only Embedded Mitigation: Adverse & Long Tern Operation (Year 15): Beneficial & Long Term Decommissioning: Neutral & Short Term
Significance of Effect	Construction: Minor Not Significant Operation (Year 1): Minor Not Significant Operation (Year 1): with only Embedded Mitigation: Minor Not Significant Operation (Year 15):: Negligible Not Significant Decommissioning: Negligible Not Significant	Construction: Minor Not Significant Operation (Year 1): Minor Not Significant Operation (Year 1): with only Embedded Mitigation: Minor Not Significa Operation (Year 15): Negligible Not Significant Decommissioning: Negligible Not Significant

* Potential exists to use targeted, low-density sheep grazing in appropriate areas of wildflower meadow under panelled areas for short periods once a suitable sward has established. This may allow for diversification of grazing management. Grazing of tussock seeded areas may be appropriate to reduce the sward every three years. Careful monitoring is however required to prevent overgrazing with conservation grazing densities used.

Environmental Statement Landscape and Visual Impact Assessment Appendix 8.2.8: Designation Analysis & Evaluation [Reference: EN010133/APP/C6.3.8.2.8.2] Jan 2023

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Landscape Receptor – National and Locally Designated Landscapes (Cottam 3a and 3b Sites)

Receptor Baseline:

Within the Cottam 3a and 3b Sites, at a regional scale, landscape character is assessed within the East Midlands Regional Landscape Character Assessment as forming part of RLCT Profile: 4b Wooded Vales, which is shown on Figure 8.5 [C6.4.8.5]. Wooded Vales does not extend into the 2km Study Area, and only occupies the western most extent of the 5km Study Area. At the eastern most edge of RLCT 4a, the boundary is shared with RLCT Profile: 6a Limestone Scarps and Dipslopes.

The sites within Cottam 3 can be sub-divided into two distinct land areas.

- Cottam 3a •
- Cottam 3b

The Site/Sites do not include nationally or locally designated landscapes.

Within the 5km Study Area, there are locally designated landscapes comprising Areas of Greater Landscape Value (AGLV). West Lindsey District Council has bought forward these AGLV within their Local Plan. There are no policy criteria underpinning the AGLV and the composite areas/parts are not identified within the Local Plan. Therefore, for clarity of the descriptions of the AGLV below, are named as follows (as shown on Figure 8.6 [C6.4.8.6]

- AGLV1 The Ridge
- AGLV2 Gainsborough
- AGLV3 Laughton Wood •

The Site/Sites for Cottam 3a and 3b fall within all three of these AGLV. The Ridge AGLV and Gainsborough AGLV run in a north south direction to reflect the prevailing landscape pattern of the area that extends from Scunthorpe in the north to the city of Lincoln in the south. The Laughton AGLV occupies the landscape to the north-east of Cottam between Scotter and the River Trent.

Cottam 3A

The site does not include nationally designated landscape of AGLV as shown on Figure 8.6

As seen on Figure 8.6, land within the Study Area shows there are locally designated landscapes comprising the AGLV centers around Gainsborough the west [Gainsborough AGLV]. The Ridge AGLV is located approximately 4.8km to the east of the Cottam 3A Site. The Laughton AGLV to the northwest of the Cottam 3A Site within the outer extents of the 2km study area and full within the 5km study area. The Laughton Wood AGLV covers an extensive area of woodland surrounding Laughton and located to the north of the site.

Cottam 3B

The site does not include nationally designated landscape or AGLV as shown on Figure 8.6.

As seen of Figure 8.6, land within the Study Area shows that there is evidence of AGLV to the east around Grayingham and Blyborough [Ridge AGLV]. The Ridge AGLV is located approximately 4.8km to the east of the Cottam 3B site.

Key Features:

AGLV1 The Ridge: This is centered on the landscape associated with the distinct landform ridge and around Grayingham, Blyborough, Willhoughton, Hemswell and Harpswell, to the east of the Site/Sites. The Ridge AGLV lies at the closest proximity to the Site/Sites as close as approximately 4.6km from the boundary between the settlements of Grayingham and Willhougton. The adjoining escarpment of the Lincolnshire Edge defines this low-lying landscape to the east, and this is an important landscape feature for the Cottam 2 Site. The landscape mainly comprises of open arable and pastoral farmland with good hedgerow boundaries. Blyborough is particularly a backdrop for views across the Till Vale due to the abundance of woodland cover associated with Blyborough Hall that's forms a strong feature on the ascending scarp slope. The landscape is crossed by minor roads and those that descend from the ridge-top route of the B1398 as steep lanes provide valuable views over the Till Vale. For example, views from Willhoughton across the landscape towards Blyton and Laughton are a key feature that offers extensive views across the scarp and over the Till Vale.

AGLV2 Gainsborough: This is centered on the landscape associated with the outskirts of Gainsborough to the south-west of the Site/Sites. The Gainsborough AGLV lies at the closest proximity to the Site/Sites at approximately 2.1km west to the west of Pilham. This is the low-lying, gently undulating terrain that rises to the north-east of Gainsborough to around 30m AOD in the vicinity of Thonock Grove and Castle Hills. This relatively elevated land extends as far south as Marton and this eastern boundary of the AGLV marks a very distinct transition between the Trent Valley area and the Till Vale where significant blocks of woodland mark the boundary. Some of these woodlands are ancient woodland including Wharton Wood, Birch Wood, and Somerby Wood. This combination of tree cover and undulating landform provides a sense of enclosure especially as the AGLV forms a boundary with the River Trent washlands that extend further west towards East Stockwith and Morton adding to the sense of open character within this landscape.

AGLV3 Laughton Wood: This is centered on the flat, open landscape that is dominated by large areas of woodland sandwiched between the settlements of East ferry, Laughton and Scotter. The area is dominated by the large conifer planation of Laughton Forest. The River Trent and its associated washlands forms part of the visual boundary to the west. The landscape is very flat except for the shallow ridge running north south form Hardwick Hill. There are wide panoramic views across this landscape and a strong perception of big skies except where the blocks of conifers give a strong sense of enclosure and closes down some views. There are also pockets of birchfringed heathland within the margins of the plantations, including the nature reserve of Scotton.

Environmental Statement Landscape and Visual Impact Assessment Appendix 8.2.8.3: Designation Analysis & Evaluation [Reference: EN010133/APP/C6.3.8.2.8.3] Jan 2023



IOLAR PROJECT			
Receptor susceptibility to change	Value of Receptor	Sensitivity	Embedded Mitigation
In terms of forces for change for the Cottam 1 Site/Sites (National and Local Designations), recent trends have shown that the AGLV has undergone rapid change in some areas, for example the woodland in Laughton Woods has been substantially felled in the past. However new planting has been designed to include a mixture of conifers and native deciduous species. Since most of the distinctive landscape patterns and features such as skylines, river corridors and pastures are historic remnants, they are particularly vulnerable to landscape change. Also with the former airbases, local aviation landmarks (control towers, hangers, runway alignment etc.) are important features of the history of the area. Overall, the susceptibility of the National and Local Designations for the Cottam 1 Site/Sites is conditioned by the rapid change to the area's woodlands but that with new planting they can take on a different appearance over time. The improvement of the presence of airbases in the landscape requires a restoration of their structure which integrates with the scale and character of the surrounding farmland and field patterns. The West Lindsey's airbases currently have a strong and generally negative influence on local landscape character. The cost of developing these air bases represent a substantial under used land resource which has landscape potential. The relevant characteristics therefore have a very limited susceptibility to accommodate change without undue adverse effects. There is scope to change the areas of woodland and improve the land use of the former airfields.	 <u>Scenic:</u> Clear views to village churches are a key feature of the area. <u>Cultural:</u> The wider landscape setting of the settlements promotes the importance of the landscape and form strong visual relationships between adjoining AGLV. <u>Natural:</u> Laughton Woods AGLV is valued for its wet heathland, a rare habitat in Lincolnshire and the nature reserve at Scotton is particularly important in this respect, but also a vulnerable feature in terms of future change. <u>Recreation and Enjoyment:</u> The future of West Lindsey's redundant airbases is a key consideration; however, they can have a degrading influence on landscape character. <u>Local Distinctiveness and Sense of Place:</u> The presence of individual field boundary oak/ash trees is a key feature of the area, but subject to decline. Even the relatively nondescript occasional trees often seen in isolation can make a crucial contribution to local landscape character. <u>Health and Wellbeing:</u> The AGLVs in combination provide a culture of 'soft tourism', in the form of walking, cycling, and boating and short breaks and this is a key aspect of the strategy. The villages at the crest of the scarp slope such as Blyborough, Willhoghton and Hemswell benefit from attractive settings due to the presence of woodland cover associated with the historic halls and associated parklands. <u>Important Spatial Function</u>: There are different landscape patterns that typify the differing landscape character and its contribution to spatial function, and these can be enhanced. Overall, the value of Nationally and Locally Designated Landscapes for the Cottam 3a and 3b Sites is shaped by the airbases that can generally have a degrading influence since they are prominent on exposed sites. They contribute little to surrounding landscape character, however there is scope to improve their landscape structure. The wider landscape setting of the settlements promotes the importance of the landscape an	Character: The character is positive and defined by wooded areas where extensive panoramas are possible. The gently undulating landform, although commonplace, also adds to the local distinctiveness. Quality: The agricultural intensification and farm amalgamation that is resulting in the loss or damage of many typical landscape features, including traditional patterns of field boundaries in the context of the wider setting of the AGLVs. <u>Value:</u> The Wooded Vales associated with AGLV2 are valued for recreation which often focuses on the woodland trail network that is focused on Laughton Woods and which attracts visitors from nearby Gainsborough and Scunthorpe. <u>Capacity:</u> The presence of mature woodland brings a sense of place and a strong framework in parts of the area to mitigate against landscape change. The wider landscape setting of the settlements promotes the importance of the landscape and where it forms a visual relationship between the adjoining AGLV, this adds vulnerability to the landscape.	Embedded Mitigation would be taken into account at the construction, operation (Year 1 and Year 15) and decommissioning stages of the Scheme. Overall, bedded Mitigation is also referred to as primary mitigation and would include the following measures: Panels to be set a minimum of 3m from Site boundaries. Panels to be set minimum of 20m from major watercourses and minimum of 8m from minor watercourses. Site boundary fencing to be set back 5m from adjacent existing hedgerows to allow for proposed thickening and growth. Existing hedges are to be allowed to grow out and will be managed to a height of 5m. Hedgerow trees will be encouraged to grow out to add further thickening and growth to the field boundaries with the addition of new hedgerow trees as appropriate, randomly spaced along the length of existing hedges. Lighting will be limited to downlights within substations and battery banks only and used when maintenance or security is required. Lighting will be PIR operated and will be calibrated to vehicle and personnel movements. All visible lighting would be 50W, installed at a maximum height of 4m with cowls fitted to prevent light spillage. Lighting required within panelled areas will be manually operated. There will be no lighting on perimeter fencing. The landscape effects with only the Embedded Mitigation taken into account equate to those effects set out for the operation stage (Year 1) and this includes secondary mitigation which will have been carried out but will have had limited physical or landscape character impact at this Embedded Mitigation stage.



High (5km Study Area)	High (5km Study Area)	High
Medium (Site/Sites)	Medium (Site/Sites)	Medium

Landscape Receptor - National and Locally Designated Landscapes (Cottam 3a and 3b Sites)

Construction	Operation (Year 1)	Operation (Year 15)	Decom
Activities during site preparation / enabling works,	In terms of mitigation for the three AGLV's associated	The effects at the Operational Phase at Year 15	A similar
construction, and commissioning with effects such as	with the Cottam 3a and 3b Site/Sites, due to their	without Mitigation equate to those effects at the	the Sche
construction traffic, noise and vibration from	distance and varied relationship with the immediate	beginning of Year 1 before any secondary mitigation	assessme
construction activities, dust generation, site runoff,	landscape to their boundaries, it is anticipated that the	has been applied. Mitigation embedded in the design	of existin
mud on roads, and the visual intrusion of plant and	overall scheme of mitigation that will reinforce the	will apply as will the growing out of the existing	primary a
machinery on site. At the early stages of the	landscape character where this has been lost or	hedges.	establish
construction stage, ground, and lower-level activities	eroded in the last century to intensive arable farming.		arising fro
such as the construction of the solar panel areas and		With secondary mitigation such as planting and grass	decommi
associated infrastructure and inverters would be	There will be a much greater level of tree cover and	seeding being taken into account at the operational	vibration
screened due to existing vegetation.	hedgerow cover over the Cottam 3a and 3b Site/s	stage (Year 15) the following changes to the landscape	generatio
scielled due to existing vegetation.	-	would occur and the effects are set out below.	generatio
During the latter part of the construction stage views	although this will be immature at this point.	would occur and the effects are set out below.	Fallowing
During the latter part of the construction stage, views		The second	Following
would become available of the elevated activities	Considerable biodiversity gains will be brought about	There will be a much greater level of tree cover over	returned
above the hedgerows. Some views from limited	by the increase in tree and hedge cover as well as	the Site(s). This tree cover will have matured to	benefit fr
specific areas of the elevated land to the east are likely	having the benefit of capturing carbon in the longer	integrate into the existing field boundary and	hedgerov
to occur, but these would not affect the integrity of the	term.	woodland vegetation both locally and across the wider	begun to
landscape receptor in itself and would be limited in		landscape setting.	landscap
their duration.	The reversion of arable land to grassland will have		character
	considerable ecological benefits, widely increasing the	The reversion of arable land to grassland will have	benefits of
Other works would be undertaken in connection with	biodiversity, resilience, and sustainability of the area	established to achieve a rich tapestry of habitats where	to be reta
the construction including fencing, gates, boundary	generally and starting to improve soil structure and	grassland mixes have integrated into their natural	grass ma
treatment and other means of enclosure and works for	water quality. Varied grassland mixes and flower rich	environment and established their natural	maintain
the provision of security and monitoring measures	pollinator mixes will build in more diversity and begin	composition with the help of some appropriate	
such as CCTV and the laying down of internal tracks.	to create visual interest across the landscape.	management. Soil structure will be much improved	Without
There would also be landscape and biodiversity		through the lack of cultivation and water quality	througho
mitigation works, including planting and the	Secondary mitigation such as planting, and grass	improvement will be seen.	views/lan
improvement of existing hedgerows to all boundaries	seeding would be taken into account at this stage to		the existi
of the Site/Sites.	include the following measures:	Views across the Site(s) from the adjacent AGLV's will	to grow o
		predominantly be maintained where necessary but will	5m. It is a
These short-lived construction activities would not	New hedgerows will be provided to the northern	form a richer tapestry of heights, colours and forms.	
affect any of the landscape receptors in this area.	boundary of the Cottam 3a Site and to the western		With Miti
There would be a change to the arable land use, but	boundaries of the Cottam 3b Site where none currently	Growth of existing and proposed vegetation is	decommi
the field boundaries and the associated tree cover	exist, increasing the overall level of hedgerows across	assumed to be:	term land
would remain intact and help with layering and the	the landscape.		
integration of the new panels. There would not be a		Woodland/trees and shelterbelts: 2.5m max at Year 1,	
fundamental change to the surroundings to the views	New and enhanced hedgerows to the southern and	7.5m max at Year 15.	
and settings of the landscape receptors.	eastern boundaries of the Cottam 3b Site will further		
	enhance and strengthen these features.	New hedgerows: 0.6m at Year 1 and 3.5m at Year 15.	
	Within the Cottam 3a Site, enhanced hedgerows,	Existing hedgerows: 0.9m at Year 1 and 5m at Year 15.	
	successional scrub, and scattered trees to the south		
	and southwestern boundaries help to buffer existing	Shrubs: 0.9m at Year 1 and 5m at Year 15.	
	vegetation and successional scrub along the eastern		
	boundary will abut the existing vegetation adjacent to	By Year 15, new tree cover in the form of scattered	
	the watercourse. A large block of successional scrub is	native tree belts and shelterbelts/woodlands will have	
	also proposed to the western boundary, screening	established and begun to mature, reaching a height of	
	views from the west.	some 7.5m. These elements will sit within the	
		landscape and will begin to better define field	
		boundaries and roadsides, with watercourses better	
	1	Boundaries and roadsides, with water tourses beller	

Environmental Statement Landscape and Visual Impact Assessment Appendix 8.2.8.3: Designation Analysis & Evaluation [Reference: EN010133/APP/C6.3.8.2.8.3] Jan 2023

mmissioning

ar process to that of construction stage, but with neme being no longer operational. This is an ment of the Site in winter but assumes retention ting vegetation and builds upon the proposed ry and secondary mitigation that had been shed as the future baseline. Effects are those from activities for the duration of the missioning to include site traffic, noise and on from decommissioning activities, dust ation and site runoff.

ing decommissioning, the land is likely to be ed to arable production. The Site will however from the significantly enhanced tree and row planting that has been carried out and has to mature to create a much stronger and robust ape, retaining and enhancing the overall ter and providing considerable biodiversity ts over the years. Bird mitigation fields are likely etaining and the potential may exist to retain nargins to retain some varied land use and in a high level of biodiversity in the local area.

ut Secondary Mitigation having been applied hout the scheme, the only change to the landscape following decommissioning would be isting hedgerows which will have been allowed w out and will have been managed to a height of is assumed that these will be retained.

litigation, the negative effects of the physical missioning will be balanced out by the long andscape and visual effects of this mitigation



	[K
Within the Cottam 3b Site, successional scrub is proposed to the northern boundary adjacent to the railway line, with new and enhanced hedgerows to the southern and eastern boundaries and across this Site/Sites adding to the overall field boundary vegetation. The cultural heritage of the farmed landscape and its importance in providing a wider setting to the three AGLV's associated with the Cottam 3a and 3b Sites will be retained and enhanced. The mitigation proposals will bring forward a more varied mix of land use and significantly enhanced grassland areas that will aim to reinforce the historic field pattern in this farmed landscape, where applicable. To the east, along the Ridge AGLV1 and within the Limestone Scarps and Dipslopes Character Area 6a, the landscape will also benefit from the improvements to the farmed landscape in the Till Vale with this being part of their wider setting. To the west, the landscape is centered on the Gainsborough AGLV2, and the woodlands associated with the outskirts of the settlement will benefit from an improved setting. To the northwest, the Laughton Woods AGLV3 is centered on the flat, open landscape that is dominated by large areas of woodland sandwiched between the settlements of East ferry, Laughton and Scotter. The area is dominated by the large conifer planation of Laughton Forest and its setting will benefit from the improvements to the farmed landscape within the Till Vale.	presented by riparian species along their winding routes. Hedgerows will have established and outgrown, being managed to a height of 5m creating a layered vegetated scene across the landscape from the higher land and a more intimate environment from the lower levels. Strong lines of tree lined hedges will run across and down the landscape forming a rich pattern of colour and form. The two AGLV's are able to accommodate the proposed development without undue adverse effects with long term physical and visual benefits over the Sites as a whole. Overall , in terms of mitigation for the Cottam 1 Site/Sites, due to district's relatively few tourist 'attractions' the nostalgic value of the airbases and their importance to aviation heritage could be recognised and retained in plans for their future development. The road network is also a priority for conservation and any new planting should be designed to integrate with the existing patten of hedgerows and trees. New planting should also avoid creating a 'linear' corridor of planting which would draw attention to any linear infrastructure developments. Also avoid the implementation of broad landscape belts that could obscure views and detract from the relationship between settlements and their landscape context. A program for monitoring the extent of key landscape features such as hedgerows and trees, together with a scheme for their on-going management.
Enhancements to the overall level of tree cover, although immature at this stage will have a very minor but beneficial effect on the setting of the local villages and will enhance the character generally in the context of the AGLVs. Between Years 1 and 15, the following beneficial effects will be achieved in terms of Designated Landscapes: - Grassland reversion across the Site (s) - A more varied landscape setting to the AGLVs - Improved management of exiting vegetation - Less intensively managed field boundaries - Increased visibility/definition of watercourses across the landscape setting - Protection of existing landscape receptors - Increased woodland/vegetation cover across the wider landscape setting - Increased riparian species vegetation - Significantly improved biodiversity - Improved carbon retention/capture - Overwintering opportunities for bird species - Improved green corridors across the landscape	



Magnitude Adverse & Short Term Beneficial & Long Term Neutral & Long Term Neu Effect Significance of Effect Negligible Not Significant Negligible Not Significant Negligible Not Significant Neg Site/Sites and Cable Route Corridor: Low Medium Medium Very Level of Effect Adverse & Short Term Beneficial & Long Term Beneficial & Long Term Neu			1	1	-
Image: Section of the AGLVS - Increased hard standing areas and infrastructureImage: Section of the AGLVS - Increased hard standing areas and infrastructureThe residual effects at the Operational Phase at Year 1 before secondary mitigation has been applied. The Effects set out below include secondary mitigation has been applied. The Effect Set out below include secondary mitigation has been applied. The Effect Set out below include secondary mitigation has been applied. The Effect Set out below include secondary mitigation has been applied. The Effect Set out below include secondary mitigation has been applied. The Effect Set out below include secondary mitigation has been applied. The Effect Set out below include secondary mitigation has been applied. The Effect Set out below include secondary mitigation has been applied. The Effect Set out below include secondary mitigation has been applied. The Effect Set out below include secondary mitigation has been applied. The Effect Set out below include secondary mitigation has been applied. The Effect Set out below include secondary mitigation has been applied. The Effect Set out below include secondary mitigation has been applied. The Effect Set out below include secondary mitigation has been applied. The Effect Set out below include secondary mitigation has been applied. The Effect Set out below include secondary mitigation has been applied. The Effect Set out below include secondary mitigation has been applied. The Effect Set out below include secondary mitigation has been applied. The Effect Set out below include secondary mitigation has been applied. The Effect Set out below include secondary mitigation has been applied. The Effect Set out below is applied. The Effe			- Historic field pattern reinforced		
include secondary mitigation which will have been carried out but will have had limited physical impact at this stage.include secondary mitigation which will have been carried out but will have had limited physical impact at this stage.include secondary mitigation which will have been carried out but will have had limited physical impact at this stage.include secondary mitigation which will have been carried out but will have had limited physical impact at this stage.include secondary mitigation which will have been carried out but will have had limited physical impact at 			 Panels and structures across the landscape setting of the AGLVs Increased hard standing areas and infrastructure The residual effects at the Operational Phase at Year 15 without Embedded Mitigation equate to those effects at the beginning of Year 1 before secondary		
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Effect Minor Not Significant Minor Not Significant Moderate Significant Neg	Magnitude	Low	Low	Medium	Very
		Adverse & Short Term	Beneficial & Long Term	Beneficial & Long Term	Neut
	-	Minor Not Significant	Minor Not Significant	Moderate Significant	Negli

Landscape Receptor – National and Locally Designated Landscapes (Cottam 3a and 3b Sites)

In-Combination Effects [Cumulative Sites]	Cumulative Effects [Cumulative Developments]
In Summary	In Summary
The In-combination effects of the Cottam 3a and 3b Sites with the other Cumulative Sites (Cottam 1 and	The Cumulative Effects of the Scheme with the other Cumulative Develop
2) is Minor at year 1 of operation and Negligible at year 15 with mitigation. This is due to the limited	and adverse, giving rise to no likely Significant effects at year 1 of operation
impact as a result of the low-level nature of the Scheme together with the quantum of mitigation. There will be positive changes to the wider setting of the AGLVs due to the additional vegetation enhancing the	with the embedded and additional mitigation. This betterment is due to t the improvements to the margins of the AGLV with new hedgerows and t
local landscape character. The existing landscape character associated with these Cumulative Sites and	of the landscape across the Sites and Study Area, all in helping reduce to
Study Area would predominantly provide tree cover along the hedge lines and their margins with a	
change to grassland with scattered trees, which would give rise to overall benefits to landscape	
character in the combination of all the Cumulative Sites.	Fabric of the Landscape
Fabric of the Landscape	There would not be the removal of, or changes to the Nationally and Loca
There would not be the removal of, or changes to the Nationally and Locally Designated Landscape	Cottam 3a and 3b. The landscape is shaped by the striking differences w
features within Cottam 3a and 3b. The landscape is shaped by the striking differences where there is a	locally designated Areas of Great Landscape Value (AGLV) being AGLV1-T
marked contrast between the locally designated Areas of Great Landscape Value (AGLV) being AGLV1-	Laughton Wood. The landscape bordering these AGLV is influenced by th
The Ridge, AGLV 2 – Gainsborough and AGLV3 – Laughton Wood. The landscape bordering these AGLV is	impact since they are prominent on exposed sites. They contribute little t
influenced by the airbases that can generally have a degrading impact since they are prominent on exposed sites. They contribute little to surrounding landscape character. The wider landscape setting of	landscape setting of the settlements promotes the importance of the land between adjoining AGLV where intervisibility exists.
the settlements promotes the importance of the landscape and form strong visual relationships	
between adjoining AGLV where intervisibility exists.	There would be the introduction of new elements and features comprisin

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ry Low

utral & Short Term

gligible Not Significant

ry Low

utral & Short Term

gligible Not Significant

opments is Minor with the Tillbridge Development ation. The effects would be Negligible at year 15 to the low-level nature of the Scheme, together with d tree planting, giving rise to the vegetative layering to reduce the cumulative effect.

ocally Designated Landscape features within where there is a marked contrast between the - The Ridge, AGLV 2 – Gainsborough and AGLV3 – the airbases that can generally have a degrading le to surrounding landscape character. The wider andscape and form strong visual relationships

sing the solar panel areas and the substation area.



There would be the introduction of new elements and features comprising the solar panel areas and the substation area.

Aesthetic Aspects of the Landscape

Refer to Figure 8.15.1.3 [C6.4.8.15.1.3] which shows that with the Cottam 3b Site, cumulative visibility with the Cottam 1 Site/Sites, Cottam 2 Site and Cottam 3b Site would not be experienced across the majority of the 2km study area. This is due to the distance, the intervening woodlands, hedgerows, and tree cover between the Site/Sites. The intervening settlements and built form would also curtail cumulative visibility between these Site/Sites.

There are local patches of intervisibility between the Cottam 3a and 3b Sites, extending from the:

- Northeast boundary of the Cottam 3a Site/Sites, defined to the west by the Green Respect Burial Park and Park House Farm, and reaching as far as Northorpe in the east
- East boundary of Cottam 3a Site, and stopping short of Cold Harbour Farm; and
- North boundary of the Cottam 3b Site, extending for a short distance as far as Grange Farm • and Top Farm.

The Laughton Wood AGLV3 is situated just on the northern-most edge of these local patches of intervisibility where the land use at the edges supports a good level of tree and woodland cover to curtailing visibility at the boundary of the designated area. There is also a very minor encroachment to the southwest of the Cottam 3b Site/Sites into the Gainsborough AGLV2, The Gainsborough AGLV lies at the closest proximity to the Site/Sites at approximately 2.1km west to the west of Pilham. The combination of tree cover and undulating landform provides a sense of enclosure adding to the sense of intimacy within this landscape.

There are local patches of intervisibility between Cottam 3a, 3b and Cottam 2 Site/Sites, extending from the:

- South boundary of the Cottam 3b Site, bordered by Pilham to the west and the medieval settlement of Dunstall to the east, and reaching as far as Springthorpe in the south
- South boundary of the Cottam 3a Site/Sites, bordered by the eastern edge of Blyton to the • west, reaching Grange Farm and stopping short of the mainline railway; and
- North boundary of the Cottam 3a Site/Sites, following the alignment of the A159 (Laughton Road) and stopping short to the west of the Green Respect Burial Park.

The Gainsborough AGLV2 and the Laughton Wood AGLV3 are located at the outer-most boundary of these local patches of intervisibility, however the presence of woodland blocks in combination with the meandering watercourses and smaller scale field systems brings a tighter grain and added layers to the landscape, which helps curtail cumulative visibility.

There is a local patch of intervisibility between All Sites, located to the:

• East of the Cottam 3b Site and north of the Bonsdale Farm at Pilham, extending across the landscape to the north of the medieval village of Dunstall as far as the medieval village of Southorpe.

The Gainsborough AGLV2 and the Laughton Wood AGLV3 are located at the outer-most boundary of these local patches of intervisibility, However, to the south of the railway line, the primary watercourse comprises the tributaries of the River Till which run in all directions and are divided by areas of geometric woodland, and this enhances the quality of the landscape and its ability to provide enclosure and intimacy, in contrast to the landscape to the north of the railway line. The presence of woodland blocks in combination with the meandering watercourses and smaller scale field systems brings a tighter grain and added layers to the landscape, which helps curtail cumulative visibility.

Users of linear routes, especially footpaths or other rights of way, or transport routes, may potentially experience the aesthetic aspects of the cumulative sites revealed in succession as a series of sequential views. For further details refer to the following detailed visual receptor sheets:

Aesthetic Aspects of the Landscape

Refer to Figure 8.15.1.3 [C6.4.8.15.1.3] which shows that with Cottam 3a and 3b, cumulative visibility with the cumulative developments would not be experienced across the majority of the 5km study area. This is due to the distance, the intervening woodlands, hedgerows, and tree cover between the Site/Sites. The intervening settlements and built form would also curtail cumulative visibility between these Site/Sites.

There are local patches of cumulative visibility which may be focus of likely significant effects, between the Cottam 3a and Tillbridge Solar. This cumulative visibility is set out in further detail within the following figures:

Figure 8.15.2.6 Cottam 1, 2, 3a and 3b Gate Burton Cumulative Developments Augmented ZTV [C6.4.8.15.2.6]. This shows Gate Burton to the west of Cottam 3a and 3b, where the intervening settlements of Kexby, Willingham by Stow and Stow lie between, where their presence will impair any associated landscape context with the Gate Burton Site.

Figure 8.15.2.8 Cottam 1, 2, 3a and 3b Tillbridge Solar Cumulative Developments Augmented ZTV [C6.4.8.15.2.8]. This shows Tillbridge to the south of the Cottam 3a and 3b Sites, where their boundaries' are located directly adjacent to each other, just to the south of Kexby Road and to the west of the settlement of Fillingham. There are no intervening settlements, woodlands or major topography, such that the presence of Tillbridge Development with the Scheme would give rise to a direct and compounded relationship in terms of the landscape context of the settlements. The presence of the Tillbridge Development would also add to coalescence between the Cottam 1 and the Cottam 2 Sites. The primary and secondary mitigation would however ensure that all existing features would be retained leading to an improvement at the operation stage (Year 15) of the watercousres across the Sites and Study Area.

Figure 8.15.2.9 Cottam 1, 2, 3a and 3b West Burton Cumulative Developments Augmented ZTV [C6.3.4.15.2.9]. This shows the West Burton Development located to the southwest of the Cottam 3a and 3b Sites where the intervening settlements of Stow, Sturton by Stow and Bransby lie between, where their presence will impair any associated landscape context with the West Burton Site.

Overall Character of the National and Locally Designated Landscape

Overall, the character of the landscape and the Locally Designated features is shaped by the striking variations in character and scenic appeal across the differing AGLV and this diversity is a key element of value. The wider landscape is shaped by relationship with the adjoining settlement of Gainsborough and its associated strong woodland blocks. There are also robust hedgerows with smaller fields and many trees in these locations that assist with closing down of views across the area adding to the intimacy of the landscape overall. The cumulative visibility for the Cottam 2 Site would not alter the overall character of the landscape and its Locally Designated features. Moreover, these designations are set within a well-vegetated context or associated with undulating landform that plays a positive role in reducing the overall cumulative effects.

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SOLAR PROJECT		
	Appendix 8.3.2.2 Individual Viewpoint Receptor Sheets [C6.3.8.3.2.2]	
	Appendix 8.3.2.3 Individual Viewpoint Receptor Sheets [C6.3.8.3.2.3]	
	Appendix 8.3.2.4 Individual Viewpoint Receptor Sheets [C6.3.8.3.2.4]	
	Appendix 8.3.3.2 Individual Residential Receptor Sheets [C6.3.8.3.3.2]	
	Appendix 8.3.3.3 Individual Residential Receptor Sheets [C6.3.8.3.3.3]	
	Appendix 8.3.4.2 Individual Transport Receptor Sheets [C6.3.8.3.4.2] Appendix 8.3.4.3 Individual Transport Receptor Sheets [C6.3.8.3.4.3]	
	Appendix 8.3.5.2 Individual PRoW Receptor Sheets [C6.3.8.3.5.2] Appendix 8.3.5.3 Individual PRoW Receptor Sheets [C6.3.8.3.4.3]	
	Overall Character of the National and Locally Designated Landscape	
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	value. The wider landscape is shaped by relationship with the adjoining settlement of Gainsborough and	
	its associated strong woodland blocks. There are also robust hedgerows with smaller fields and many trees in these locations that assist with closing down of views across the area adding to the intimacy of	
	the landscape overall. The cumulative visibility for the Cottam 2 Site would not alter the overall	
	character of the landscape and its Locally Designated features. Moreover, these designations are set	
	within a well-vegetated context or associated with undulating landform that plays a positive role in	
	reducing the overall cumulative effects.	
	The difference in effect between the addition of the Scheme to the cumulative baseline is low for the	
	Cumulative Sites during the construction and operation (Year 1) stages, because there would be a barely	
	perceptible change to the extent of landscape features and elements of importance. The baseline of the	
	AGLV would not be affected but its wider setting would be improved with the landscape mitigation to	
	yield beneficial effects.	
	Construction: Low	Construction: Low
	Operation (Year 1): Low	Operation (Year 1): Low
Magnitude	Operation (Year 1): with only Embedded Mitigation: Low	Operation (Year 1): with only Embedded Mitigation: Low
	Operation (Year 15): Very Low	Operation (Year 15): Very Low
	Decommissioning: Very Low	Decommissioning: Very Low
	Construction: Adverse & Short Term	Construction: Adverse & Short Term
Type of	Operation (Year 1): Adverse & Long Term	Operation (Year 1): Adverse & Long Term Operation (Year 1): with only Embedded Mitigation: Adverse & Long Ter
Effect	Operation (Year 1): with only Embedded Mitigation: Adverse & Long Term Operation (Year 15): Beneficial & Long Term	Operation (Year 1): With only Embedded Mitigation: Adverse & Long Ter Operation (Year 15): Beneficial & Long Term
	Decommissioning: Neutral & Short Term	Decommissioning: Neutral & Short Term
	Construction: Minor Not Significant	Construction: Minor Not Significant
Significance	Operation (Year 1): Minor Not Significant	Operation (Year 1): Minor Not Significant
Significance	Operation (Year 1): with only Embedded Mitigation: Minor Not Significant	Operation (Year 1): with only Embedded Mitigation: Minor Not Significa
of Effect	Operation (Year 15): Negligible Significant	Operation (Year 15): Negligible Not Significant
	Decommissioning: Negligible Not Significant	Decommissioning: Negligible Not Significant

* Potential exists to use targeted, low-density sheep grazing in appropriate areas of wildflower meadow under panelled areas for short periods once a suitable sward has established. This may allow for diversification of grazing management. Grazing of tussock seeded areas may be appropriate to reduce the sward every three years. Careful monitoring is however required to prevent overgrazing with conservation grazing densities used.

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Landscape Receptor – Scheduled Monuments, Listed Buildings, Conservation Areas and Registered Parks and Gardens (Cottam 1 Site/Sites)

Receptor Baseline:

Within the Cottam 1 Site/Sites, at a regional scale, landscape character is assessed within the East Midlands Regional Landscape Character Assessment as forming part of RLCT Profile: 4a Unwooded Vales, which is shown on Figure 8.5 [C6.4.8.5]. Unwooded Vales extends across the majority of the 2km and 5km Study Area apart from the eastern most edge where it shares a boundary with RLCT Profile: 6a Limestone Scarps and Dipslopes. The western extent of the 5km Study Area is also host to a small part of RLCT Profile 3a: Floodplain Valleys and RLCT Profile: 4b Wooded Vales. The Site/Sites within Cottam 1 (2km Study Area) can be sub-divided into two distinct land areas:

- Cottam 1 North •
- Cottam 1 South •

There are no Listed Buildings, Conservation Areas or Registered Parks and Gardens within the Cottam 1 Site/Sites.

Key Features:

Scheduled Monuments: The closest Scheduled Monument to the centre is Thorpe Medieval Settlement (List Entry Number: 1016978) in Thorpe le Fallows hamlet which borders the Cottam 1 Site/Sites to the south. The remains of the medieval village survive well as a series of substantial earthworks of a small settlement established before the late 11th century. Linear ponds adjacent to Thorpe Road are part of the group of remains and the war memorial near the center of the settlement marks the site of the medieval church. Coates Medieval Settlement and Moated Site (List Entry Number 1016979) is located approximately 560m from the boundary of the Cottam 1 South Site. There is a further Scheduled Monument outside the Site in the village of Brattleby called Cross on St Cuthbert's Churchyard (List Entry Number: 1018288) just within 2km of the boundary of the Cottam 1 South Site. Land within the 5km Study Area of the Cottam 1 South Site shows there are several scheduled monuments including Sites at Harpswell comprising Harpswell Hall (List Entry Number: 1019068) which is a postmedieval house and gardens overlying medieval settlement remains. The Site of a college and Benedictine Abbey (List Entry Number: 1012976) can be traced at St Mary's Church to the development of a major ecclesiastical site, The medieval settlement of Broxholme also survives as a series of substantial earthworks and its former open fields. The deserted village of North Ingleby (List Entry Number 100350) between Sturton by Stow and Marton, Knaith Park {List Entry Number 1008685) is the remains of a medieval nunnery of Heynings and Springthorpe (List Entry Number 1016920) is a moated manorial complex immediately north-west of Elm Tree Farm.

Listed Buildings: The Grade I listed Church of St Edith (List Entry Number: 1146742) lies in the hamlet of Coates at the centre of the Cottam 1 North Site. The church is Mid C12, early C13, C15 constructed in coursed limestone rubble, limestone ashlar with a plain tiled roof. The closest listed building in proximity to the Cottam 1 South Site/Sites is located at Thorpe le Fallows comprising Thorpe le Fallows Farmhouse (List Entry Number: 1308921), which is a c.1830 cream brick building with a hipped tiled roof. There are further number Listed Buildings within 2km Study Area of the Cottam Site/Sites. Land within the 5km Study Area for the Cottam Site/Sites shows there are several listed buildings in the village of Hemswell, which are all Grade II Listed apart from the Church of All Saints which displays a square tower of coursed ironstone rubble. Harpswell is host to the Grade I listed Church of St Chad of late C11, C13, C14 and restored C19 that is associated with the memory of the Duke of Cumberland.s "Victory over the rebels". Hemswell Cliff includes the former RAF Officer's Mess (List Entry Number 1435888), Aisthorpe with various Grade II Listed buildings, the Grade I Listed Gateway to Scrampton House which is an early C17 rusticated arch, Broxholme with its various Grade II listed buildings, Ingleby Chase (List Entry 1147263) an c. 1830 House, Brampton with its collection of Grade II Listed buildings, Marton with the Grade I Listed Church of St. Margaret of Antioch with its C11 tower of herringbone masonary, Gate Burton comprising the Grade II listed Gate Burton Hall (List Entry 1359458) Upton with its Grade II* listed Church of All Saints with the West Tower of 176 and Heapam with its Grade I listed Church of All Saints (List Entry 1064048).

Conservation Areas: There are several Conservation Areas including Brattleby, Ingham, Fillingham, Glentworth and Hemswell as follows:

Brattleby: This includes the majority of the village. The immediate grounds of Brattelby Hall are included within the Conservation Area reflecting the importance of the mature tree cover, particularly on the northern village approaches and along the drive to Thorpe Lane. The Church of St Cuthbert and its setting of mature trees is also an important feature along with the other mature trees in and around the village. Ingham: This includes The Green, which is a focal point in the village where the dividing roads are lined with mature and newly planted trees and the main part of The Green slopes gently north-west. The Church of All Saints dominates The Green being set on a low mound above it.

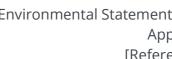
Fillingham: This includes the linear form of the main High Street, Chapel Road, and Willingham Road and where they open out at the east end of the village which is an important space defined by the St. Andrew's Church and associated mature trees. Fillingham Castle takes a position on the hillside stretching out along the northern edge of the village and is set within associated woodland overlooking the lake and the village of Fillingham. There is also the Oak Walk leading down from the Cliff escarpment into the village that gives Fillingham its strong identity.

Glentworth: This includes the mature tree cover, much of which forms plantations such as Coachroad Plantation and then further plantations to the north, east and south of the village. Glentworth also extends some way up the lower slope of the scarp, that is at St. George's Hill and Hillside Road. The view to the west and south of the village is one of a relatively flat landscape of open fields and trees. The position of Glentworth Hall (Grade II* Listed) that stands prominently to the north-west of the village is also a key feature.

Hemswell: This includes the main built areas around Bunkers Hill, Weldon Road, The Church, The Stud and Polar House and Brook Street. The main character of the Conservation Area however can be attributed to its landscape setting on the Cliff edge. These Conservation Areas are all located on rising ground to the east of the Site at the base of the prominent landform running north to south. Land within the 5km Study Area shows there are Conservation Areas at Hemswell and South Carlton.

Registered Parks and Gardens: The closest Registered Park and Garden lies just on the outer eastern 2km Study Area and comprises the Grade II listed Fillingham Castle (List Entry Number: 100097). This was built between c 1760 and 1770 to accompany the house and included a park with a long avenue aligned on the east front that is partly lined with mature oaks, sycamore, and chestnut as far as the east lodge gateway. Gothic-style arches are placed at the extremities of the park. There are two surviving areas of park and woodland including Lady's Wood and Pale Wood to the north-west and north-east and Fox Covert to the south-east. The park has been reduced from its original size to arable farmland.

Environmental Statement Landscape and Visual Impact Assessment Appendix 8.2.9: Cultural Analysis & Evaluation [Reference: EN010133/APP/C6.3.8.2.9.1] Jan 2023





Receptor susceptibility to change	Value of Receptor	Sensitivity	Embedd
In terms of forces for change for the	<u>Scenic:</u> The line of settlements, aligned approximately north to south, retain much of their	<u><i>Character:</i></u> The line of	Embedde
Cottam 1 Site/Sites (Cultural	historic character. Ancient hedgerows are still evident and sinuous belts of trees and	settlements, aligned	the const
Designations), recent trends have shown	shrubs define ancient parish boundaries.	approximately north to south,	decommi
that the main sensitivity is focused on the		define the historic character.	Embedde
ancient enclosures that has been	<i><u>Cultural</u></i> : The largest settlement is Gainsborough that has both an active economic and	Ancient hedgerows are still	mitigatior
weakened by modern agricultural	historic influence of the landscape, particularly the port facilities along the Trent.	evident and sinuous belts of	
practices. The settlement pattern that		trees and shrubs define	Panels to
defines the contrast between the small	<u>Natural:</u> Rural tranquility remains a strong feature over the area, however significant	ancient parish boundaries.	adjacent
compact villages and larger market towns	development pressures exist from the major roads that traverse the area.		
remains largely intact, but their		<u><i>Quality:</i></u> The most widespread	Site boun
landscape settings are risk of demise	<u>Recreation and Enjoyment:</u> This is focused on the Trent where the gravel terraces have been	change has been in	existing h
from expansion and development.	a focus of human activity for many thousands of years, however there are many tranquil	agricultural intensification,	and grow
	places for people to enjoy the landscape for recreation.	where the change from	
Overall, the susceptibility of the Cultural		pastoral to arable cropping	Existing h
Designations for the Cottam 1 Site/Sites	Local Distinctiveness and Sense of Place: This is typified by the strong minor road network,	has resulted in loss of hedges,	be manag
is conditioned by string of historic	which is wide and sinuous in nature and reflects the strong east to west alignment of the	and consequently increase in	encourag
settlements that are aligned	field patterns. North south roads are more directly aligned due to their Roman influence,	field sizes close to settlements.	growth to
approximately north to south and the	apart from the road linking the central settlement line which dips and meanders along the		hedgerow
Trent floodplain where there are	scarp slope.	<u>Value:</u> The landscape shows	the length
surviving ancient enclosures		evidence of historic settlement	
characterised by small field sizes. The	<u>Health and Wellbeing:</u> The tranquil experiential qualities are strong in many places and the	with farms, nucleated villages,	Lighting w
mixed farming heritage is also	sense of history is experienced through the medieval settlement pattern of small compact	and small hamlets such as	and batte
fundamental in retaining landscape	villages and larger market towns that remain broadly intact.	Thorpe le Fallows and Coates,	security is
character and should be managed to		which are features value that	will be ca
ensure the area continues to reflect its	Important Spatial Function: This is defined by the central settlement line that broadly	are not highly recognised.	All visible
long history of agricultural land use. The	follows the 20m contour with open field farming systems. Gainsborough also includes a		maximum
relevant characteristics of the landscape	large deer park from the twelfth to the fourteenth century. The hedgerows also provide a	<u><i>Capacity:</i></u> Some features make	light spilla
therefore have some ability to	link to the past, some marking ancient boundaries and many dating from the period of	a minimal contribution to	will be ma
accommodate change without undue	enclosure.	landscape character but the	perimeter
adverse effects given there is scope to		ancient enclosures and their	
protect the character and diversity of the	Overall , the value of the Cultural Designations for the Cottam 1 Site/Sites is shaped by the	contrast with the modern	The lands
farming heritage of the area despite the	ancient enclosures and their contrast with the modern fields and planned enclosures that	fields and planned enclosures	Mitigatior
erosion of traditional character and	have a strong east to west orientation. The road network also reflects this pattern where	that have a strong east to west	set out fo
ecosystems through post-war agricultural	Till Bridge Lane follows the course of a Roman road from Ermine Street on the top of the	orientation are vulnerable.	includes s
intensification.	cliff to the former river crossing on the Trent.		carried ou
			landscape
			Mitigatior
Medium to High (5km Study Area)	Medium to High (5km Study Area)	Medium to High	
Medium (Site/Sites)	Medium (Site/Sites)	Medium	

Ided Mitigation

ded Mitigation would be taken into account at struction, operation (Year 1 and Year 15) and nissioning stages of the Scheme. This ded Mitigation is also referred to as primary ion and would include the following measures:

to be set back 50m from the boundaries of nt dwellings.

undary fencing to be set back 5m from adjacent hedgerows to allow for proposed thickening wth.

hedges are to be allowed to grow out and will naged to a height of 5m. Hedgerow trees will be aged to grow out to add further thickening and to the field boundaries with the addition of new ow trees as appropriate, randomly spaced along th of existing hedges.

will be limited to downlights within substations tery banks only and used when maintenance or is required. Lighting will be PIR operated and alibrated to vehicle and personnel movements. le lighting would be 50W, installed at a Im height of 4m with cowls fitted to prevent illage. Lighting required within panelled areas manually operated. There will be no lighting on ter fencing.

dscape effects **with only** the Embedded on taken into account equate to those effects for the operation stage (Year 1) and this s secondary mitigation which will have been out but will have had limited physical or ape character impact at this Embedded ion stage.



Landscape Receptor - Scheduled Monuments, Listed Buildings, Conservation Areas and Registered Parks and Gardens (Cottam 1)

Construction	Operation (Year 1)	Operation (Year 15)	Decom
Activities during site preparation / enabling works,	There are no Listed buildings within the Sites of	The effects at the Operational Phase at Year 15	A similar
construction, and commissioning with effects such as	Cottam 1 North or Cottam 1 South but there are a	without Mitigation equate to those effects at the	the Scher
construction traffic, noise and vibration from	number within the village of Willingham by Stow to the	beginning of Year 1 before any secondary mitigation	assessme
construction activities, dust generation, site runoff,	west, Stow to the Southwest and Kexby to the	has been applied. Mitigation embedded in the design	of existin
mud on roads, and the visual intrusion of plant and	northwest. To the east, along the ridge, the villages of	will apply as will the growing out of the existing	primary a
machinery on site. At the early parts of the	Fillingham, Ingham, Cammeringham, Brattteby and	hedges.	establish
construction stage, ground, and lower-level activities	Glentworth are all host to Listed Buildings. Although		arising fro
such as the construction of the solar panel areas and	their setting is not directly affected by the Scheme,	With secondary mitigation such as planting and grass	decommi
associated infrastructure and inverters would be	mitigation around the boundary of the Site/Sites will	seeding being taken into account at the operational	vibration
screened due to existing vegetation in all but the south	help to ensure that these receptors are not impacted.	stage (Year 15) the following changes to the landscape	generatio
of field D14 where the boundary between the		would occur and the effects are set out below.	001101010
scheduled monument and the Site/Sites is open. This	Conservation Areas within these villages are also not		Following
however will be mitigated by setting the development	unduly affected by the Scheme due to distance and	Views to the north, south, east, and west of the Cottam	returned
back by 50m from the northern boundary so that the	intervening, topography, vegetation/built form.	1 Site/Sites will be screened in the close-mid range	benefit fr
integrity of the Site/Sites is retained.		views through the new hedgerow and shelterbelt	hedgerov
integrity of the site/sites is retained.	Coates Medieval settlement and moated Site sits	planting. The enhancement of existing hedges will be	begun to
During the latter part of the construction stage, views	between the Cottam 1 North and South Sites and is not	managed to a height of 5m in the middle-distance	landscape
would become available of the elevated activities	affected by the Scheme.	views. These new and augmented hedgerows will	character
above the hedgerows, but these would be limited to	anected by the scheme.	provide a series of good quality field boundaries both	benefits of
very few mid-long-range views from these landscape	Thorpe Medieval settlement sits to the south of field	formally strengthening the existing and historical field	to be reta
	D14 and would be affected by the Scheme.	pattern and creating a multi-layered landscape. Views	
receptors.	D14 and would be affected by the Scheme.	of the longer distance, where hedgerows do not block	grass ma
Other works would be undertaken in connection with	Secondary mitigation such as planting, and grass	these, will be of a layered, well treed landscape with a	maintain
the construction including fencing, gates, boundary	seeding would be taken into account at this stage to	backdrop of some wooded vegetation in places on the	Without
treatment and other means of enclosure and works for	include the following measures:	horizon. Both new and existing vegetation will have	througho
	filciude the following measures.		-
the provision of security and monitoring measures	There will be a new bodge to the couth of field D14	established and begun to mature, creating a much	views/lan the existi
such as CCTV and the laying down of internal tracks.	There will be a new hedge to the south of field D14 adjacent to the scheduled monument to the south. A	stronger structure to the landscape, and retaining its overall character of the area.	
There would also be landscape and biodiversity		overall character of the area.	to grow o
mitigation works, including planting and the	50m buffer of tussock mix grassland will lie to the	Growth of existing and proposed vegetation is	5m. It is a
improvement of existing hedgerows to all boundaries	north of the monument, whilst a 5m width of	assumed to be:	
of the Site/Sites.	shelterbelt planting will be provided to the west of this	assumed to be.	With Miti
	feature.	Woodland/trees and shelterbelts: 2.5m max at Year 1,	decommi
These short-lived construction activities would affect	Views towards the Cite frame the village of lash and to	7.5m max at Year 15.	term land
one scheduled monument at Thorpe le Fallows to	Views towards the Site from the village of Ingham to		
some degree, but its integrity would not be lost. There	the southeast are mitigated by a large belt of scattered	New hedgerows: 0.6m at Year 1 and 3.5m at Year 15.	
would be a change to the arable land use, but the field	trees following the watercourse on the eastern		
boundaries and the associated tree cover would	boundary of the Site at Cottam 1 North. Views from	Existing hedgerows: 0.9m at Year 1 and 5m at Year 15.	
remain intact and help with layering in the landscape	the northeast at the village of Fillingham area		
and the integration of the new panels into this	mitigated by a new hedgerow with hedgerow trees to	Shrubs: 0.9m at Year 1 and 5m at Year 15.	
location. There would not be a fundamental change to	the northeastern boundary.		
the surroundings to the views and settings of the		By Year 15, the tree belt, new and enhanced	
landscape receptors.	Scattered tree belts and enhanced hedgerows to the	hedgerows will have fully established and will have	
	western boundaries of the Site(s) and around the River	begun to mature. Existing hedges will have reached a	
	Till will mitigate any views towards the Site from the	height of some 3.5m whilst the shelterbelt planting and	
	west.	hedgerow trees will be some 7.5m high screening any	
		potential views into the Site from the south, north and	
	St. Edith's Church (GI) at Coates is predominantly	the west.	
	screened from the south by existing vegetation and		
	from the north by existing agricultural buildings and	These landscape receptors are able to accommodate	
	the Site(s) are located some distance from this building	the development without undue adverse effects and	
	and do not affect its setting.	there will be beneficial effects in terms of local	

Environmental Statement Landscape and Visual Impact Assessment Appendix 8.2.9: Cultural Analysis & Evaluation [Reference: EN010133/APP/C6.3.8.2.9.1] Jan 2023

mmissioning

lar process to that of construction stage, but with neme being no longer operational. This is an ment of the Site in winter but assumes retention ting vegetation and builds upon the proposed ry and secondary mitigation that had been shed as the future baseline. Effects are those from activities for the duration of the missioning to include site traffic, noise and on from decommissioning activities, dust ation and site runoff.

ing decommissioning, the land is likely to be ed to arable production. The Site will however from the significantly enhanced tree and row planting that has been carried out and has to mature to create a much stronger and robust ape, retaining and enhancing the overall ter and providing considerable biodiversity ts over the years. Bird mitigation fields are likely etaining and the potential may exist to retain margins to retain some varied land use and in a high level of biodiversity in the local area.

ut Secondary Mitigation having been applied hout the scheme, the only change to the landscape following decommissioning would be isting hedgerows which will have been allowed w out and will have been managed to a height of is assumed that these will be retained.

litigation, the negative effects of the physical missioning will be balanced out by the long andscape and visual effects of this mitigation.



SOLAR PROJECT				
		 Enhancements to the overall level of tree cover will have a minor but beneficial effect on the setting of the local villages and the Registered Park and Garden at Fillingham Castle. The cultural heritage of the farmed landscape immediately surrounding the settlements of Willingham by Stow, Stow and Kexby will be retained and enhanced. The mitigation proposals will bring forward a more varied mix of land use and significantly enhanced grassland areas that will aim to reinforce the historic field pattern in this farmed landscape, where applicable. To the east, along the ridge and within the Limestone Scarps and Dipslopes Character Area 6a, the villages of Fillingham, Ingham, Cammeringham, Brattteby and Glentworth will also benefit from the improvements to the farmed landscape in the Till Vale with this being part of their wider setting. Between Years 1 and 15, the following beneficial effects will be achieved in terms of Heritage Assets: Enhanced general landscape setting over the longer term to a very limited number of heritage receptors Improved green infrastructure and ecological links to a small number of heritage sites Adverse effects (mitigated): Panels and structures across landscape – with very limited views from heritage assets in the short term. The effects at the Operational Phase at Year 15 without Embedded Mitigation equate to those effects at the beginning of Year 1 before secondary mitigation has been applied. The Effects set out below include secondary mitigation which will have been carried out but will have had limited physical impact at this stage 	tree/hedge cover and biodiversity net gains enhancing the local character. Overall, in terms of mitigation for the Cottam 1 Site/Sites, due to the landscape that is largely flat, this allows wide views of large-scale features, especially the power stations on the west bank of the Trent. In contrast, views of small-scale features, such as the river corridor and its tributaries are an important asset to be enhanced for their overarching history of the area during the medieval period in particular. The aims are therefore to protect the archaeological value of the River Trent and its features associated with the flood plain. These features include the extensive network on minor roads across much of the area that has changed little since medieval times and the enclosure field pattern landscape that is preserved in some parts. Opportunities to protect the remaining pasture and enhance existing hedgerows where they have been lost will help reinstate historical landscape character. The protection and enhancement of ancient woodlands is also a key consideration by improving awareness and promoting appropriate management.	
5km Study Ar		Marcalau	Manufacture	
Magnitude	Very Low	Very Low	Very Low	Very
Level of Effect	Adverse & Short Term	Beneficial & Long Term	Neutral & Long Term	Neut
Significance of Effect	Negligible Not Significant	Negligible Not Significant	Negligible Not Significant	Negli
Site/Sites and	d Cable Route Corridor			
Magnitude	Low	Very Low	Very Low	Very
Level of Effect	Adverse & Short Term	Beneficial & Long Term	Beneficial & Long Term	Neut
Significance of Effect	Minor Not Significant	Negligible Not Significant	Negligible Not Significant	Negli

y Low

utral & Short Term

gligible Not Significant

y Low

utral & Short Term

gligible **Not Significant**



In-Combination Effects [Cumulative Sites]	Cumulative Effects [Cumulative Developments]
In Summary	In Summary
The In-combination effects of the Cottam 1 Site with the other Cumulative Sites (Cottam 2 and 3a and 3b) is Minor at year 1 of operation and Negligible at year 15 with mitigation. This is due to the limited impact as a result of the low-level nature of the Scheme together with the quantum of mitigation. The existing landscape character associated with these Cumulative Sites and Study Area would predominantly provide tree cover along the hedge lines and their margins with a change to grassland with scattered trees, which would give rise to overall benefits to landscape character.	The Cumulative Effects of the Scheme with the other Cumulative D Development and adverse, giving rise to no likely Significant effects Negligible at year 15 with the embedded and additional mitigation, the Scheme, together with the improvements to the landscape ma and tree planting, giving rise to the vegetative layering of the lands reduce to reduce the cumulative effect.
Fabric of the Landscape	Fabric of the Landscape
There would not be the removal of, or changes in Scheduled Monuments, Listed Buildings, Conservation Areas and Registered Parks and Gardens within Cottam 1. Overall, the landscape is shaped by the ancient enclosures and their contrast with the modern fields and planned enclosures that have a strong east to west orientation. The road network also reflects this pattern where Till Bridge Lane follows the course of a Roman road from Ermine Street on the top of the cliff to the former river crossing on the Trent.	There would not be the removal of, or changes in Scheduled Monu Registered Parks and Gardens within Cottam 1. Overall, the landsc contrast with the modern fields and planned enclosures that have also reflects this pattern where Till Bridge Lane follows the course cliff to the former river crossing on the Trent.
There would be the introduction of new elements and features comprising the solar panel areas, the substation area and Cable Route Corridor extending between the Cottam Power Station and the Cottam 1 Site/Sites and extending between the Cottam 1 Site/Sites and Cottam 2 Site (the 'Cable Route Corridors').	There would be the introduction of new elements and features co and Cable Route Corridor extending between the Cottam Power S between the Cottam 1 Site/Sites and the Cottam 2 Site (the 'Cable
Aesthetic Aspects of the Landscape	Aesthetic Aspects of the Landscape
Refer to Figure 8.15.1.1 [C6.4.8.15.1.1] which shows that with the Cottam 1 Site/Sites, cumulative visibility with the Cable Route Corridor, Cottam 2, and Cottam 3a and 3b Sites and the Cable Route Corridors would not be experienced across the majority of the 2km study area. This is due to the distance, the intervening woodlands, hedgerows, and tree cover between the Site/Sites. The intervening settlements	Refer to Figure 8.15.2.1 [C6.4.8.15.2.1] which shows that with Cotto cumulative developments would not be experienced across the m distance, the intervening woodlands, hedgerows, and tree cover b built form would also curtail cumulative visibility.
and built form would also curtail cumulative visibility between these cumulative sites and the Cable Route Corridors.	There are local patches of cumulative visibility which may be focu Site/Sites and Gate Burton Energy Park, Tillbridge Solar and West
There are very minor patches of cumulative intervisibility between the Cottam 1 Site/Sites and the Cottam 2 Site, located to the:	in further detail within the following figures:
east of Upton and to the south of Sturgate Airfield	Figure 8.15.2.6 Cottam 1, 2, 3a and 3b Gate Burton Cumulative D
 south of Kexby in the locality of Valley Farm east of Willingham by Stow in the locality of the residential property known as Carisbrooke east of Stow, just to the east of the property known as Tam Howes; and 	shows Gate Burton to the west of Cottam 1, where the intervenin lie between, where their presence will impair any associated land
 west of Sturton by Stow, extending from West Syke Lane as far as Normanby by Stow. 	Figure 8.15.2.8 Cottam 1, 2, 3a and 3b Tillbridge Solar Cumulativ shows Tillbridge to the south of the Cottam 1 Site, where their bo
The Scheduled Monuments, Listed Buildings, Conservation Areas and Registered Parks and Gardens are focused around the settlements where the land use at their edges supports a good level of tree and woodland cover to help in curtailing visibility across these areas. The landscape features within these	just to the south of Kexby Road and to the west of the settlemen woodlands or major topography, such that the presence of Tillbr direct and compounded relationship in terms of the landscape c
areas are focused around local undulations in landform found to each side of the River Till and where the presence of large-scale arable fields prevail. There is a particular concentration of cumulative visibility to the northeast of Willingham by Stow, but the local concentration of woodlands comprising Top Wood, Heaton's Wood, and Big Wood help to curtail visibility in this area.	Development would also add to coalescence between the Cottan mitigation would however ensure that all existing features would operation stage (Year 15) of the watercousres across the Sites ar
There are very minor patches of cumulative intervisibility between the Cottam 1 Site/Sites, Cottam 2, and Cottam 3a Site, located to the:	Figure 8.15.2.9 Cottam 1, 2, 3a and 3b West Burton Cumulative I shows the West Burton Development located to the southwest o of Stow, Sturton by Stow and Bransby lie between, where their p
 northeast of Sturton by Stow, extending between Tillbridge Road and Ingham Road. 	with the West Burton Site.
The Scheduled Monuments, Listed Buildings, Conservation Areas and Registered Parks and Gardens are focused around the settlements where the land use at their edges supports a good level of tree and woodland cover to help in curtailing visibility across these areas.	The other Cumulative Developments at Bumble Bee Farm, Field R Scheme by the intervening settlements of Gainsborough, Lea, Bly

> lopments is Minor with the Tillbridge year 1 of operation. The effects would be s betterment is due to the low-level nature of s of these historic features with new hedgerows e across the Sites and Study Area, all in helping

nts, Listed Buildings, Conservation Areas and is shaped by the ancient enclosures and their rong east to west orientation. The road network Roman road from Ermine Street on the top of the

sing the solar panel areas, the substation area n and the Cottam 1 Site/Sites and extending te Corridors').

Site/Sites, cumulative visibility with the ty of the 5km study area. This is due to the een the Site/Sites. The intervening settlements and

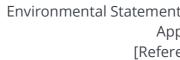
ikely significant effects, between the Cotton 1 on Solar Park. This cumulative visibility is set out

pments Augmented ZTV [C6.4.8.15.2.6]. This lements of Kexby, Willingham by Stow and Stow e context with the Gate Burton Site.

elopments Augmented ZTV [C6.4.8.15.2.8]. This ries' are located directly adjacent to each other, lingham. There are no intervening settlements, Development with the Scheme would give rise to a of the settlements. The presence of the Tillbridge d the Cottam 2 Sites. The primary and secondary etained leading to an improvement at the idy Area.

opments Augmented ZTV [C6.3.4.15.2.9]. This Cottam 1 Site where the intervening settlements ce will impair any associated landscape context

and High Marnham are separated from the nd Willingham by Stow.

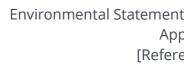




	There are very minor patches of cumulative intervisibility between the Cottam 1 Site/Sites, Cottam 2, and Cottam 3b Sites, located to the:	Overall Character of the Landscape and Scheduled Monuments Listed Build Gardens
	• northeast of Sturton by Stow, extending between School Lane Farm and Ingham Road.	Overall, the character of the landscape is shaped by the predominance this land use is commonplace, the field hedgerows are consistent, stro
	The Scheduled Monuments, Listed Buildings, Conservation Areas and Registered Parks and Gardens are focused around the settlements where the land use at their edges supports a good level of tree and woodland cover to help in curtailing visibility across these areas.	they play a major role in curtailing the cumulative visibility across the a landscape and land use have some ability to accommodate change wit visibility for the Cottam 1 Site/Sites would not alter the overall character
	The landscape features within these areas are focused around local undulations in landform found to each side of the River Till and where the presence of large-scale arable fields prevail. There is a particular concentration of cumulative visibility to the northeast of Willingham by Stow, but the local concentration of woodlands comprising Top Wood, Heaton's Wood, and Big Wood help to curtail visibility in this area.	Monuments, Listed Buildings, Conservation Areas and Registered Parks positive role in reducing the overall cumulative effects.
	 There are local patches of intervisibility between All Sites comprising the landscape to the: east boundary of the Cottam 1 North Site/Sites, extending from Glentworth in the north as far as Ingham in the south. 	
	The Scheduled Monuments, Listed Buildings, Conservation Areas and Registered Parks and Gardens are focused around the settlements where the land use at their edges supports a good level of tree and woodland cover to help in curtailing visibility across these areas.	
	The landscape features within these areas are focused on the settlement pattern to the east that includes Ingham, Cammeringham and Brattleby. Woodland is mainly concentrated to the west of Cammeringham and Brattleby and includes geometric shaped shelterbelts and woodland plantations consisting of predominantly native species with large poplar specimens in shelterbelts. The woodlands and settlement help to curtail visibility in this area.	
	Users of linear routes, especially footpaths or other rights of way, or transport routes, may potentially experience the aesthetic aspects of the cumulative sites revealed in succession as a series of sequential views. For further details refer to the following detailed visual receptor sheets:	
	Appendix 8.3.2.2 Individual Viewpoint Receptor Sheets [C6.3.8.3.2.2] Appendix 8.3.2.3 Individual Viewpoint Receptor Sheets [C6.3.8.3.2.3] Appendix 8.3.2.4 Individual Viewpoint Receptor Sheets [C6.3.8.3.2.4]	
	Appendix 8.3.3.2 Individual Residential Receptor Sheets [C6.3.8.3.3.2] Appendix 8.3.3.3 Individual Residential Receptor Sheets [C6.3.8.3.3.3]	
	Appendix 8.3.4.2 Individual Transport Receptor Sheets [C6.3.8.3.4.2] Appendix 8.3.4.3 Individual Transport Receptor Sheets [C6.3.8.3.4.3]	
	Appendix 8.3.5.2 Individual PRoW Receptor Sheets [C6.3.8.3.5.2] Appendix 8.3.5.3 Individual PRoW Receptor Sheets [C6.3.8.3.4.3]	
	<u>Overall Character of the Landscape and Scheduled Monuments Listed Buildings, Conservation Areas and Registered Parks and Gardens</u> Overall, the character of the landscape is shaped by the predominance of medium and large-scale	
	agriculture. Although this land use is commonplace, the field hedgerows are consistent, strong features and generally in good condition and they play a major role in curtailing the cumulative visibility across the area. These relevant characteristics of the landscape and land use have some ability to accommodate	
	change without undue adverse effects. The cumulative visibility for the Cottam 1 Site/Sites would not alter the overall character of the landscape and the Scheduled Monuments, Listed Buildings, Conservation Areas and Registered Parks and Gardens. Moreover, these features play a positive role in reducing the overall cumulative effects.	
Magnitude	Construction: Low Operation (Year 1): Low Operation (Year 1): with only Embedded Mitigation: Low	Construction: Low Operation (Year 1): Low Operation (Year 1): with only Embedded Mitigation: Low
	Operation (Year 15): Very Low	Operation (Year 15): Very Low

uildings, Conservation Areas and Registered Parks and

ce of medium and large-scale agriculture. Although rong features and generally in good condition and e area. These relevant characteristics of the vithout undue adverse effects. The cumulative cter of the landscape and the Scheduled rks and Gardens. Moreover, these features play a





	Decommissioning: Very Low	Decommissioning: Very Low
	Construction: Adverse & Short Term	Construction: Adverse & Short Term
Type of	Operation (Year 1): Adverse & Long Term	Operation (Year 1): Adverse & Long Term
Effect	Operation (Year 1): with only Embedded Mitigation: Adverse & Long Term	Operation (Year 1): with only Embedded Mitigation: Adverse & Long Te
Enect	Operation (Year 15): Beneficial & Long Term	Operation (Year 15): Neutral & Long Term
	Decommissioning: Neutral & Short Term	Decommissioning: Neutral & Short Term
	Construction: Minor Not Significant	Construction: Minor Not Significant
Significance	Operation (Year 1): Minor Not Significant	Operation (Year 1): Minor Not Significant
-	Operation (Year 1): with only Embedded Mitigation: Minor Not Significant	Operation (Year 1): with only Embedded Mitigation: Minor Not Signific
of Effect	Operation (Year 15): Negligible Not Significant	Operation (Year 15): Negligible Not Significant
	Decommissioning: Negligible Not Significant	Decommissioning: Negligible Not Significant

* Potential exists to use targeted, low-density sheep grazing in appropriate areas of wildflower meadow under panelled areas for short periods once a suitable sward has established. This may allow for diversification of grazing management. Grazing of tussock seeded areas may be appropriate to reduce the sward every three years. Careful monitoring is however required to prevent overgrazing with conservation grazing densities used.

Environmental Statement Landscape and Visual Impact Assessment Appendix 8.2.9: Cultural Analysis & Evaluation [Reference: EN010133/APP/C6.3.8.2.9.1] Jan 2023

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Landscape Receptor – Scheduled Monuments, Listed Buildings, Conservation Areas and Registered Parks and Gardens (Cottam 2 Site)

Receptor Baseline:

Within the Cottam 2 to Cottam 3a and 3b Sites, at a regional scale, landscape character is assessed within the East Midlands Regional Landscape Character Assessment as forming part of RLCT Profile: 4a Unwooded Vales, which is shown on Figure 8.5 [C6.4.8.5].

The landscape is characterized by the dynamic broad valley of the River Trent which is bordered by large urban areas including the cities of Nottingham and Lincoln connected by a strategic road network in a mostly north south direction. There are also scattered rural settlements perched on the edge of the floodplain that are linked by a smaller network of minor roads and local lanes which generally follow an east west alignment.

There are no Scheduled Monuments, Listed Buildings, Conservation Areas or Registered Parks and Gardens within the Cottam 2 Site (2km Study Area).

Key Features:

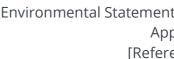
Scheduled Monuments: The closest is Gilby Medieval Settlement and Cultivation Remains (List Entry Number: 1016795) which lies approximately 1.3km to the northwest of the Site occupying the south facing slope of a small knoll adjacent to Gilby Farm. The monument includes the full extent of the surviving remains of the village of Gilby, which was established in the early 12th century. The Deserted Village of Dunstall (List Entry Number: 1004996) lies approximately 0.75km to the northeast of the Site boundary and comprises a network of sunken roads and rectangular crofts with well-preserved ridge and furrow. The only visible earthwork is a raised rectangular area, grassed over, apparently the site of the chapel within the center of the site and a tree on it. Land within the 5km Study Area shows there are scheduled monuments at Southorpe (List Entry Number: 1016794), Willoughton (List Entry 1007689 and 1011456), Springthorpe (List Entry Number: 1016920) and Harpswell (List Entry Number: 1019068).

Listed Buildings: Two isolated listed buildings are in close proximity to the boundary of the Site/Sites, including the Grade II Old Hall (List Entry Number: 1165535) which lies 400m to the west. The house is timber frame with colour washed brick with a pantile roof and 3 brick ridge stacks. There are alterations as early as C14 and leading up to C20. The Grade II Corringham Windmill (List Entry Number: 135941) lies 580m to the south of the boundary of the Site/Sites and is an early C19 3 storey tower mill. There are no other surviving features, and the windmill stands in the middle of an open field. There are further Listed Buildings within the villages of Corringham including the Grade I Listed Church of St. Lawrence (List Entry Number: 1064162) which dates to C11 and is constructed in coursed limestone rubble with ashlar dressings and lead roofs. There is also a 3 stage plain unbuttressed square tower with a paired belfry under round arches. Springthorpe plays host to two listed buildings including the Grade I Listed Church of St. Lawrence (List Entry Number: 1146616), which dates to C11 and is constructed in coursed limestone rubble with slate roofs and stone capped gables with finials. The C11 west bell tower has bell openings on all four sides with round headed openings. Land within the 5km Study Area shows there are listed buildings at Pilham including the Grade II* Listed Church of All Saints (List Entry Number: 1317137) of c.1750 with C19 additions. The western tower has a chamfer topped plinth surmounted by an embattled parapet with 4 stubby corner obelisk pinnacles. At Wilhoughton, there are three Grade II Listed buildings including the Church of St. Andrew (List Entry Number: 1064176). Harpswell includes the Grade I Listed Church of St. Chad (List Entry Number 1309029) with a west tower supporting a bell chamber on three sides and plinth and quoins. Hemswell supports several listed buildings, including the Grade II* Listed Church of All Saints (List Entry Number 1166242) of early C13 with a west tower of 1764 divided by flat string courses, with plinths and quoins. Heapham supports several listed buildings including the Grade I Listed Church of All Saints (List Entry Number: 1064048) of Mid C11 with a Mid C11 rendered west tower with a plinth and clasping pilaster buttresses.

Conservation Areas: There is only one Conservation Area at Springthorpe where the earliest evidence of settlement can be found in the Saxon and Norman construction of the Church of St. Lawrence (List Entry Number: 1146616). The village green is enclosed by several former farm buildings in a close arrangement that forms a bend in the road where views open out onto the green. Land within the 5km Study Area includes the conservation area at Hemswell that sits to the southeast, the setting of which is attributed to its landscape setting on the Cliff Edge. The older properties in the conservation area are all worked of locally built stone (hence the dwelling 'Quarry Hill') on Bunkers Hill. The stone walls are also an important feature in the area as they complement the buildings and other important features include the tree and woodland cover and strong hedgerows that continue into the central parts of the village and are a key feature.

Registered Parks and Gardens: There are no Registered Parks and Gardens on Site or within 2km study area or within the 5km study area of the Cottam 2 Site. The nearest Registered Park and Garden is the Grade II Listed Norton Place (List Entry: 1470334) that includes parkland and gardens to the designs of Thomas White in around 1772. The house (List Entry: 1359423) is Grade I Listed of 1776 and has an associated bridge between the lakes (List Entry: 1165038) in the surrounding parkland to the east.

Environmental Statement Landscape and Visual Impact Assessment Appendix 8.2.9: Cultural Analysis & Evaluation [Reference: EN010133/APP/C6.3.8.2.9.2] Jan 2023





Receptor susceptibility to change	Value of Receptor	Sensitivity	
In terms of forces for change for the	<u>Scenic:</u> The attractiveness of the landscape is typified by the strong minor road network,	<u><i>Character: T</i>he local character of the</u>	+
Cottam 2 Site (Cultural Designations),	which is wide and sinuous in nature and reflects the strong east to west alignment of the	landscape is typified by the strong	
recent trends have shown that the	field patterns. North south roads are more directly along the scarp slope, which allow	minor road network, which is wide and	
settlement pattern is a key sensitivity.	views across the scenic landscape.	sinuous in nature and reflects the	
The contrast between the small		strong east to west alignment of the	1
compact villages and larger market	<u><i>Cultural:</i></u> The line of settlements, aligned approximately north to south, retain much of	field patterns. The line of settlements,	-
towns remains largely intact, but the	their historic character and this character extends to comprise the collection of medieval	aligned approximately north to south,	
expansion around their edges and the	deserted settlements that populate the area between the higher ridge line and the Trent	also retain much of their historic	1
associated impact on landscape	to the west.	character.	(
character is a key issue. Other			
sensitivities are focused on the ancient	<i>Natural:</i> Ancient hedgerows are still evident and sinuous belts of trees and shrubs define	<u>Quality:</u> The landscape shows evidence	
enclosures that has been weakened by	ancient parish boundaries.	of historic settlement with farms and	
modern agricultural practices.		nucleated villages and small hamlets	
	<u>Recreation and Enjoyment:</u> The tranquil experiential qualities are strong in many places	such as Aisby, Corringham and Pilham.	
Overall, the susceptibility of the	and the sense of history is experienced through the medieval settlement pattern of small	The landscape surrounding these	1
Cultural Designations for the Cottam 2	compact villages and larger market towns that remain broadly intact and are a focus for	settlements retain a deeply rural and	1
Site is conditioned by collection of	recreation and enjoyment.	tranquil character.	
historic settlements that date from			f
medieval and some with stone and	Local Distinctiveness and Sense of Place: This is focused on the Trent where the gravel	Value: The largest settlement is	
bronze age origins where there are	terraces have shaped a distinctive landscape where there are many tranquil places for	Gainsborough that has both a strong	1
visible surviving earthworks and ridge	people to enjoy for the landscape recreation.	historic influence of the landscape,	
and furrow. The mixed farming heritage		particularly the heavily wooded	
is also fundamental in retaining	Health and Wellbeing: Rural tranquility remains a strong feature over the area, however	landscape that provides a distinctive	
landscape character and should be	significant development pressures exist from the major roads that traverse the	change in contrast to the regular	
managed to ensure the area continues	landscape. This area however is generally traversed by a smaller more informal historic	agricultural land use. These woodlands	'
to reflect its long history of agricultural	road network that passes east to west connecting the Trent to the Roman routes on the	also provide an attractive setting and	
land use. The relevant characteristics	ridge line.	approach to Gainsborough.	'
of the landscape therefore have a			1
moderate to high ability to	Important Spatial Function: The largest settlement is Gainsborough that has both a strong	Capacity: The most widespread change	1
accommodate change without undue	historic influence of the landscape, particularly the heavily wooded landscape that	has been in agricultural intensification	
adverse effects given there is scope to	provides a distinctive change in contrast to the regular agricultural land use. These	and the change from pastoral to arable	
protect the character and diversity of	woodlands also provide an attractive setting and approach to Gainsborough.	cropping that has resulted in the loss of	
the farming heritage through	Querell the value of the Cultural Designations for the Cattern 2 Site is shaped by the	hedges, and consequently, and increase	
appropriate landscape maintenance	Overall , the value of the Cultural Designations for the Cottam 2 Site is shaped by the	in field size, which affects the capacity	
and management interventions.	central settlement line that broadly follows the 20m contour of the scarp and ridge.	of the landscape to absorb change.	
	Gainsborough also includes a large deer park and its wooded setting to the north-east is		1
	a key feature. The ancient enclosures and deserted villages and their contrast with the		
	modern fields and planned enclosures are also a key feature.		
Medium to High (5km Study Area)	Medium to High (5km Study Area)	Medium to High	+
Medium (Site/Sites)	Medium (Site/Sites)	Medium	T

Embedded Mitigation

Embedded Mitigation would be taken into account at the construction, operation (Year 1 and Year 15) and decommissioning stages of the Scheme. This Embedded Mitigation is also referred to as primary mitigation and would include the following measures:

Panels to be set back 50m from the boundaries of adjacent dwellings.

Site boundary fencing to be set back 5m from adjacent existing hedgerows to allow for proposed thickening and growth.

Existing hedges are to be allowed to grow out and will be managed to a height of 5m. Hedgerow trees will be encouraged to grow out to add further thickening and growth to the field boundaries with the addition of new hedgerow trees as appropriate, randomly spaced along the length of existing hedges.

Lighting will be limited to downlights within substations and battery banks only and used when maintenance or security is required. Lighting will be PIR operated and will be calibrated to vehicle and personnel movements. All visible lighting would be 50W, installed at a maximum height of 4m with cowls fitted to prevent light spillage. Lighting required within panelled areas will be manually operated. There will be no lighting on perimeter fencing.

The landscape effects **with only** the Embedded Mitigation taken into account equate to those effects set out for the operation stage (Year 1) and this includes secondary mitigation which will have been carried out but will have had limited physical or landscape character impact at this Embedded Mitigation stage.



Landscape Receptor – Scheduled Monuments, Listed Buildings, Conservation Areas and Registered Parks and Gardens (Cottam 2 Site)

Construction	Operation (Year 1)	Operation (Year 15)	Decom
Activities during site preparation / enabling works, construction traffic, noise and vibration from construction activities, dust generation, site runoff, mud on roads, and the visual intrusion of plant and machinery on site. At the early stages of the construction stage, ground and lower-level activities such as the construction of the solar panel areas an associated infrastructure and inverters would be screened due to existing vegetation and the built fo During the latter part of the construction stage, view would become available of the elevated activities above the hedgerows, these would also be obscured from listed buildings in Corringham by existing vegetation and the intervening built form. Other works would be undertaken in connection wit the construction including fencing, gates, boundary treatment and other means of enclosure and works the provision of security and monitoring measures such as CCTV and the laying down of internal tracks There would also be landscape and biodiversity mitigation works, including planting and the improvement of existing hedgerows to all boundarie of the Site/Sites. These short-lived construction activities would not affect any of the landscape receptors in this area. There would be a change to the arable land use, but the field boundaries and the associated tree cover would remain intact and help with layering and the integration of the new panels. There would not be a fundamental change to the surroundings to the view and settings of the landscape receptors.	 There are no listed buildings within the Site of the Cottam 2 Site, but there are a number within the village of Corringham to the southwest/west. Although their setting is not directly affected by Scheme, mitigation around the western boundary of the Cottam 2 Site/Sites will help to ensure that these receptors are not impacted. There are no Conservation Areas affected by Scheme. The deserted village of Dunstall to the northeast of the Site is not affected by the Scheme and its integrity is retained, but shelterbelt planting to the eastern boundary of the Cottam 2 Site/Sites will provide additional tree cover locally. Gilby Medieval settlement and cultivation remains (scheduled monument) is not affected by the Scheme and its integrity is retained. Secondary mitigation such as planting, and grass seeding would be taken into account at this stage to include the following measures: The western boundary of the Cottam 2 Site is to be planted with a strong shelterbelt along its length, augmenting a few areas where vegetation already exists. To the south, Corringham Mill stands independently along the A631 with the Site/Sites providing the backdrop when viewed from this road. Enhanced hedgerows along the southern boundary of the 	The effects at the Operational Phase at Year 15 without Mitigation equate to those effects at the beginning of Year 1 before any secondary mitigation has been applied. Mitigation embedded in the design will apply as will the growing out of the existing hedges. With secondary mitigation such as planting and grass seeding being taken into account at the operational stage (Year 15) the following changes to the landscape would occur and the effects are set out below. Views to the north, south, east and west of the Cottam 2 Site/Sites will be screened in the close-mid range through the new hedgerows, scattered tree and shelterbelt planting together with the enhancement of existing hedges which will be managed to a height of 5m. These new and augmented hedgerows will provide a series of good quality field boundaries both formally strengthening the existing and historical field pattern and creating a multi-layered landscape. Views of the longer distance, where hedgerows do not block these, will be of a layered, well treed landscape with the addition of shelterbelt and scattered tree planting around the Cottam 2 Site/Sites with a backdrop of some wooded vegetation in places on the horizon. Both new and existing vegetation will have established and begun to mature, creating a much stronger structure to the landscape, and retaining its overall character of the area. Growth of existing and proposed vegetation is assumed to be: Woodland/trees and shelterbelts: 2.5m max at Year 1, 7.5m max at Year 15. New hedgerows: 0.6m at Year 1 and 3.5m at Year 15. Existing hedgerows: 0.9m at Year 1 and 5m at Year 15. By Year 15, the shelterbelt and enhanced hedgerows will have fully established and will have begun to mature. Existing hedges will have reached a height of some 3.5m whilst the shelterbelt planting and hedgerow trees will be some 7.5m high screening any potential views into the Cottam 2 Site/Sites from both the south and the west. Views from the east will be screened by the scattered tree planting which will have	A similar the Scher assessme of existing primary a establish arising fro decommi vibration generation Following returned benefit fr hedgerow begun to landscape character benefits of to be reta grass ma maintain Without througho views/lan the existi to grow o 5m. It is a With Miti decommi

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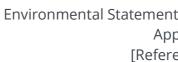
mmissioning

ar process to that of construction stage, but with neme being no longer operational. This is an nent of the Site in winter but assumes retention ing vegetation and builds upon the proposed and secondary mitigation that had been shed as the future baseline. Effects are those from activities for the duration of the missioning to include site traffic, noise and on from decommissioning activities, dust tion and site runoff.

ng decommissioning, the land is likely to be ed to arable production. The Site will however from the significantly enhanced tree and ow planting that has been carried out and has to mature to create a much stronger and robust ape, retaining and enhancing the overall ter and providing considerable biodiversity s over the years. Bird mitigation fields are likely etaining and the potential may exist to retain nargins to retain some varied land use and in a high level of biodiversity in the local area.

It Secondary Mitigation having been applied nout the scheme, the only change to the andscape following decommissioning would be sting hedgerows which will have been allowed out and will have been managed to a height of assumed that these will be retained.

litigation, the negative effects of the physical missioning will be balanced out by the long ndscape and visual effects of this mitigation.



Cottam

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		 The cultural heritage of the farmed landscape surrounding the settlement of Corringham will be retained and enhanced. The mitigation proposals will bring forward a more varied mix of land use and significantly enhanced grassland areas that will aim to reinforce the historic field pattern in this farmed landscape, where applicable. To the west is the wooded landscape to the east of Gainsborough, which is located within the Wooded Vales Character Area 4b and a fundamental part of the Gainsborough Area of Great Landscape Value (AGLV). The landscape setting of the Gainsborough AGLV2 will therefore also benefit from the improvements to the farmed landscape in the Till Vale with this being part of its wider setting. Between Years 1 and 15, the following beneficial effects will be achieved in terms of Heritage Assets: Enhanced general landscape setting over the longer term to a very limited number of heritage receptors Improved green infrastructure and ecological links to a small number of heritage sites Adverse effects (mitigated): Panels and structures across landscape – with very limited views from heritage assets in the short term. The effects at the Operational Phase at Year 15 without Embedded Mitigation equate to those effects at the beginning of Year 1 before secondary mitigation has been applied. The Effects set out below include secondary mitigation which will have been carried out but will have had limited physical impact at this stage. 	These landscape receptors are able to accommodate the development without undue adverse effects and there will be beneficial effects in terms of local tree/hedge cover and biodiversity net gains enhancing the local character. Overall, in terms of mitigation for the Cottam 2 Site, due to the landscape that is largely flat, this allows wide views of large-scale and prominent features on the horizon, especially towards the wooded edge of Gainsborough. The Trent corridor is also an important asset to be enhanced for its overarching history of the area during the medieval period and the archaeological value of the flood plain. The extensive network on minor roads are part of the appreciation of the landscape and the enclosure field pattern landscape is preserved in some parts. Opportunities to protect the remaining pasture and enhance existing hedgerows where they have been lost will help reinstate historical landscape character. The protection and enhancement of ancient woodlands around Gainsborough is also a key consideration by improving awareness and promoting appropriate management.	
5km Study A		Marylaw	Venden	Martin
Magnitude	Very Low	Very Low	Very Low	Very
Level of Effect	Adverse & Short Term	Beneficial & Long Term	Beneficial & Long Term	Neut
Significance of Effect	Negligible Not Significant	Negligible Not Significant	Negligible Not Significant	Negli
Site/Sites and	d Cable Route Corridor			
Magnitude	Low	Very Low	Very Low	Very
Level of Effect	Adverse & Short Term	Beneficial & Long Term	Beneficial & Long Term	Neut
Significance of Effect	Minor Not Significant	Negligible Not Significant	Negligible Not Significant	Negli

ry Low

utral & Long Term

gligible Not Significant

ry Low

utral & Short Term

gligible Not Significant



In-Combination Effects [Cumulative Sites]	Cumulative Effects [Cumulative Developments]
<u>In Summary</u> The In-combination effects of the Cottam 2 Site with the other Cumulative Sites (Cottam 1 and 3a and 3b) is Minor at year 1 of operation and Negligible at year 15 with mitigation. This is due to the limited impact as a result of the low-level nature of the Scheme together with the quantum of mitigation. The existing landscape character associated with these Cumulative Sites and Study Area would predominantly provide tree cover along the hedge lines and their margins with a change to grassland with scattered trees, which would give rise to overall benefits to landscape character.	In Summary The Cumulative Effects of the Scheme with the other Cumulative De and adverse, giving rise to no likely Significant effects at year 1 of op with the embedded and additional mitigation. This betterment is du with the improvements to the landscape margins of these historic fe rise to the vegetative layering of the landscape across the Sites and cumulative effect.
<i>Eabric of the Landscape</i> There would not be the removal of, or changes Scheduled Monuments, Listed Buildings, Conservation Areas and Registered Parks and Gardens or features of the landscape within Cottam 2. The wider landscape is typified by the central settlement line that broadly follows the 20m contour of the scarp and ridge. Gainsborough also includes a large deer park and its wooded setting to the north-east is a key feature. The ancient enclosures and deserted villages and their contrast with the modern fields and planned enclosures are also a key feature.	<i>Fabric of the Landscape</i> There would not be the removal of, or changes Scheduled Monume Registered Parks and Gardens or features of the landscape within C settlement line that broadly follows the 20m contour of the scarp ar and its wooded setting to the north-east is a key feature. The ancien with the modern fields and planned enclosures are also a key feature
There would be the introduction of new elements and features comprising the solar panel areas, the substation area and the Cable Route Corridor extending between the Cottam 1 Site/Sites and the Cottam 2 Site and the Cottam 2 and Cottam 3a and 3b Sites (the 'Cable Route Corridors').	There would be the introduction of new elements and features com the Cable Route Corridor extending between the Cottam 1 Site/Sites 3a and 3b Sites (the 'Cable Route Corridors').
<u>Aesthetic Aspects of the Landscape</u> Refer to Figure 8.15.1.2 [C6.4.8.15.1.2] which shows that with the Cottam 2 Site, cumulative visibility with Cottam 1 Site/Sites and Cottam 3a and 3b Sites would not be experienced across the entirety of the 2km study area. This is due to the distance, the intervening woodlands, hedgerows, and tree cover between the Site/Sites. The intervening settlements and built form would also curtail cumulative	<u>Aesthetic Aspects of the Landscape</u> Refer to Figure 8.15.2.2 [C6.4.8.15.2.2] which shows that with the Co developments would not be experienced across the majority of the intervening woodlands, hedgerows, and tree cover between the Site would also curtail cumulative visibility.
visibility.	There are local patches of cumulative visibility which may be focus and Tillbridge Solar. This cumulative visibility is set out in further de
 There are local patches of intervisibility between the Cottam 2 Site and with the 3a and Cottam 3b Sites extending from the: South boundary of the Cottam 2 Site, starting at the eastern edge of Corringham and reaching as far as Yawthorpe Beck and Yawthorpe West boundary of the Cottam 2 Site, extending as far as Pilham Lane 	Figure 8.15.2.6 Cottam 1, 2, 3a and 3b Gate Burton Cumulative Dev Gate Burton to the west of Cottam 2, where the intervening settlem between, where their presence will impair any associated landscap
 East boundary of the Cottam 2 Site, extending as far Yawthorpe and Yawthorpe Fox Covert Northwest boundary of the Cottam 2 Site, extending as far as the Cottam 3a and 3b Sites. 	Figure 8.15.2.8 Cottam 1, 2, 3a and 3b Tillbridge Solar Cumulative I shows Tillbridge to the south of the Cottam 2 Site, where their bout to the south of Kexby Road and to the west of the settlement of Fill
The Scheduled Monuments, Listed Buildings, Conservation Areas and Registered Parks and Gardens are focused around the settlements where the land use at their edges supports a good level of tree and woodland cover to help in curtailing visibility across these areas. Despite the intensive agricultural use and lack of hedgerow cover, there are local concentrations of woodland and tree cover at strategic locations between the cumulative sites, which help curtail intervisibility. Between the Cottam 3a and 3b Site/Sites, the woodland and tree cover associated with the mainline railway and Grange Farm and Top Farm is a key land use feature that contributes to reduced visibility across the landscape.	 Woodlands or major topography, such that the presence of Tillbridg direct and compounded relationship in terms of the landscape com Development would also add to coalescence between the Cottam 1 mitigation would however ensure that all existing features would be stage (Year 15) of the watercousres across the Sites and Study Area Figure 8.15.2.9 Cottam 1, 2, 3a and 3b West Burton Cumulative Development between the Cottam
 There is a local patch of intervisibility between the Cottam 2 Site and with the Cottam 3b Site, comprising the: Northern-most tip of the Cottam 2 Site extending across the medieval village of Dunstall as far 	Sturton by Stow and Bransby lie between, where their presence wil West Burton Site.
 Norther Findst tip of the Cottain 2 site extending across the medieval village of Duristan as failed as the medieval village of Southorpe; and Southeast of the River Eau, extending as far as Huckerby Farm and Huckerby Bungalows. 	The other Cumulative Developments at Bumble Bee Farm, Field Fa by the intervening settlements of Gainsborough, Lea, Blyton and W
The Scheduled Monuments, Listed Buildings, Conservation Areas and Registered Parks and Gardens are focused around the settlements where the land use at their edges supports a good level of tree and woodland cover to help in curtailing visibility across these areas. The presence of former settlement	

> pments is Minor with the Tillbridge Development ion. The effects would be Negligible at year 15 the low-level nature of the Scheme, together res with new hedgerows and tree planting, giving ly Area, all in helping reduce to reduce the

> Listed Buildings, Conservation Areas and m 2. The wider landscape is typified by the central dge. Gainsborough also includes a large deer park closures and deserted villages and their contrast

> ng the solar panel areas, the substation area and I the Cottam 2 Site and the Cottam 2 and Cottam

2 Site, cumulative visibility with the cumulative study area. This is due to the distance, the es. The intervening settlements and built form

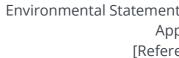
ely significant effects, between the Cottam 2 Site vithin the following figures:

ments Augmented ZTV [C6.4.8.15.2.6]. This shows of Kexby, Willingham by Stow and Stow lie ntext with the Gate Burton Site.

opments Augmented ZTV [C6.4.8.15.2.8]. This es' are located directly adjacent to each other, just am. There are no intervening settlements, velopment with the Scheme would give rise to a of the settlements. The presence of the Tillbridge the Cottam 2 Sites. The primary and secondary ained leading to an improvement at the operation

ments Augmented ZTV [C6.3.4.15.2.9]. This shows Site where the intervening settlements of Stow, air any associated landscape context with the

nd High Marnham are separated from the Scheme ham by Stow.





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	 such as Southorpe brings mature trees and woodland cover to the landscape setting of the cumulative sites, and this helps in providing separation and screening between them. There are local patches of intervisibility between All Sites comprising the: North of the Bonsdale Farm at Pilham, extending across the landscape to the north of the medieval village of Dunstall as far as the medieval village of Southorpe West of Springthorpe, extending across the landscape as far as Harpswell Low Farm; and East of Yawthorpe, extending across the landscape as far as Harpswell Low Farm; and East of Yawthorpe, extending across the land use at their edges supports a good level of tree and woodland cover to help in curtailing visibility across these areas. The intensive agricultural land use also contributes to the abundance of farmsteads and small holdings across this landscape, which also have associated large scale agricultural buildings, tree cover and shelterbelts such as those present at Bonsdale Farm. These features make a significant contribution in breaking down the visibility between the cumulative sites. Users of linear routes, especially footpaths or other rights of way, or transport routes, may potentially experience the assthetic aspects of the cumulative sites revealed in succession as a series of sequential views. For further details refer to the following detailed visual receptor sheets: Appendix 8.3.2.2 Individual Viewpoint Receptor Sheets [C6.3.8.3.2.2] Appendix 8.3.2.1 Individual Residential Receptor Sheets [C6.3.8.3.2.4] Appendix 8.3.2.1 Individual Residential Receptor Sheets [C6.3.8.3.2.2] Appendix 8.3.3.1 Individual Residential Receptor Sheets [C6.3.8.3.4.2] Appendix 8.3.3.1 Individual Residential Receptor Sheets [C6.3.8.3.4.3] Appendix 8.3.4.2 Individual Residential Receptor Sheets [C6.3.8.3.4.3] Appendix 8.3.5.2 Individual Residential Receptor Sheets [C6.3.8.3.4.3	Overall Character of the Landscape and Scheduled Monuments Listed Buildin Gardens Overall, the character of the landscape is shaped by the predominance o settlements, aligned approximately north to south, retain much of their f comprise the collection of medieval deserted settlements that populate t Trent to the west. The built form of these settlements and their associate cumulative visibility across the area. These relevant characteristics of the accommodate change without undue adverse effects. The cumulative vis overall character of the landscape and the Scheduled Monuments, Listed Parks and Gardens. Moreover, these features play a positive role in redu
Magnitude Type of Effect	Construction: Low Operation (Year 1): Low Operation (Year 1): with only Embedded Mitigation: Low Operation (Year 15): Very Low Decommissioning: Very Low Construction: Adverse & Short Term Operation (Year 1): Adverse & Long Term	Construction: Low Operation (Year 1): Low Operation (Year 1): with only Embedded Mitigation: Low Operation (Year 15): Very Low Decommissioning: Very Low Construction: Adverse & Short Term Operation (Year 1): Adverse & Long Term

gs, Conservation Areas and Registered Parks and

f medium and large-scale agriculture. The line of historic character and this character extends to the area between the higher ridge line and the ed tree cover plays a major role in curtailing the e landscape and land use have some ability to sibility for the Cottam 2 Site would not alter the Buildings, Conservation Areas and Registered ucing the overall cumulative effects.



		Operation (Year 1): with only Embedded Mitigation: Adverse & Long Term	Operation (Year 1): with only Embedded Mitigation: Adverse & Long Ter
		Operation (Year 15): Beneficial & Long Term	Operation (Year 15): Neutral & Long Term
		Decommissioning: Neutral & Short Term	Decommissioning: Neutral & Short Term
		Construction: Minor Not Significant	Construction: Minor Not Significant
	Significance	Operation (Year 1): Minor Not Significant	Operation (Year 1): Minor Not Significant
	of Effect	Operation (Year 1): with only Embedded Mitigation: Minor Not Significant	Operation (Year 1): with only Embedded Mitigation: Minor Not Significa
		Operation (Year 15): Negligible Not Significant	Operation (Year 15): Negligible Not Significant
		Decommissioning: Negligible Not Significant	Decommissioning: Negligible Not Significant

* Potential exists to use targeted, low-density sheep grazing in appropriate areas of wildflower meadow under panelled areas for short periods once a suitable sward has established. This may allow for diversification of grazing management. Grazing of tussock seeded areas may be appropriate to reduce the sward every three years. Careful monitoring is however required to prevent overgrazing with conservation grazing densities used.

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Landscape Receptor – Scheduled Monuments, Listed Buildings, Conservation Areas and Registered Parks and Gardens (Cottam 3a and 3b Sites)

Receptor Baseline:

Within the Cottam 3a Site, at a regional scale, landscape character is assessed within the East Midlands Regional Landscape Character Assessment as forming part of RLCT Profile: 4a Unwooded Vales, which is shown on Figure 8.5 [C6.4.8.5]. Unwooded Vales is located within the 2km Study Area, but only extending across its eastern most part, then sharing the western most part with RLCT Profile 4b: Wooded Vales. The landscape character type then occupies an eastern part of the 5km Study Area where it shares a boundary with Kirton in Lindsey. The western part of the 5km Study Area then comprises of a mixture of RLCT 2b: Planned and Drained Fens and Carrlands, RLCT 4a: Unwooded Vales and RLCT 4b: Wooded Vales, The Unwooded Vales is generally characterised by mixed agriculture set within an enclosed landscape of low, well-maintained hedgerows. The Cottam 3 Site can be sub-divided into two distinct land areas.

- Cottam 3a •
- Cottam 3b

There are no Conservation Areas or Registered Parks and Gardens within the Cottam 3a and 3b Sites (2km Study Area). **Key Features:**

Scheduled Monuments: The closest is Gilby Medieval Settlement and Cultivation Remains (List Entry Number: 1016795) which lies approximately 900m to the southwest of the Site occupying the south facing slope of a small knoll adjacent to Gilby Farm. The monument includes the full extent of the surviving remains of the village of Gilby, which was established in the early 12th century. The Deserted Village of Dunstall (List Entry Number: 1004996) lies approximately 1.4km to the south-east of the Site boundary and comprises a network of sunken roads and rectangular crofts with well-preserved ridge and furrow. The only visible earthwork is a raised rectangular area, grassed over, apparently the site of the chapel within the centre of the site and a tree on it. There are scheduled monuments at Southorpe (List Entry Number: 1016794) recorded in the Doomsday Book as one of the two 'Torps'. The church remained standing until the early 16th century, and the most recent buildings to occupy the site of the moated manor were taken down in 1966. Land within the 5km Study Area includes Scheduled Monuments at Willhoughton (List Entry Number: 1007689), which is a monastery of the military orders of Knights Templars and Knights Hospitallers at Temple Garth Farm. The estate was dissolved in 1545 and it was sold to the Saundersons (Earls of Scarborough) and has thus survived largely intact to the present day. Springthorpe (List Entry Number: 1016920) includes a medieval manorial complex immediately north-west of Elm Tree Farm and the visible remains of the complex include a moated platform, or island with a series of earthwork features, including ditched enclosures and remains of medieval ridge and furrow. The Cross in St Martin's Churchyard (List Entry Number: 1018291) lies approximately 940m to the southwest of the boundary of the Cottam 3b Site.

Listed Buildings:

Blyton which sits to the immediate southwest of the Cottam 3a Site, supports several Listed Buildings including the Grade I listed Church of St Martin (List Entry Number: 1064159) which is located 660m to the southwest of the boundary of the Site/Sites. The church is constructed in coursed limestone rubble with slate and lead roofs. The west tower is separated by string courses, stepped angled buttresses with a battlemented and pinnacled top. There are further Listed Buildings at Laughton that includes the Grade I listed Church of All Saints (List Entry Number: 131208) located approximately 1.6km from the north-west boundary of Cottam 3a. The church was rebuilt in 1894 by Bodley and Garner and is mainly coursed limestone rubble with ashlar and lead roofs. The C14 stage tower has an embattled parapet with angle and mid wall pinnacles with grotesque water chutes beneath. The Grade II Mount Pleasant Farmhouse (List Entry Number: 131186) also lies to the north of the Cottam 3a Site approximately 600m north of the boundary. This is a late C18 building of brown brick with painted brick dressings, pantile roof with raised brick coped gables. The closest listed building in proximity to the boundary of the Cottam 3b Site is the Grade II Listed Old Railway Station (List Entry Number: 1359454) located 0.32km to the west. This is the former Railway Station of c.1860 with later C19 additions all constructed in pale yellow brick with ashlar dressings and a slate roof. There are further Listed Buildings at Northorpe including the Grade I Church of St John the Baptist (List Entry Number: 1165812). There are number of Listed Buildings in the settlement of Pilham which are predominantly Grade II listed including the Grade II* Listed Church of All Saints (List Entry Number: 1317137) constructed in limestone and blue Lias, banded coursed rubble. The tower is of 2 stages with a chamfer topped plinth surmounted by an embattled parapet with 4 stubby corner obelisk pinnacles.

Conservation Areas: There is only one Conservation Area at Springthorpe where the earliest evidence of settlement can be found in the Saxon and Norman construction of the Church of St. Lawrence (List Entry Number: 1146616). The village green is enclosed by several former farm buildings in a close arrangement that forms a bend in the road where views open out onto the green. Land within the 5km Study Area includes the conservation area at Hemswell that sits to the southeast, the setting of which is attributed to its landscape setting on the Cliff Edge. The older properties in the conservation area are all worked of locally built stone (hence the dwelling 'Quarry Hill') on Bunkers Hill. The stone walls are also an important feature in the area as they complement the buildings and other important features include the tree and woodland cover and strong hedgerows that continue into the central parts of the village and are a key feature.

Registered Parks and Gardens: The closest Registered Park and Garden lies outside the 5km Study Area and comprises the Grade II listed Fillingham Castle (List Entry Number: 100097). This was built between c.1760 and 1770 to accompany the house and included a park with a long avenue aligned on the east front that is partly lined with mature oaks, sycamore, and chestnut as far as the east lodge gateway. Gothic-style arches are placed at the extremities of the park. There are two surviving areas of park and woodland including Lady's Wood and Pale Wood to the north-west and north-east and Fox Covert to the south-east. The park has been reduced from its original size to arable farmland.

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In terms of forces for change for the Cottam 3a and 3b Sites (Cultural Designations), recent trends have shown that access to historic sites is limited, along with interpretation to raise awareness and improve understanding and enjoyment of local history. The deserted medieval villages are particularly sensitive but also testimony to subsequent change during the medieval period when farming developed to the perimeter of the Cliff Edge.Nat Nat Nat Nat Nat Nat Nat Nat Nat Nat Nat subsequent change during the medieval period when farming developed to the perimeter of the Cliff Edge.Nat Na	alue of Receptor cenic: Nucleated settlement patterns follow major routes with springline villages along the foot f the Cliff and some estates and parklands. ultural: Ermine Street, follows the higher, drier land of the limestone plateau and first world war irfields are a feature along the top of the scarp, with RAF Scampton still active and home to the ed Arrows. latural: The sandy habitats of lichen heathland, lowland heathland and dry acid grassland are nportant features. ecreation and Enjoyment: The parklands and estates are important historic features including neir ancient woodlands and veteran trees. These areas often provide access for quiet ecreation. Distinctiveness and Sense of Place: The 'sense of place' and inspiration is mainly derived from ccessible viewpoints that enjoy the long-distance views across adjacent areas from the top of The 'Cliff'.	SensitivityCharacter:Nucleated settlementpatterns follow major routeswith springline villages along thefoot of the Cliff and someestates and parklands thatprovide local points of interestand the opportunity to captureviews across the landscape.Quality:The landscape showsevidence of historic settlementwith farms and nucleatedvillages and small hamlets suchas the Medieval village ofSouthorpe.The landscape	Embedded Mitigation Embedded Mitigation would be taken into account at the construction, operation (Year 1 and Year 15) and decommissioning stages of the Scheme. This Embedded Mitigation is also referred to as primary mitigation and would include the following measures: Panels to be set back 50m from the boundaries of adjacent dwellings. Site boundary fencing to be set back 5m from adjacent existing hedgerows to allow for proposed thickening and growth.
3a and 3b Sites (Cultural Designations), recent trends have shown that access to historic sites is limited, along with interpretation to raise awareness and improve understanding and enjoyment of local history. The deserted medieval villages are particularly sensitive but also testimony to subsequent change during the medieval period when farming developed to the perimeter of the Cliff Edge.Overall RecOverall, the susceptibility of the Cultural Designations for Cottam is conditioned by the presence of several ground features, especially on the plateau, that includes prehistoric burial mounds, Roman artefacts and abandoned medieval villages. The relevant characteristics therefore have a limited capacity to accommodate change without undue adverse effects. However, there is scope for protecting these features and providing interpretation to bring them to the attention of a wider audience.Imple of the cate	f the Cliff and some estates and parklands. <u>ultural:</u> Ermine Street, follows the higher, drier land of the limestone plateau and first world war irfields are a feature along the top of the scarp, with RAF Scampton still active and home to the ed Arrows. <u>atural:</u> The sandy habitats of lichen heathland, lowland heathland and dry acid grassland are nportant features. <u>ecreation and Enjoyment:</u> The parklands and estates are important historic features including heir ancient woodlands and veteran trees. These areas often provide access for quiet <u>ecreation.</u> <u>bcal Distinctiveness and Sense of Place:</u> The 'sense of place' and inspiration is mainly derived from ccessible viewpoints that enjoy the long-distance views across adjacent areas from the top of	patterns follow major routes with springline villages along the foot of the Cliff and some estates and parklands that provide local points of interest and the opportunity to capture views across the landscape. <u>Quality:</u> The landscape shows evidence of historic settlement with farms and nucleated villages and small hamlets such as the Medieval village of	 account at the construction, operation (Year 1 and Year 15) and decommissioning stages of the Scheme. This Embedded Mitigation is also referred to as primary mitigation and would include the following measures: Panels to be set back 50m from the boundaries of adjacent dwellings. Site boundary fencing to be set back 5m from adjacent existing hedgerows to allow
his	ealth and Wellbeing: Panoramic views out over Humberhead Levels to the west and Lincoln athedral on top of the Edge above Witham Gap can be enjoyed from many locations. Inportant Spatial Function: The spatial character of the area is provided by the large-scale mestone plateau and its west facing scarp known as the 'Cliff', which features as a backdrop in nany views across the area. Inverall, the value of the Cultural Designations for the Cottam 3a and 3b Sites is shaped by the istoric evidence of the Roman period, with the network of long straight roads, in particular rmine Street which links Lincoln to the crossing point of the Humber.	surrounding these settlements retain some rural and tranquil character with farms, but minor lanes and roads are interrupted by the presence the former airfield in parts. <u>Value:</u> Areas have a positive landscape character but include some areas of degradation where agricultural intensification has eroded landscape character, particularly around the edges of settlements. <u>Capacity:</u> The landscape benefits from high levels of visual containment due to the local landform, hedgerows, and shelter belts and this helps tolerance for landscape change.	Existing hedges are to be allowed to grow out and will be managed to a height of 5m. Hedgerow trees will be encouraged to grow out to add further thickening and growth to the field boundaries with the addition of new hedgerow trees as appropriate, randomly spaced along the length of existing hedges. Lighting will be limited to downlights within substations and battery banks only and used when maintenance or security is required. Lighting will be PIR operated and will be calibrated to vehicle and personnel movements. All visible lighting would be 50W, installed at a maximum height of 4m with cowls fitted to prevent light spillage. Lighting required within panelled areas will be manually operated. There will be no lighting on perimeter fencing. The landscape effects with only the Embedded Mitigation taken into account equate to those effects set out for the operation stage (Year 1) and this includes secondary mitigation which will have been carried out but will have had limited
			physical or landscape character impact at this Embedded Mitigation stage.
Medium to High (5km Study Area) Me	ledium to High (5km Study Area)	Medium to High	
Medium (Site/Sites) Me	ieuuni to higi (Jkin Jtuuy Alea)	Medium	

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Landscape Receptor – Scheduled Monuments,	, Listed Buildings, Conservation Areas and	d Registered Parks and Gardens (Cottam 3a and 3b Sites)
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mmissioning

lar process to that of construction stage, but with heme being no longer operational. This is an sment of the Site in winter but assumes retention sting vegetation and builds upon the proposed ry and secondary mitigation that had been ished as the future baseline. Effects are those g from activities for the duration of the nmissioning to include site traffic, noise and ion from decommissioning activities, dust ation and site runoff.

ving decommissioning, the land is likely to be ned to arable production. The Site will however fit from the significantly enhanced tree and erow planting that has been carried out and has to mature to create a much stronger and robust cape, retaining and enhancing the overall cter and providing considerable biodiversity fits over the years. Bird mitigation fields are likely retaining and the potential may exist to retain margins to retain some varied land use and ain a high level of biodiversity in the local area.

out Secondary Mitigation having been applied ghout the scheme, the only change to the /landscape following decommissioning would be isting hedgerows which will have been allowed w out and will have been managed to a height of is assumed that these will be retained.

Mitigation, the negative effects of the physical nmissioning will be balanced out by the long landscape and visual effects of this mitigation.



of Effect

Magnitude	ery Low dverse & Short Term	Very Low Beneficial & Long Term		Ver
		Very Low	Very Low	Ver
		 and mitigate views. Enhancements to the overall level of tree cover will have a minor but beneficial effect on the setting of the local villages. New planting to enhance the setting of Blyton will be beneficial in particular since vegetation cover is sparse around the edges of the settlement and the close proximity to the former airfield use and strategic and busy road networks raises the level of sensitivity at this location. The cultural heritage of the farmed landscape surrounding the settlement of Blyton will be retained and enhanced. The mitigation proposals will bring forward a more varied mix of land use and significantly enhanced grassland areas that will aim to reinforce the historic field pattern in this farmed landscape, where applicable. To the west, is Laughton Wood, which is located within the Wooded Vales Character Area 4b and a fundamental part of the Laughton Wood Area of Great Landscape Value (AGLV). The landscape setting of Laughton Wood AGLV3 will therefore also benefit from the improvements to the farmed landscape in the Till Vale with this being part of its wider setting. Between Years 1 and 15, the following beneficial effects will be achieved in terms of Heritage Assets: Enhanced general landscape setting over the longer term to a very limited number of heritage receptors Improved green infrastructure and ecological links to a small number of heritage sites Adverse effects (mitigated): Panels and structures across landscape – with very limited views from heritage assets in the short term. The effects at the Operational Phase at Year 15 without Embedded Mitigation equate to those effects at the beginning of Year 1 before secondary mitigation has been applied. The Effects set out below include secondary mitigation which will have been carried out but will have had limited physical impact at this stage. 	the development without undue adverse effects and there will be beneficial effects in terms of local tree/hedge cover and biodiversity net gains enhancing the local character. Overall , in terms of mitigation for the Cottam 3a and 3b Sites, the sense of place and the diversity of settlements is important and features such as long- distance views inwards to Lincoln Cathedral are to remain unobstructed. The aim is also to maintain the open character of the plateau areas including appropriate redevelopment of disused airfields, re- using their technical and domestic infrastructure, and protecting features of historic interest. The presence of historic ground features including prehistoric burial mounds and evidence of deserted medieval villages is a feature and encouraging their protection through cessation of cultivation and establishment of permanent grassland where possible is a recognized aspect of this farmed landscape and preserving the time depth of the landscape.	

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/ery Low

leutral & Short Term

Negligible Not Significant



Site/Sites and	Site/Sites and Cable Route Corridor			
Magnitude	Low	Very Low	Very Low	Very L
Level of	Adverse & Short Term	Beneficial & Long Term	Beneficial & Long Term	Neutra
Effect				
Significance	Minor Not Significant	Negligible Not Significant	Negligible Not Significant	Neglig
of Effect				

In-Combination Effects [Cumulative Sites]	Cumulative Effects [Cumulative Developments]
In Summary The In-combination effects of the Cottam 3a and 3b Site with the other Cumulative Sites (Cottam 1 and 2) is Minor at year 1 of operation and Negligible at year 15 with mitigation. This is due to the limited impact as a result of the low-level nature of the Scheme together with the quantum of mitigation. The existing landscape character associated with these Cumulative Sites and Study Area would predominantly provide tree cover along the hedge lines and their margins with a change to grassland with scattered trees, which would give rise to overall benefits to landscape character.	In Summary The Cumulative Effects of the Scheme with the other Cumulative Developer and adverse, giving rise to no likely Significant effects at year 1 of operatio with the embedded and additional mitigation. This betterment is due to the the improvements to the landscape margins of these historic features with to the vegetative layering of the landscape across the Sites and Study Area effect.
<u>Fabric of the Landscape</u> There would not be the removal of, or changes to the Scheduled Monuments, Listed Buildings, Conservation Areas and Registered Parks and Gardens or features of the landscape within Cottam 3a and 3b. The wider landscape is typified by the historic evidence of the Roman period, with the network of long straight roads, in particular Ermine Street which links Lincoln to the crossing point of the Humber. The spatial fabric of the landscape is also provided by the large-scale limestone plateau and it west facing scarp known as the 'Cliff', which features as a backdrop in many views across the area. There would be the introduction of new elements and features comprising the solar panel areas, the substation area and Cable Route Corridor extending between the Cottam 1 Site/Sites and the Cottam 2	Fabric of the LandscapeThere would not be the removal of, or changes to the Scheduled MonumeRegistered Parks and Gardens or features of the landscape within Cottamthe historic evidence of the Roman period, with the network of long straigLincoln to the crossing point of the Humber. The spatial fabric of the landslimestone plateau and its west facing scarp known as the 'Cliff', which featarea.There would be the introduction of new elements and features comprisingCable Route Corridor extending between the Cottam 1 Site/Sites and the Cand 3b Site/Sites (the 'Cable Route Corridors').
Site and the Cottam 2 and Cottam 3a and 3b Sites (the 'Cable Route Corridors'). <u>Aesthetic Aspects of the Landscape</u> Refer to Figure 8.15.1.3 [C6.4.8.15.1.3] which shows that with the Cottam 3a Site, cumulative visibility with the Cottam 1 Site/ Sites, Cottam 2 Site and Cottam 3b Site would not be experienced across the majority of the 2km study area. This is due to the distance, the intervening woodlands, hedgerows, and tree cover between the Site/Sites. The intervening settlements and built form would also curtail cumulative visibility between these Site/Sites.	Aesthetic Aspects of the Landscape Refer to Figure 8.15.1.3 [C6.4.8.15.1.3] which shows that with the Cottam cumulative developments would not be experienced across the majority of distance, the intervening woodlands, hedgerows, and tree cover between built form would also curtail cumulative visibility between these Site/Sites. There are local patches of cumulative visibility which may be focus of likely
 There are local patches of intervisibility between the Cottam 3a and 3b Sites, extending from the: Northeast boundary of the Cottam 3a Site, defined to the west by the Green Respect Burial Para and Park House Farm, and reaching as far as Northorpe in the east East boundary of Cottam 3a Site, and stopping short of Cold Harbour Farm; and North boundary of the Cottam 3b Site, extending for a short distance as far as Grange Farm and Top Farm. 	Gate Burton to the west of Cottam 3a and 3b, where the intervening settle lie between, where their presence will impair any associated landscape co Figure 8.15.2.8 Cottam 1, 2, 3a and 3b Tillbridge Solar Cumulative Develop
The Scheduled Monuments, Listed Buildings, Conservation Areas and Registered Parks and Gardens are focused around the settlements where the land use at their edges supports a good level of tree and woodland cover to help in curtailing visibility across these areas. Despite the concentration of straight roads that cut bluntly across the open arable landscape, there are concentrations of woodlands to soften their presence such as the Green Respect Burial Park. These woodlands help to close down visibility across the landscape.	shows Tillbridge to the south of the Cottam 3a and 3b Sites, where their be other, just to the south of Kexby Road and to the west of the settlement or settlements, woodlands or major topography, such that the presence of T give rise to a direct and compounded relationship in terms of the landscap the Tillbridge Development would also add to coalescence between the Co secondary mitigation would however ensure that all existing features would operation stage (Year 15) of the watercousres across the Sites and Study A

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Low

ral & Short Term

igible Not Significant

pments is Minor with the Tillbridge Development ion. The effects would be Negligible at year 15 the low-level nature of the Scheme, together with ith new hedgerows and tree planting, giving rise ea, all in helping reduce to reduce the cumulative

nents, Listed Buildings, Conservation Areas and m 3a and 3b. The wider landscape is typified by ight roads, in particular Ermine Street which links dscape is also provided by the large-scale atures as a backdrop in many views across the

ng the solar panel areas, the substation area and e Cottam 2 Site and the Cottam 2 and Cottam 3a

n 3a and 3b Sites, cumulative visibility with the of the 5km study area. This is due to the n the Site/Sites. The intervening settlements and es.

ely significant effects, between the Cottam 3a Site vithin the following figures:

ments Augmented ZTV **[C6.4.8.15.2.6].** This shows lements of Kexby, Willingham by Stow and Stow context with the Gate Burton Site.

opments Augmented ZTV [**C6.4.8.15.2.8].** This boundaries' are located directly adjacent to each of Fillingham. There are no intervening Tillbridge Development with the Scheme would ape context of the settlements. The presence of Cottam 1 and the Cottam 2 Sites. The primary and ould be retained leading to an improvement at the Area.



Cottam		LReferenc
	 There are local patches of intervisibility between Cottam 3a, 3b and Cottam 2 Site, extending from the: South boundary of the Cottam 3b Site, bordered by Pilham to the west and the medieval settlement of Dunstall to the east, and reaching as far as Springthorpe in the south South boundary of the Cottam 3a Site, bordered by the eastern edge of Blyton to the west, reaching Grange Farm and stopping short of the mainline railway; and North boundary of the Cottam 3a Site, following the alignment of the A159 (Laughton Road) and stopping short to the west of the Green Respect Burial Park. 	Figure 8.15.2.9 Cottam 1, 2, 3a and 3b West Burton Cumulative Development the West Burton Development located to the southwest of the Cottam 3a a of Stow, Sturton by Stow and Bransby lie between, where their presence w the West Burton Site. The other Cumulative Developments at Bumble Bee Farm, Field Farm and by the intervening settlements of Gainsborough, Lea, Blyton and Willingha
	 The Scheduled Monuments, Listed Buildings, Conservation Areas and Registered Parks and Gardens are focused around the settlements where the land use at their edges supports a good level of tree and woodland cover to help in curtailing visibility across these areas. This section of the landscape is showing higher concentrations of cumulative visibility and land use is mainly arable with a limited presence of settlement. The natural features however, such as the meandering watercourses and smaller scale field systems bring a tighter grain and added layers to the landscape, which helps curtail views across the area and mitigate any effects. There is a local patch of intervisibility between All Sites, located to the: East of the Cottam 3b Site and north of the Bonsdale Farm at Pilham, extending across the landscape to the north of the medieval village of Dunstall as far as the medieval village of Southorpe. 	Overall Character of the Landscape and Scheduled Monuments Listed Buildings Gardens Overall, the character of the landscape is shaped by the predominance of r by nucleated settlement patterns that follow major routes with springline v estates and parklands. The built form of these settlements and their assoc the cumulative visibility across the area. These relevant characteristics of t accommodate change without undue adverse effects. The cumulative visib overall character of the landscape and the Scheduled Monuments, Listed E Parks and Gardens. Moreover, these features play a positive role in reducin
	The Scheduled Monuments, Listed Buildings, Conservation Areas and Registered Parks and Gardens are focused around the settlements where the land use at their edges supports a good level of tree and woodland cover to help in curtailing visibility across these areas. The exposed landscape to the east of Cottam 3b Site/Sites is occasionally broken by small plantation woodlands often sheltering dispersed farmsteads and large-scale agricultural buildings such as those at Huckerby Farm and Huckerby Bungalows which bring screening and enclosure.	
	Users of linear routes, especially footpaths or other rights of way, or transport routes, may potentially experience the aesthetic aspects of the cumulative sites revealed in succession as a series of sequential views. For further details refer to the following detailed visual receptor sheets:	
	Appendix 8.3.2.2 Individual Viewpoint Receptor Sheets [C6.3.8.3.2.2] Appendix 8.3.2.3 Individual Viewpoint Receptor Sheets [C6.3.8.3.2.3] Appendix 8.3.2.4 Individual Viewpoint Receptor Sheets [C6.3.8.3.2.4]	
	Appendix 8.3.3.2 Individual Residential Receptor Sheets [C6.3.8.3.3.2] Appendix 8.3.3.3 Individual Residential Receptor Sheets [C6.3.8.3.3.3]	
	Appendix 8.3.4.2 Individual Transport Receptor Sheets [C6.3.8.3.4.2] Appendix 8.3.4.3 Individual Transport Receptor Sheets [C6.3.8.3.4.3]	
	Appendix 8.3.5.2 Individual PRoW Receptor Sheets [C6.3.8.3.5.2] Appendix 8.3.5.3 Individual PRoW Receptor Sheets [C6.3.8.3.4.3]	
	Overall Character of the Landscape and Scheduled Monuments Listed Buildings, Conservation Areas and Registered Parks and Gardens Overall, the character of the landscape is shaped by the predominance of medium and large-scale agriculture punctuated by nucleated settlement patterns that follow major routes with springline villages along the foot of the Cliff and some estates and parklands. The built form of these settlements and their associated tree cover plays a major role in curtailing the cumulative visibility across the area. These relevant characteristics of the landscape and land use have some ability to accommodate change without undue adverse effects. The cumulative visibility for the Cottam 2 Site would not alter the overall character of the landscape and the Scheduled Monuments, Listed Buildings, Conservation Areas and Registered Parks and Gardens. Moreover, these features play a positive role in reducing the overall cumulative effects.	

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> ments Augmented ZTV [C6.3.4.15.2.9]. This shows and 3b Sites where the intervening settlements will impair any associated landscape context with

nd High Marnham are separated from the Scheme ham by Stow.

ngs, Conservation Areas and Registered Parks and

of medium and large-scale agriculture punctuated e villages along the foot of the Cliff and some ociated tree cover plays a major role in curtailing of the landscape and land use have some ability to sibility for the Cottam 2 Site would not alter the Buildings, Conservation Areas and Registered icing the overall cumulative effects.



	Construction: Low	Construction: Low
	Operation (Year 1): Low	Operation (Year 1): Low
Magnitude	Operation (Year 1): with only Embedded Mitigation: Low	Operation (Year 1): with only Embedded Mitigation: Low
-	Operation (Year 15): Very Low	Operation (Year 15): Very Low
	Decommissioning: Very Low	Decommissioning: Very Low
	Construction: Adverse & Short Term	Construction: Adverse & Short Term
Type of	Operation (Year 1): Adverse & Long Term	Operation (Year 1): Adverse & Long Term
	Operation (Year 1): with only Embedded Mitigation: Adverse & Long Term	Operation (Year 1): with only Embedded Mitigation: Adverse & Long Ter
Effect	Operation (Year 15): Beneficial & Long Term	Operation (Year 15): Neutral & Long Term
	Decommissioning: Neutral & Short Term	Decommissioning: Neutral & Short Term
	Construction: Minor Not Significant	Construction: Minor Not Significant
Significance	Operation (Year 1): Minor Not Significant	Operation (Year 1): Minor Not Significant
-	Operation (Year 1): with only Embedded Mitigation: Minor Not Significant	Operation (Year 1): with only Embedded Mitigation: Minor Not Significa
of Effect	Operation (Year 15): Negligible Not Significant	Operation (Year 15): Negligible Not Significant
	Decommissioning: Negligible Not Significant	Decommissioning: Negligible Not Significant

* Potential exists to use targeted, low-density sheep grazing in appropriate areas of wildflower meadow under panelled areas for short periods once a suitable sward has established. This may allow for diversification of grazing management. Grazing of tussock seeded areas may be appropriate to reduce the sward every three years. Careful monitoring is however required to prevent overgrazing with conservation grazing densities used.

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Landscape Receptor – Ancient Woodlands and Natural Designations (Cottam 1 Site/Sites)

Receptor Baseline: ٠

- Within the Cottam 1 Site/Sites, at a regional scale, landscape character is assessed within the East Midlands Regional Landscape Character Assessment as forming part of RLCT Profile: 4a Unwooded Vales, which is shown on Figure 8.5 [C6.4.8.5]. Unwooded Vales extends across the majority of the 2km and 5km Study Area apart from the eastern most edge where it shares a boundary with RLCT Profile: 6a Limestone Scarps and Dipslopes. The western extent of the 5km Study Area is also host to a small part of RLCT Profile 3a: Floodplain Valleys and RLCT Profile: 4b Wooded Vales.
- The Site/Sites within Cottam 1 (2km Study Area) can be sub-divided into two distinct land areas:
- Cottam 1 North
- Cottam 1 South •
- There are no Ancient Woodlands, Local Nature Reserves, Local Wildlife Sites or Sites of Special Scientific Interest (SSSI) on Site or within the Cottam 1 Site/Sites.

Key Features:

- Ancient Woodlands: The closest Ancient Woodland is Burton Wood (Index MLI50651) at Gate Burton which is to the west (approximately 3.5km) of Normanby by Stow and the Cottam 1 Site/Sites. This woodland is mainly classified as semi-natural with the remaining 4 hectares classified as plantation and is closely associated with the Grade II* Listed Gate Burton Hall (List Entry 1359458). The house dates to the 17th and early 18th century and was formed as part of the Knaith Estate and also includes a later 19th century farmstead, coach house and stables. There is remnant parkland to the north, south and west of the hall, but the land to the east (surrounding Burton Wood) is in agricultural use. Within the 5km Study Area, other Ancient Woodland can be found at Stag Wood just to the north of the settlement of Knaith Park. Thurlby Wood, which forms part of a group of other woodlands such as Hermit Dam Wood, located between the settlements of Lea and Upton. The woodland lies in close proximity to the Hermit Dam moated site (List Entry: 1016110) and northeast of Hermit Dam Wood. Aside from the flood plain grazing marsh, the Ancient Woodland and ancient re-planted woodland provides one of the key habitats on the boundary with the Till Vale landscape to the east of the Trent.
- Local Nature Reserves (LNRs): The closest Local Nature Reserve is at Owlet Plantation west of Blyton, but this is located in closer proximity to the Cottam 2 Site. The woodland comprises birch, oak and pine interspersed among open heathland and also supports an important diversity of invertebrates. Remnants of the heathland are still evident, and they form part of the Coversands Heathland. There is good public access over most of the site due to the extensive footpath network which is dry all year due to the sandy soil.
- Local Wildlife Sites (LWSs): There are three LWSs located in close proximity to the Cottam 1 Site/Sites. The Willingham to Fillingham Lane Verges LWS is located adjacent to the boundary of the Cottam 1 North Site/Sites. This is a 3 – 3.5m wide roadside verge where the main habitats are calcareous grassland and neutral grassland (unimproved, semi-improved). Additional habitats include coarse grassland, species rich hedgerow and ditches. There are two other sites separated from the Cottam 1 Site/Sites by approximately 165m and 1.1km respectively. These LWSs are present due to the network of quiet lanes that lead to the villages, especially where they are associated with the watercourses such as the crossings of the River Till and its associated tributaries, otherwise the floodplain grazing marsh is the most extensive semi-natural habitat focused along the Trent. Where woodland cover is limited, these watercourses and quiet lanes provide an important substitute woodland and woodland edge habitat as well as being significant linear features in the landscape.
- Sites of Specific Scientific Interest (SSSI's): The closest SSSI is located at Lea Marsh, to the northwest (approximately 6.9km) of the Cottam 1 North Site. closest Local Wildlife Site is located to the western edge of River Trent, to the north-west direction of the settlement of Lea and south of the settlement of Gainsborough. The SSSI forms part of the Lea Marsh and the associated Lea Marshes Main Drainage network. Away from the flood plain, the habitat distribution is confined to features such as hedgerows, field margins, ponds, 'unimproved' grassland, and copses.

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Receptor susceptibility to change	Value of Receptor	• Sensitivity
 In terms of forces for change for the Cottam 1 Site/Sites (Natural Designations), recent trends have shown that changes in soils structure and water table levels can modify habitats. For example, the woodlands that are least modified in the area are formed on the historic heath at Morton and Laughton Commons. Other factors causing change to habitats is the cessation of grazing leading to a succession from heathland to woodland. Sycamore regeneration, aged tree stock and tree disease is also a key issue. The high volume of dog walkers is also a consideration. Also, because of the fertilizer inputs, the main surviving areas of semi-natural habitat tend to be confined to the floodplain grazing marsh and sites such as Lea Marsh SSSI. Overall, the susceptibility of the Natural Designations for the Cottam 1 Site/Sites is conditioned by the underlying geology and drainage patterns. The change in habitat types is also conditioned by the cessation of the use of agricultural sprays and lead to the encouragement of vigorous grasses as is evident at the Willingham to Fillingham Lane Verges LWS. The heavy mowing of verges close to residential properties is also a concern in terms of change and interpretation/awareness raising could be considered. The presence of the north south road network also severs habitat connectivity in some areas. The A156 is a major route that divides the Trent flood plain from the Till Vale to the east. The relevant characteristics of the landscape therefore have a limited ability to accommodate change without undue adverse effects given there is scope to protect and enhance the natural character of the minor east west local road network. There is also scope to improve linkages between the Trent flood plain and the Till Vale to the east by improving connectivity across major routes such as the A156 (Gainsborough Road). 	 <u>Scenic</u>: The broadleaved woodlands, copses and networks of hedgerows provide important habitats for farmland species. The network of woodlands to the west of Cammeringham and Brattleby are notable and a further network to the north of Coates. <u>Cultural</u>: The bedrock geology of Triassic and Jurassic mudstones has given rise to a variety of habitats due to the wide variety of soils; however very little semi-natural habitat remains across the area despite the rich geodiversity. <u>Natural</u>: The wet and often peaty low-lying areas are key in supporting some habitats and types of woodland such as Owlet Plantation. These woodlands and their associated habitats are now less widespread in the locality. <u>Recreation and Enjoyment</u>: This is mainly confined to the road networks due to lack of PRoW. The Willingham to Fillingham LWS contributes to this access network. Further west, Littleborough Lane is an important route lining with Stow Park Road. <u>Local Distinctiveness and Sense of Place</u>: The Trent flood plain displays many meanders that gives the area its distinctiveness and sense of place but is disconnected from the Till Vale landscape by the strong north south road network. Elsewhere the SSI at Lea Marsh is the only other location that connects the Trent flood plain with the Till Vale to the east, apart from Knaith Hill at Knaith and Trent Port Road at Marton. <u>Health and Wellbeing</u>: The Trent flood plain is a key asset and there are road networks that connect to the river corridor that can be promoted for biodiversity due to their tranquil qualities. The road network to the south of Gate Burton such a Clay Lane and Willingham Road are key routes that connect east west. <u>Important Spatial Function</u>: Areas of pasture and grassland habitats add to the spatial function of the area where they are present particularly due to the change of intimacy within the landscape. Overall, the value of the Natural Designations for	 Character: Enhancing the habitat connectivity of streams, dykes and other watercourses in the landscape would bring forward some positive benefits. Quality: The most widespread change has been in agricultural intensification, where the change from pastoral to arable cropping has resulted in loss of hedges, and consequently increase in field sizes and reduced connectivity. Value: Areas of pasture and grassland habitats add to the spatial function of the area where they are present particularly due to the change of intimacy within the landscape. Capacity: Features are evident, but they are locally

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• Embedded Mitigation

- Embedded Mitigation would be taken into account at the construction, operation (Year 1 and Year 15) and decommissioning stages of the Scheme. This Embedded Mitigation is also referred to as primary mitigation and would include the following measures:
- Panels to be set back 20m from existing woodlands with an ecological buffer between.
- Panels to be set a minimum of 3m from Site boundaries.
- Site boundary fencing to be set back 5m from adjacent existing hedgerows to allow for proposed thickening and growth.
- Existing hedges are to be allowed to grow out and will be managed to a height of 5m. Hedgerow trees will be encouraged to grow out to add further thickening and growth to the field boundaries with the addition of new hedgerow trees as appropriate, randomly spaced along the length of existing hedges.
- Lighting will be limited to downlights within • substations and battery banks only and used when maintenance or security is required. Lighting will be PIR operated and will be calibrated to vehicle and personnel movements. All visible lighting would be 50W, installed at a maximum height of 4m with cowls fitted to prevent light spillage. Lighting required within panelled areas will be manually operated. There will be no lighting on perimeter fencing.
- The landscape effects **with only** the Embedded Mitigation taken into account equate to those effects set out for the operation stage (Year 1) and this includes secondary mitigation which will have been carried out but will have had limited

Medium (5km Study Area)	Medium
	change.
	vulnerable to
	the area leaving the landscape
	remains across
	natural habitat
	little semi-
	means that very
	agriculture
	of the land for
	predominant us
	commonplace and the

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physical or landscape character impact at this Embedded Mitigation stage.



Landscape Receptor – Ancient Woodlands and Natural Designations (Cottam 1 Site/Sites)

Construction	Operation (Year 1)	Operation (Year 15)	Decommissioning
Activities during site preparation /	Designations lie predominantly to the west/southwest of both the Cottam 1 North and	The effects at the Operational Phase at Year 15 without	A similar process to that of
enabling works, construction, and	South Sites with Ancient Woodland, Local Nature Reserves and Local Wildlife Sites within	Mitigation equate to those effects at the beginning of	construction stage, but with the
commissioning with effects such as	the study area but having no physical or visual impact/influence on the Site/Sites other	Year 1 before any secondary mitigation has been	Scheme being no longer operatio
construction traffic, noise and	than distant views where these may exist. Opportunities for reinforcement of the	applied. Mitigation embedded in the design will apply	This is an assessment of the Site i
vibration from construction activities,	character area within both the Cottam 1 Site/Sites and Cottam Site are available.	as will the growing out of the existing hedges.	winter but assumes retention of
dust generation, site runoff, mud on			existing vegetation and builds up
roads, and the visual intrusion of	Both Sites lie outside the outer limits of any of the SSSI's impact risk zones locally.	With secondary mitigation such as planting and grass	the proposed primary and secon
plant and machinery on site. At the	Reversion of arable farmland to varied pasture within the Site/Sites provides	seeding being taken into account at the operational	mitigation that had been establis
early stages of the construction stage,	opportunities for some natural regeneration and improved biodiversity and potential	stage (Year 15) the following changes to the landscape	as the future baseline. Effects ar
ground, and lower-level activities such	wildlife links.	would occur and the effects are set out below.	those arising from activities for t
as the construction of the solar panel			duration of the decommissionin
areas and associated infrastructure	Secondary mitigation such as planting, and grass seeding would be taken into account at	Views to the north, south, east, and west of the Cottam	include site traffic, noise and
and inverters would predominantly	this stage to include the following changes to the landscape:	1 Site will be screened in the close-mid range proximity	vibration from decommissioning
be screened by existing vegetation.		due to the new hedgerow and shelterbelt planting and	activities, dust generation and si
	Wildflower meadow mix to be sown beneath proposed panels.	the enhancement of existing hedges which will be	runoff.
During the latter part of the	with ower meadow mix to be sown beneath proposed panels.	managed to a height of 5m. These new and augmented	
construction stage, views would	Existing hedgerows to be allowed to grow out and managed to a height of 5m with	hedgerows will provide a series of good quality field	Following decommissioning, the
become available of the elevated	additional trees added. New hedgerows with hedgerow trees planted along roadsides	boundaries both formally strengthening the existing and	is likely to be returned to arable
activities above the hedgerows, but	where none exist.	historical field pattern and creating a multi-layered	production. The Site will howeve
these would be limited and would not		landscape. Scattered tree belts will follow the routes of	benefit from the significantly
affect the integrity of woodlands or	Cottam 1 North	existing watercourses, strengthening their visibility in	enhanced tree and hedgerow
other designated receptors.	Within the Cottam 1 North Site, reinforcement of the character includes enhancement of	the wider landscape. Views of the longer distance,	planting that has been carried o
0	the local woodland cover including Larch Plantation and Fillingham Low Wood as well as	where hedgerows do not block these, will be of a	and has matured to create a mi
Other works would be undertaken in	a strong belt running north/south to the west of Turpin Farm. This provides a strong	layered, well treed landscape with a backdrop of some	stronger and robust landscape,
connection with the construction	buffer of successional scrub a minimum of 15m wide around each woodland feature	wooded vegetation in places on the horizon. Both new	retaining, and enhancing the ov
including fencing, gates, boundary	which enhances the biodiversity as well as strengthening the character locally and	and existing vegetation will have established and begun	character and providing conside
treatment and other means of	helping to link up with the adjacent hedgerows and shelterbelts.	to mature, creating a much stronger structure to the	biodiversity benefits over the ye
enclosure and works for the provision	helping to link up with the adjacent nedgerows and shelterbeits.	landscape, and retaining and enhancing the overall	Bird mitigation fields and wetla
of security and monitoring measures	Strong linear shelterbelts adjacent to Side Farm help to link up areas of woodland	character of the area.	grazing marshes are likely to be
such as CCTV and the laying down of	visually and physically via augmented hedgerows and provide a strong buffer adjacent		retained and the potential may
internal tracks. There would also be	to the existing watercourse, further enhancing its setting and its biodiversity.	The proposed grassland will have established and will	to retain grass margins to main
landscape and biodiversity mitigation	to the existing watercourse, further enhancing its setting and its biodiversity.	have settled into its natural scheme with some minor	some varied land use and a hig
works, including planting and the	Tall herb mixes adjacent to this and another watercourse to the south will help to	appropriate management of differing regimes. The soil	level of biodiversity in the local
improvement of existing hedgerows	enhance this feature with open sides and riparian tree species strengthening the	quality will be considerably improved through the lack	,
to all boundaries of the Site/Sites	character locally. It will also help to strengthen the physical links between the Trent	of cultivation and the chemical run-off will be reduced	Without Secondary Mitigation
creating a much greater level of	Flood Plain and the Till Vale which are currently eroded by the existing road system in	around the Site(s) enhancing the water quality generally.	having been applied throughou
vegetation locally, creating many	parts of the area.	There will be considerable biodiversity gains through the	scheme, the only change to the
associated beneficial effects.		establishment of the varied grassland types and regimes	views/landscape following
There may be very minor removal of	Enhanced roadside verges (with margin verge habitat created from a LWS donor) along	and a long-term increase in pollinator species and bird	decommissioning would be the
sections of hedgerow around access	the Willingham Road running east/west will also augment these links and improve the	and other species and numbers locally.	existing hedgerows which will h
roads for visibility purposes.	biodiversity and habitat along this important route.		been allowed to grow out and v
51 1		Growth of existing and proposed vegetation is assumed	have been managed to a height
	Cottam 1 South	to be:	5m. It is assumed that these wil
These short-lived construction	Within the Cottam 1 South Site, there are several small woodlands including		retained.
activities would not adversely affect	Cameringham Low Covert, Thorpe Wood and Brattleby Gorse which provide a good level	Woodland/trees and shelterbelts: 2.5m max at Year 1,	
the local woodlands, existing	of cover locally and will be linked to each other and further afield with enhanced and	7.5m max at Year 15.	With Mitigation, the negative ef
vegetation, or designated areas.	new hedgerows. Successional scrub will be provided as necessary at the base of some		of the physical decommissionin
There would be a change to the	of these woodlands to increase the biodiversity and transitional value to the grassland	New hedgerows: 0.6m at Year 1 and 3.5m at Year 15.	be balanced out by the long ter
arable land use which will be	beyond. Two small areas of scattered native tree belts will augment this woodland cover		landscape and visual effects of t
beneficial to soils and watercourses,	and help to create valuable links (including integrating lone field trees into the	Existing hedgerows: 0.9m at Year 1 and 5m at Year 15.	mitigation.
significantly increase biodiversity and	landscape).		
help to capture carbon. The field		Shrubs: 0.9m at Year 1 and 5m at Year 15.	

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boundaries and the associated tree cover would remain intact and help with visual layering across the landscape and the integration of the neuromannels. There would be neuroned and the integration of the neuromannels. There would be neuroned and the integration of the neuromannels. There would be neuroned and the integration of the neuromannels. There would be neuroned and the integration of the neuromannels. There would be neuroned and the integration of the neuromannels. There would be neuroned and the integration of the neuromannels. There would be neuroned and the integration of the neuromannels. There would be neuroned and the integration of the neuromannels. There would be neuroned and the integration of the neuromannels. There would be neuroned and the integration of the neuromannels. There would be neuroned and the integration of the neuromannels. There would be neuroned and the integration of the neuromannels. There would be neuroned and the integration of the neuromannels. There would be neuroned and the integration of the neuromannels. There would be neuroned and the integration of the neuromannels. There would be neuroned and the integration of the neuromannels. There would be neuroned and the integration of the neuromannels. There would be neuroned and the integration of the neuromannels. There would be neuroned and the integration of the neuroned and the integra		nd the associated tree	undaries and the associa	To the west, where the papel areas sit adjacent to the River Till, reinstated floodplain		
new panes. The would be about the work of the second panes of the intervent of the intervent of the second panes. The second panes is the second panes of the intervent of the second panes. The second panes is the second panes of the intervent of the second panes. The second panes is the second panes of the intervent of the second panes. The second panes is the second panes the second panes is the second panes. The s	 with visual layering across the landscape and the integration of the new panels. There would be no adverse changes to the woodlands or vegetation with buffer planting implemented around these, further protecting these assets. Overall, the local woodland and other vegetated cover, both within the Site and of the wider area, is able to accommodate the changes that arise through the construction of the Site without undue adverse effects. The integrity of all features will be retained and enhancement at ground level through initial grassland planting will have beneficial effects from the outset. The planting the local woodland and other vegetated cover, both within the Site and of the wider area, is able to accommodate the changes that arise through the construction of the Site without undue adverse effects. The integrity of all features will be retained and enhancement at ground level through initial grassland planting will have beneficial effects from the outset. The planti streng erode mana varied current improvided in the planting streng erode mana varied current improvided in the planting would be address will be retained and enhancement at ground level through initial grassland planting will have beneficial effects from the outset. The planting streng erode mana varied current improvided in the planting streng erode mana varied current improvided in the planting streng erode mana varied current improvided in the planting streng erode mana varied current improvided in the planting streng erode mana varied current improvided in the planting streng erode mana varied current improvided in the planting streng erode mana varied current improvided in the planting streng erode mana varied current improvided in the planting streng erode mana varied current improvided in the planting streng erode mana varied current improvided in the planting streng erode mana varied current improvided in the planting streng erode mana varied current improvided in the planting streng erode m	yering across the d the integration of the There would be no ges to the woodlands of th buffer planting l around these, further ese assets. Total woodland and other ver, both within the Site der area, is able to e the changes that arise construction of the Site is adverse effects. The l features will be enhancement at groun initial grassland plantin	ver would remain intact a th visual layering across t indscape and the integrati w panels. There would be verse changes to the woo getation with buffer plant plemented around these otecting these assets. verall, the local woodland getated cover, both within d of the wider area, is ab commodate the changes rough the construction of thout undue adverse effe tegrity of all features will l tained and enhancement vel through initial grasslar Il have beneficial effects f	meadows will enhance the local character and create a much more resilient landscape. Around this important feature, the panel areas will be mitigated with strong belts of scattered native riparian trees to reinforce the character of this landscape type and ensure Scheme has some separation from the river. Strong buffers of tall herb mixes around the river will further strengthen this character, enhance biodiversity by providing valuable habitats around this water course. Although this area is less well wooded, enhancement of field boundaries and riparian tree belts will add to the overall character. The addition of irregularly spaced hedgerow trees across the Cottam 1 South Site will help increase the tree cover locally and create additional biodiversity benefits by providing strong links of native trees between existing woodlands and proposed shelterbelts. These new trees will also further enhance the east/west cover to enhance these green corridors. The strengthening of the field boundaries with both the addition of new hedgerow planting and enhancement of existing hedges, will create additional ecological links and strengthen the character of the historical field pattern locally where this has been lost or eroded. Existing field boundaries will be allowed to grow out where these are currently managed as low hedges, being managed to a height of Sm. This, together with wide and varied grassland buffers to the base of existing and proposed vegetation where turnety value. The planting of oak and birch within the tree belts will further reinforce the character of the local woodlands. The planting of oak and birch within the tree belts will be achieved with the panelled areas would be explored where applicable. Although new vegetation will be ilmmature, existing hedgerows will have begun to grow out at Year 1 and the var	locally will be augmented by increased vegetation cover creating both visual and ecological links across the landscape to the adjoining woodland blocks. Grassland mixes will have established and will create valuable habitats with soil structure greatly improved through cessation of arable cultivation. Following mitigation, the Cottam 1 Site/Sites are able accommodate change without undue adverse effects and there will be considerable beneficial effects in the increased level of vegetation cover locally, the linking and enhancement of existing natural features and the biodiversity benefits that this will bring, creating a stronger, more resilient framework across the local character area. Overall, in terms of mitigation for the Cottam 1 Site/ Sites, due to the loss of habitats that would have been more widespread in this locality, the aim is to maintain underlying geological conditions that support the range of species. Other aims would look to secure associated benefits, for example there are woodlands associated with Ancient Woodland that are 'secondary' in nature, such as Oak Plantation that has developed from the more open structure of an historic heathland/common. There is also opportunity to manage rides and to increase open canopy woodland in some parts. Blocks of conifer plantation could also be made more diverse in species through silvicultural thinning and the establishment of more native broadleaves. Landscape scale projects such as those delivered by the Trent Vale Partnership, are working to enhance access, biodiversity, and the natural character of the River Trent's flood plain and other watercourses such as the River Till and their objectives could be built into overall	



		- Green energy production		
		Adverse effects: Panels and structures across landscape Increased hard standing areas Potential minor pollution around substations Loss of food production Increased tracks around Sites The effects at the Operational Phase at Year 15 without Embedded Mitigation equate to those effects at the beginning of Year 1 before secondary mitigation has been applied. The Effects set out below include secondary mitigation which will have been carried out but will have had limited physical impact at this stage.		
5km Study A	rea:			
Magnitude	Very Low	Low	Low	Very Low
Level of Effect	Neutral & Short Term	Beneficial & Long Term	Beneficial & Long Term	Neutral & Short Term
Significance of Effect	Negligible Not Significant	Minor Not Significant	Minor Not Significant	Negligible Not Significant
Site/Sites an	d Cable Route Corridor:			
Magnitude	Low	Low	Medium	Very Low
Level of Effect	Adverse & Short Term	Beneficial & Long Term	Beneficial & Long Term	Neutral & Short Term
Significance of Effect	Minor Not Significant	Minor Not Significant	Moderate Significant	Negligible Not Significant

In-Combination Effects [Cumulative Sites]	Cumulative Effects [Cumulative
In Summary	In Summary
The In-combination effects of the Cottam 1 Site with the other Cumulative Sites (Cottam 2 and 3a and 3b) is Minor at year 1 of operation and Negligible at year 15 with mitigation. This is due to the limited impact as a result of the low-level nature of the Scheme together with the quantum of mitigation. The existing landscape character associated with these Cumulative Sites and Study Area would predominantly provide tree cover along the hedge lines and their margins with a change to grassland with scattered trees, which would give rise to overall benefits to landscape character.	The Cumulative Effects of the Scheme with with the Tillbridge Development and adver year 1 of operation. The effects would be N additional mitigation. This betterment is d together with the improvements to the lan
Fabric of the Landscape	and natural designations with new hedge vegetative layering of the landscape across
There would not be the removal of, or changes in Ancient Woodlands and Natural Designations or features of the landscape within Cottam 1. The landscape is shaped by the rich geodiversity, however the predominant use of the land for agriculture means that very	to reduce the cumulative effect.
little semi-natural habitat remains across the area. Changes to morphological and hydraulic characteristics have affected species	<u>Fabric of the Landscape</u>
abundance and decreased the range of population of some species.	There would not be the removal of, or cha
	Designations or features of the landscap

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e Developments]

th the other Cumulative Developments is Minor verse, giving rise to no likely Significant effects at Negligible at year 15 with the embedded and due to the low-level nature of the Scheme, andscape context of these ancient woodlands gerows and tree planting, giving rise to the oss the Sites and Study Area, all in helping reduce

nanges in Ancient Woodlands and Natural be within Cottam 1. The landscape is shaped by



There would be the introduction of new elements and features comprising the solar panel areas, the substation area and Cable Route by the rich geodiversity, however the predominant use of the land for agriculture means Corridor extending between the Cottam Power Station and the Cottam 1 Site/Sites and extending between the Cottam 1 Site/Sites and that very little semi-natural habitat remains across the area. Changes to morphological the Cottam 2 Site (the 'Cable Route Corridors'). and hydraulic characteristics have affected species abundance and decreased the range of population of some species. Aesthetic Aspects of the Landscape Refer to Figure 8.15.1.1 [C6.4.8.15.1.1] which shows that with the Cottam 1 Site/Sites, cumulative visibility with the Cable Route Corridor There would be the introduction of new elements and features comprising the solar Cottam 2 Site, and Cottam 3a and 3b Sites and the Cable Routes Corridor would not be experienced across the majority of the 2km panel areas, the substation area and Cable Route Corridor extending between the Cottam study area. This is due to the distance, the intervening woodlands, hedgerows, and tree cover between the Site/Sites. The intervening Power Station and the Cottam 1 Site/Sites and extending between the Cottam 1 Site/sites settlements and built form would also curtail cumulative visibility between these cumulative sites and the Cable Route Corridors. and Cottam 2 Site (the 'Cable Route Corridors'). There are very minor patches of cumulative intervisibility between the Cottam 1 Site/Sites and the Cottam 2 Site, located to the: Aesthetic Aspects of the Landscape • east of Upton and to the south of Sturgate Airfield Refer to Figure 8.15.2.1 [C6.4.8.15.2.1] which shows that with the Cottam 1 Site/Sites, • south of Kexby in the locality of Valley Farm cumulative visibility with the cumulative developments would not be experienced across east of Willingham by Stow in the locality of the residential property known as Carisbrooke the majority of the 5km study area. This is due to the distance, the intervening east of Stow, just to the east of the property known as Tam Howes; and woodlands, hedgerows, and tree cover between the Site/Sites. The intervening • west of Sturton by Stow, extending from West Syke Lane as far as Normanby by Stow. settlements and built form would also curtail cumulative visibility. The Ancient Woodlands and Natural Designations would not be affected by these minor patches of intervisibility. There are local patches of cumulative visibility which may be focus of likely significant effects, between the Cotton 1 Site/Sites and Gate Burton Energy Park, Tillbridge Solar and There are very minor patches of cumulative intervisibility between the Cottam 1 Site/Sites, Cottam 2 Site, and Cottam 3a Site, located to West Burton Solar Park. This cumulative visibility is set out in further detail within the the: following figures: northeast of Sturton by Stow, extending between Tillbridge Road and Ingham Road. Figure 8.15.2.6 Cottam 1, 2, 3a and 3b Gate Burton Cumulative Developments The Ancient Woodlands and Natural Designations would not be affected by these minor patches of intervisibility. Augmented ZTV [C6.4.8.15.2.6]. This shows Gate Burton to the west of Cottam 1, where the intervening settlements of Kexby, Willingham by Stow and Stow lie between, and northeast of Sturton by Stow, extending between School Lane Farm and Ingham Road. where their presence will impair any associated landscape context with the Gate Burton Site. The Ancient Woodlands and Natural Designations would not be affected by these minor patches of intervisibility. Figure 8.15.2.8 Cottam 1, 2, 3a and 3b Tillbridge Solar Cumulative Developments There are local patches of intervisibility between All Sites comprising the landscape to the: Augmented ZTV [C6.4.8.15.2.8]. This shows Tillbridge to the south of the Cottam 1 Site, • east boundary of the Cottam 1 North Site, extending from Glentworth in the north as far as Ingham in the south. where their boundaries' are located directly adjacent to each other, just to the south of Kexby Road and to the west of the settlement of Fillingham. There are no intervening The Ancient Woodlands and Natural Designations would not be affected by these minor patches of intervisibility. settlements, woodlands or major topography, such that the presence of Tillbridge Development with the Scheme would give rise to a direct and compounded relationship Users of linear routes, especially footpaths or other rights of way, or transport routes, may potentially experience the aesthetic aspects in terms of the landscape context of the settlements. The presence of the Tillbridge of the cumulative sites revealed in succession as a series of sequential views. For further details refer to the following detailed visual Development would also add to coalescence between the Cottam 1 and the Cottam 2 receptor sheets: Sites. The primary and secondary mitigation would however ensure that all existing features would be retained leading to an improvement at the operation stage (Year 15) Appendix 8.3.2.2 Individual Viewpoint Receptor Sheets [C6.3.8.3.2.2] of the watercousres across the Sites and Study Area. Appendix 8.3.2.3 Individual Viewpoint Receptor Sheets [C6.3.8.3.2.3] Appendix 8.3.2.4 Individual Viewpoint Receptor Sheets [C6.3.8.3.2.4] Figure 8.15.2.9 Cottam 1, 2, 3a and 3b West Burton Cumulative Developments Augmented ZTV [C6.3.4.15.2.9]. This shows the West Burton Development located to the Appendix 8.3.3.2 Individual Residential Receptor Sheets [C6.3.8.3.3.2] southwest of the Cottam 1 Site where the intervening settlements of Stow, Sturton by Appendix 8.3.3.3 Individual Residential Receptor Sheets [C6.3.8.3.3.3] Stow and Bransby lie between, where their presence will impair any associated landscape context with the West Burton Site. Appendix 8.3.4.2 Individual Transport Receptor Sheets [C6.3.8.3.4.2] Appendix 8.3.4.3 Individual Transport Receptor Sheets [C6.3.8.3.4.3] The other Cumulative Developments at Bumble Bee Farm, Field Farm and High Marnham are separated from the Scheme by the intervening settlements of Gainsborough, Lea, Appendix 8.3.5.2 Individual PRoW Receptor Sheets [C6.3.8.3.5.2] Blyton and Willingham by Stow. Appendix 8.3.5.3 Individual PRoW Receptor Sheets [C6.3.8.3.4.3] Overall Character of the National and Locally Designated Landscape Overall Character of the National and Locally Designated Landscape Overall, the character of the landscape and the Ancient Woodlands and Natural Overall, the character of the landscape and the Ancient Woodlands and Natural Designations is shaped by the broadleaved woodlands, Designations is shaped by the broadleaved woodlands, copses and networks of copses and networks of hedgerows provide important habitats for farmland species. The network of woodlands to the west of hedgerows provide important habitats for farmland species. The network of woodlands Cammeringham and Brattleby are notable and a further network to the north of Coates. These relevant characteristics of the landscape to the west of Cammeringham and Brattleby are notable and a further network to the north of Coates. These relevant characteristics of the landscape have some ability to have some ability to accommodate change without undue adverse effects. The cumulative visibility for the Cottam 1 Site/Sites would not

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SOLAR PROJECT		
	alter the overall character of the landscape. Moreover, these Ancient Woodlands and Natural Designations play a positive role in reducing the overall cumulative effects across the landscape.	accommodate change without undue adv Cottam 1 Site/Sites would not alter the ov
	The landscape works provided in association with the Sites (such as improvements to existing vegetation and provision of new hedgerows and trees) will be beneficial to the existing situation by the creation of improved connectivity,	these Ancient Woodlands and Natural D overall cumulative effects across the land
	Construction: Low	Construction: Low
	Operation (Year 1): Low	Operation (Year 1): Low
Magnitude	Operation (Year 1): with only Embedded Mitigation: Low	Operation (Year 1): with only Embedded
-	Operation (Year 15): Very Low	Operation (Year 15): Very Low
	Decommissioning: Very Low	Decommissioning: Very Low
	Construction: Adverse & Short Term	Construction: Adverse & Short Term
Type of	Operation (Year 1): Adverse & Long Term	Operation (Year 1): Adverse & Long Term
	Operation (Year 1): with only Embedded Mitigation: Adverse & Long Term	Operation (Year 1): with only Embedded
Effect	Operation (Year 15): Beneficial & Long Term	Operation (Year 15): Beneficial & Long Te
	Decommissioning: Neutral & Short Term	Decommissioning: Neutral & Short Term
	Construction: Minor Not Significant	Construction: Minor Not Significant
Significance	Operation (Year 1): Minor Not Significant	Operation (Year 1): Minor Not Significan
-	Operation (Year 1): with only Embedded Mitigation: Minor Not Significant	Operation (Year 1): with only Embedded
of Effect	Operation (Year 15): Negligible Not Significant	Operation (Year 15): Negligible Not Signi
	Decommissioning: Negligible Not Significant	Decommissioning: Negligible Not Signifi

* Potential exists to use targeted, low-density sheep grazing in appropriate areas of wildflower meadow under panelled areas for short periods once a suitable sward has established. This may allow for diversification of grazing management. Grazing of tussock seeded areas may be appropriate to reduce the sward every three years. Careful monitoring is however required to prevent overgrazing with conservation grazing densities used.

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> adverse effects. The cumulative visibility for the e overall character of the landscape. Moreover, l Designations play a positive role in reducing the indscape.

led Mitigation: Low

rm led Mitigation: Adverse & Long Term Term m

ant

led Mitigation: Minor Not Significant gnificant

ificant



Landscape Receptor – Ancient Woodlands and Natural Designations (Cottam 2 Site)

Receptor Baseline:

Within the Cottam 2 Site, at a regional scale, landscape character is assessed within the East Midlands Regional Landscape Character Assessment as forming part of RLCT Profile: 4a Unwooded Vales, which is shown on Figure 8.5 [C6.4.8.5]. Unwooded Vales extends across the entirety of the 2km Study Area and then extends into the 5km Study Area where at its eastern most edge it shares a boundary with RLCT Profile: 6a Limestone Scarps and Dipslopes. The western extent of the 5km Study Area is also host to a large part of RLCT Profile: 4b Wooded Vales.

The landscape is characterized by the dynamic broad valley of the River Trent which is bordered by large urban areas including the cities of Nottingham and Lincoln connected by a strategic road network in a mostly north south direction. There are also scattered rural settlements perched on the edge of the floodplain that are linked by a smaller network of minor roads and local lanes which generally follow an east west alignment.

There are no Ancient Woodlands, Local Nature Reserves, Local Wildlife Sites or Sites of Special Scientific Interest within the Cottam 2 Site (2km Study Area).

Key Features:

Ancient Woodlands: The closest Ancient Woodland is Birch Wood (Index MLI50657) to the west close to and within Gainsborough. The woodland is mainly classified as semi-natural with the remaining 4 hectares as plantation and forms a strong group with other woodlands surrounding Karston Lakes Golf Course, such as Wharton Wood to the north and Hornby and Somerby Wood to the south. Wharton Wood (Index MLI50656) is mainly classified as semi- natural and shares its southern boundary with the lake at Corringham Scroggs. Other woodlands include White's Wood (MLI50649), Bass Wood with Park Springs Wood (MLI50652), Lea Wood (MLI50648), Warren Wood (MLI50647), Willoughton Wood (MLI50654) and Thurlby and Caistor Woods (MLI50653). There are no Ancient Woodlands to the east of the 5km Study Area or outside of it in that direction.

Local Nature Reserves (LNRs): The closest Local Nature Reserve is located to the north-west (approximately 5.2km) at Owlet Plantation, just to the west of Blyton. The woodland comprises birch, oak and pine interspersed among open heathland and also supports an important diversity of invertebrates. Remnants of the heathland are still evident, and they form part of the Coversands Heathland. There is good public access over most of the site due to the extensive footpath network which is dry all year due to the sandy soil.

Local Wildlife Sites (LWSs): The closest Local Wildlife Sites are located in close proximity to the Cottam 1 Site/Sites and not the Cottam 2 Site. The Willingham to Fillingham Road Verges LWS is located adjacent to the boundary of the Cottam 1 North Site. This is a 3 – 3.5m wide roadside verge where the main habitats are calcareous grassland and neutral grassland (unimproved, semi-improved). Additional habitats include coarse grassland, species rich hedgerow and ditches. There are two other sites separated from the Cottam 1 Site/Sites by approximately 165m and 1.1km respectively. These LWSs are present due to the network of quiet lanes that lead to the villages, especially where they are associated with the watercourses such as the crossings of the River Till and its associated tributaries, otherwise the floodplain grazing marsh is the most extensive semi-natural habitat focused along the Trent. Where woodland cover is limited, these watercourses and quiet lanes provide an important substitute woodland and woodland edge habitat as well as being significant linear features in the landscape.

Site of Specific Scientific Interest (SSSI's): The closest SSSIs are located at Laughton Common, Scotton and Laughton Forest Ponds, Scotton Beck Fields, Scotton Common and Tuetoes Hill SSSIs, situated to the north and northwest of the boundary of the Cottam 2 Site outside the 5km Study Area. Laughton Common SSSI comprises lowland acid grassland, dune, and heath habitat. Scotton and Laughton Forest Ponds SSSI comprises peaty heathland pools with open acid grassland and botanically important mire habitats. Scotton Beck Fields SSSI comprises unimproved acidic grassland and heathland botanical communities. Scotton Common SSSI is a rare example of a lowland heathland in Lincolnshire, supporting common lizard, adder, scarce plants, and rare moths and Tuetoes Hill SSSI is an important mosaic of dry acid grassland including dune grassland.

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Receptor susceptibility to change	Value of Receptor	Sensitivity	Embedde
In terms of forces for change for the Cottam 2 Site (Natural Designations), recent trends have shown that changes in soils structure and water table levels through agricultural activity has modified habitats. However, the woodlands that are least modified in the area are formed on the historic heath at Morton and Laughton Commons. Other factors causing change to habitats has been animal grazing, although cessation has been leading to a succession from heathland to woodland. Sycamore regeneration, aged tree stock and tree disease are also key factors in terms of landscape change and the high volume of dog walkers is also a consideration. The change in habitat types is also conditioned by the use of agricultural sprays that has led to the encouragement of vigorous grasses as is evident at the Willingham to Fillingham Road Verges LWS. The heavy mowing of verges close to residential properties is also a concern in terms of change and interpretation/awareness raising could be considered. Overall, the susceptibility of the Natural Designations for the Cottam 2 Site is conditioned by the changes to the underlying geology and drainage patterns by intensive agriculture. The presence of the north south road network also severs habitat connectivity between the Trent's flood plain and the Till Vale to the east. The A156 is a major route that divides the Trent flood plain. The relevant characteristics of the landscape therefore have some ability to accommodate change without undue adverse effects. There is scope to protect and enhance the natural character of the minor east west local road network to improve connectivity between the Till Vale and the Trent across major routes such as the A156 (Gainsborough Road). Minor roads that lead to the Trent from the A156 could be a key priority to build on connectivity.	 <u>Scenic</u>: This includes the complex range of sites that form part of Laughton Woods and Scotton Common which are large, contiguous Forestry Commission woodland sites which contain important habitats. <u>Cultural</u>: The underlying geological conditions that support the range of species is the key cultural focus. <u>Natural</u>: The habitats at Laughton Woods and Scotton Common support a range of habitats including heathland, wetland, grassland, and woodland for protected species such as reptiles, invertebrates, birds, and plant species. <u>Recreation and Enjoyment</u>: The local road network provides access for recreation; however, the mown grass verges detract from the natural character of the area. <u>Local Distinctiveness and Sense of Place</u>: The presence of the east west road network creates a local distinctiveness and the right-angled bends in them offer a more natural 'sense of place'. <u>Health and Wellbeing</u>: The natural character of the local road network enhances a strong feeling of health and wellbeing. <u>Important Spatial Function</u>: Because of the fertilizer inputs, the main surviving areas of semi-natural habitat tend to be confined to the floodplain grazing marsh and sites such as Lea Marsh SSSI. Overall, the value of the Natural Designations for the Cottam 2 Site is shaped by the agricultural activity that has modified habitats. However, the woodlands that are least modified in the area are formed on the historic heath at Morton and Laughton Commons. The natural character of the local road network is also a key feature that offers scope to improve habitat connectivity between the Till Vale and the Trent flood plain. 	Character: This is shaped by the complex range of sites that form part of Laughton Woods and Scotton Common which are large, contiguous Forestry Commission woodland sites which contain important habitats. Quality: The habitats at Laughton Woods and Scotton Common support a range of habitats including heathland, wetland, grassland, and woodland for protected species such as reptiles, invertebrates, birds, and plant species. Value: The natural character of the local road network is a key feature that offers scope to improve habitat connectivity between the Till Vale and the Trent flood plain. Capacity: Although the remaining hedgerow network is generally strong, there is nevertheless evidence of decline in several areas, with gaps and few hedgerow trees leaving the landscape vulnerable to change.	Embedded construction decommiss Mitigation would inclue Panels to be an ecologic Panels to be Site bound existing he growth. Existing he growth. Existing he growth. Existing he growth to the hedgerow fithe length Lighting wi and battery security is the be calibrate visible light height of 4 Lighting real operated. The Iandsco Mitigation for out for the secondary but will have impact at the
Medium (5km Study Area)	Medium (5km Study Area)	Medium	<u> </u>
Medium (Site/Sites)	Medium (Site/Sites)	Medium	1

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led Mitigation

ed Mitigation would be taken into account at the tion, operation (Year 1 and Year 15) and issioning stages of the Scheme. This Embedded n is also referred to as primary mitigation and clude the following measures:

be set back 20m from existing woodlands with gical buffer between.

be set a minimum of 3m from Site boundaries.

idary fencing to be set back 5m from adjacent hedgerows to allow for proposed thickening and

nedges are to be allowed to grow out and will be l to a height of 5m. Hedgerow trees will be ged to grow out to add further thickening and o the field boundaries with the addition of new w trees as appropriate, randomly spaced along th of existing hedges.

will be limited to downlights within substations ery banks only and used when maintenance or is required. Lighting will be PIR operated and will ated to vehicle and personnel movements. All shting would be 50W, installed at a maximum f 4m with cowls fitted to prevent light spillage. required within panelled areas will be manually d. There will be no lighting on perimeter fencing.

scape effects **with only** the Embedded on taken into account equate to those effects set ne operation stage (Year 1) and this includes ry mitigation which will have been carried out nave had limited physical or landscape character this Embedded Mitigation stage.



Landscape Receptor – Ancient Woodlands and Natural Designations (Cottam 2 Site)

e Receptor – Ancient Woodlands and Natural Designations (Cottam 2 Site)				
Construction	Operation (Year 1)	Operation (Year 15)	Decommissioning	
Activities during site preparation	Designations lie predominantly to the west/southwest of both the Cottam 2 Site with	The residual effects at the Operational Phase at Year 15 without	A similar process to that of	
/ enabling works, construction,	Ancient Woodland, Local Nature Reserves and Local Wildlife Sites within the study area but	Mitigation equate to those effects at the beginning of Year 1	construction stage, but with	
and commissioning with effects	having no physical or visual impact/influence on the Site other than distant views where	before any secondary mitigation has been applied. Mitigation	the Scheme being no longer	
such as construction traffic,	these may exist. Opportunities for reinforcement of the character area are available.	embedded in the design will apply as will the growing out of the	operational. This is an	
noise and vibration from		existing hedges.	assessment of the Site in	
construction activities, dust	The Site lies just beyond the outer limits of the SSSI's impact risk zones of all neighbouring		winter but assumes retention	
generation, site runoff, mud on	SSSIs. Reversion of arable farmland to varied pasture within the Site(s) provides	With secondary mitigation such as planting and grass seeding	of existing vegetation and	
roads, and the visual intrusion of	opportunities for some natural regeneration and improved biodiversity and potential	being taken into account at the operational stage (Year 15) the	builds upon the proposed	
plant and machinery on site. At	wildlife links.	following changes to the landscape would occur and the visual	primary and secondary	
the early stages of the		effects are set out below.	mitigation that had been	
construction stage, ground, and	Secondary mitigation such as planting, and grass seeding would be taken into account at		established as the future	
lower-level activities such as the	this stage to include the following changes to the landscape:	Views to the north, south, east, and west of the Cottam 2	baseline. Effects are those	
construction of the solar panel		Site/Sites will be screened in the close-mid range proximity due	arising from activities for the	
areas and associated	Wildflower meadow mix to be sown beneath proposed panels.	to the new hedgerow and shelterbelt planting and the	duration of the	
infrastructure and inverters		enhancement of existing hedges which will be managed to a	decommissioning to include	
would predominantly be	Existing hedgerows to be allowed to grow out and managed to a height of 5m with	height of 5m. These new and augmented hedgerows will provide	site traffic, noise and vibratio	
screened by existing vegetation.	additional trees added. New hedgerows with hedgerow trees planted along roadsides	a series of good quality field boundaries both formally	from decommissioning	
	where none exist.	strengthening the existing and historical field pattern and	activities, dust generation an	
During the latter part of the		creating a multi-layered landscape. Scattered tree belts will	site runoff.	
construction stage, views would	Within the Cottam 2 Site, reinforcement of the character includes linear bands of scattered	follow the routes of existing watercourses, strengthening their		
become available of the elevated	trees to the east of the Site along the Yawthorpe Beck. This belt will enhance the character	visibility in the wider landscape. Views of the longer distance,	Following decommissioning,	
activities above the hedgerows,	of the river corridor with a strong vertical feature together with a 10m wide tall herb mix to	where hedgerows do not block these, will be of a layered, well	the land is likely to be	
but these would be limited and	enhance its setting in both visual and ecological terms. The reduction in agricultural sprays	treed landscape with a backdrop of some wooded vegetation in	returned to arable productio	
would not affect the integrity of	will both enhance water quality and suppress vigorous grasses to all areas but particularly	places on the horizon. Both new and existing vegetation will	The Site will however benefit	
woodlands or other designated	around existing watercourses.	have established and begun to mature, creating a much stronger	from the significantly	
receptors.		structure to the landscape, and retaining and enhancing the	enhanced tree and hedgerow	
	Existing ponds within the Site are retained and enhanced with proposed native shrub	overall character of the area.	planting that has been carrie	
Other works would be	planting creating a strong buffer to these landscape elements.		out and has matured to creat	
undertaken in connection with		The proposed grassland will have established and will have	a much stronger and robust	
the construction including	A small woodland to the southeast of the Cottam 2 Site is proposed where several trees	settled into its natural scheme with some minor appropriate	landscape, retaining, and	
fencing, gates, boundary	exist, helping to bolster the level of woodland cover locally and linking to existing landscape	management of differing regimes. The soil quality will be	enhancing the overall	
treatment and other means of	features through enhanced hedgerows around existing field boundaries.	considerably improved through the lack of cultivation and the	character and providing	
enclosure and works for the		chemical run-off will be reduced around the Site(s) enhancing	considerable biodiversity	
provision of security and	The strengthening of the east/west boundaries across the Site will help to reconnect the	the water quality generally. There will be considerable	benefits over the years. Bird	
monitoring measures such as	Trent Flood Plain with the Till Vale to the east.	biodiversity gains through the establishment of the varied	mitigation fields and wetland	
CCTV and the laying down of internal tracks. There would also		grassland types and regimes and a long-term increase in	grazing marshes are likely to	
be landscape and biodiversity	The addition of irregularly spaced hedgerow trees across the Cottam 2 Site/Sites will help	pollinator species and bird and other species and numbers	be retained and the potentia	
	increase the tree cover locally and create additional biodiversity benefits by creating strong	locally.	may exist to retain grass	
mitigation works, including	links of native trees between existing woodlands and proposed shelterbelts.	Crowth of avisting and propagad vagatation is assumed to be	margins to maintain some varied land use and a high	
planting and the improvement of existing hedgerows to all		Growth of existing and proposed vegetation is assumed to be:	level of biodiversity in the	
boundaries of the Site/Sites	The strengthening of the field boundaries with both the addition of new hedgerow planting	Woodland/trees and shelterbelts: 2.5m max at Year 1, 7.5m max	local area.	
creating a much greater level of	and enhancement of existing hedges, will create additional ecological links and strengthen	at Year 15.		
vegetation locally, creating many	the character of the historical field pattern locally where this has been lost or eroded.		Without Secondary Mitigatic	
associated beneficial effects.	Existing field boundaries will be allowed to grow out where these are currently managed as	New hedgerows: 0.6m at Year 1 and 3.5m at Year 15.	Without Secondary Mitigation having been applied	
There may be very minor	low hedges, being managed to a height of 5m. This, together with wide and varied grassland	income neugerows. v.on at real i and s.sill at real 15.	throughout the scheme, the	
removal of sections of hedgerow	buffers to the base of existing and proposed vegetation where currently these are narrow,	Evicting hadgerows: 0.0m at Voar 1 and Em at Voar 15	only change to the	
around access roads for visibility	will create strong and resilient networks with much improved biodiversity value. The use of	Existing hedgerows: 0.9m at Year 1 and 5m at Year 15.	views/landscape following	
	flower rich pollinator mixes where appropriate on boundaries will add considerably to the	Shrubs: 0.9m at Year 1 and 5m at Year 15.	decommissioning would be	
purposes.	biodiversity of the Site which has been much degraded by agricultural intensification.	ישטאל איז	the existing hedgerows which	
These short-lived construction		Following mitigation, at Year 15, The existing woodland locally	will have been allowed to	
activities would not adversely		will be augmented by increased vegetation cover creating both	grow out and will have been	
activities would not duversely		win be degriterited by increased vegetation cover creating both	Si Sw Sut and will have been	

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SOLAR PROJECT				
	affect the local woodlands, existing vegetation, or designated areas. There would be a change to the arable land use which will be beneficial to soils and watercourses, significantly increase biodiversity and help to capture carbon. The field boundaries and the associated tree cover would remain intact and help with visual layering across the landscape and the integration of the new panels. There would be no adverse changes to the woodlands or vegetation with buffer planting implemented around these, further protecting these assets. Overall, the local woodland and other vegetated cover, both within the Site and of the wider area, is able to accommodate the changes that arise through the construction of the Site without undue adverse effects. The integrity of all features will be retained and enhancement at ground level through initial grassland planting will have beneficial effects from the outset.	Although new vegetation will be immature, existing hedgerows will have begun to grow out at Year 1 and the varied grassland areas will have become established, starting to create valuable habitats. Overall, this will help to link habitats and strengthen the overall character locally and maintain a sense of place. Important opportunities to bolster the local vegetation cover, buffering and connecting existing fragmented vegetation, aims to create a more resilient and biodiverse landscape. Between Years 1 and 15, the following beneficial effects will be achieved in terms of Natural designations: Grassland reversion Increased woodland/vegetation cover A more varied landscape Improved management of exiting vegetation Less intensively managed land Soil improvements Water improvements Bird mitigation fields Significantly improved biodiversity Improved carbon retention/capture Green energy production Adverse effects: Panels and structures across landscape Increased hard standing areas Potential minor pollution around substations Loss of food production Increased tracks around Sites The effects at the Operational Phase at Year 15 without Embedded Mitigation equate to those effects at the beginning of Year 1 before secondary mitigation has been applied. The Effects set out below include secondary mitigation which will have been carried out but will have had limited physical impact at this stage.	 visual and ecological links across the landscape to the adjoining woodland blocks. Grassland mixes will have established and will create valuable habitats with soil structure greatly improved through cessation of arable cultivation. Following mitigation, the Site is able accommodate change without undue adverse effects and there will be considerable beneficial effects in the increased level of vegetation cover locally, the linking and enhancement of existing natural features and the biodiversity benefits that this will bring, creating a stronger, more resilient framework across the local character area. Overall, in terms of mitigation for the Cottam 2 Site, due to the loss of habitats that would have been more widespread in this locality, landscape scale projects such as those delivered by the Trent Vale Partnership, are working to enhance access, biodiversity, and the natural character of the River Trent's flood plain and other watercourses such as the River Till and its tributaries. The aim is also to focus on the woodland cover, in particular the woodlands that are 'secondary' in nature to the Ancient Woodlands, such as Oak Plantation that has developed from the more open structure of an historic heathland/common. There is also opportunity to manage rides and to increase open canopy woodland in some parts. Blocks of conifer plantation could also be made more diverse in species through silvicultural thinning and the establishment of more native broadleaves. 	managed to a height of 5m. It is assumed that these will be retained. With Mitigation, the negative effects of the physical decommissioning will be balanced out by the long-term landscape and visual effects of this mitigation.
5km Study Ar	ea:		1	1
Magnitude	Very Low	Low	Low	Very Low
Level of Effect	Neutral & Short Term	Beneficial & Long Term	Beneficial & Long Term	Neutral & Short Term
Significance of Effect	Negligible Not Significant	Minor Not Significant	Minor Not Significant	Negligible Not Significant
Site/Sites and	l Cable Route Corridor:			
Magnitude	Low	Low	Medium	Very Low
Level of Effect	Adverse & Short Term	Beneficial & Long Term	Beneficial & Long Term	Neutral & Short Term
Significance of Effect	Minor Not Significant	Minor Not Significant	Moderate Significant	Negligible Not Significant

MagnitudeVery LowLowLowLevel of EffectNeutral & Short TermBeneficial & Long TermBeneficial & Long TermSignificance of EffectNegligible Not SignificantMinor Not SignificantMinor Not SignificantMinor Not SignificantSite/Sites art/Cable Route Corridor:LowMediumMediumLevel of EffectAdverse & Short TermBeneficial & Long TermBeneficial & Long TermSignificance of EffectMinor Not SignificantMinor Not SignificantMediumSignificance of EffectMinor Not SignificantMinor Not SignificantMinor Not Significant				
EffectMegligible Not SignificantMinor Not SignificantMinor Not SignificantSignificance of EffectNegligible Not SignificantMinor Not SignificantMinor Not SignificantSite/Sites and Cable Route Corridor:LowMediumLevel of EffectAdverse & Short TermBeneficial & Long TermBeneficial & Long TermSignificanceMinor Not SignificantMinor Not SignificantModerate Significant	Magnitude	Very Low	Low	Low
Significance of Effect Negligible Not Significant Minor Not Significant Minor Not Significant Site/Sites and Cable Route Corridor: Cable Route Corridor: Medium Magnitude Low Low Medium Level of Effect Adverse & Short Term Beneficial & Long Term Beneficial & Long Term Significance Minor Not Significant Minor Not Significant Minor Not Significant	Level of	Neutral & Short Term	Beneficial & Long Term	Beneficial & Long Term
of Effectof Effectof EffectSite/Sites and Cable Route Corridor:MagnitudeLowLevel of EffectAdverse & Short TermBeneficial & Long TermBeneficial & Long TermSignificanceMinor Not SignificantMinor Not SignificantMinor Not Significant	Effect			
Site/Sites and Cable Route Corridor: Magnitude Low Medium Level of Effect Adverse & Short Term Beneficial & Long Term Beneficial & Long Term Significance Minor Not Significant Minor Not Significant Minor Not Significant	Significance	Negligible Not Significant	Minor Not Significant	Minor Not Significant
MagnitudeLowLowMediumLevel of EffectAdverse & Short TermBeneficial & Long TermBeneficial & Long TermSignificanceMinor Not SignificantMinor Not SignificantModerate Significant	of Effect			
Magnitude Magnitude Level of Effect Adverse & Short Term Beneficial & Long Term Significance Minor Not Significant Minor Not Significant	Site/Sites and	d Cable Route Corridor:		
Effect Effect Significance Minor Not Significant Minor Not Significant Minor Not Significant	Magnitude	Low	Low	Medium
Significance Minor Not Significant Minor Not Significant Moderate Significant	Level of	Adverse & Short Term	Beneficial & Long Term	Beneficial & Long Term
	Effect			
of Effect	Significance	Minor Not Significant	Minor Not Significant	Moderate Significant
	of Effect			

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In-Combination Effects [Cumulative Sites]	Cumulative Effects [Cumulative Developments
<u>In Summary</u> The In-combination effects of the Cottam 2 Site with the other Cumulative Sites (Cottam 1 and 3a and 3b) is Minor at year 1 of operation and Negligible at year 15 with mitigation. This is due to the limited impact as a result of the low-level nature of the Scheme together with the quantum of mitigation. The existing landscape character associated with these Cumulative Sites and Study Area would predominantly provide tree cover along the hedge lines and their margins with a change to grassland with scattered trees, which would give rise to overall benefits to landscape character.	<u>In Summary</u> The Cumulative Effects of the Scheme with the other Cumulat and adverse, giving rise to no likely Significant effects at year with the embedded and additional mitigation. This bettermer with the improvements to the landscape context of these and hedgerows and tree planting, giving rise to the vegetative laye helping reduce to reduce the cumulative effect.
<u>Fabric of the Landscape</u> There would not be the removal of, or changes to the Ancient Woodlands and Natural Designations within Cottam 2. The landscape is shaped by the agricultural activity that has modified habitats. However, the woodlands that are least modified in the area are formed on the historic heath at Morton and Laughton Commons. The natural character of the local road network is also a key feature that offers scope to improve habitat connectivity between the Till Vale and the Trent flood plain.	<i>Fabric of the Landscape</i> There would not be the removal of, or changes to the Ancient landscape is shaped by the agricultural activity that has mod modified in the area are formed on the historic heath at Mort local road network is also a key feature that offers scope to in Trent flood plain.
There would be the introduction of new elements and features comprising the solar panel areas, the substation area and the Cable Route Corridor extending between the Cottam 1 Site/Sites and the Cottam 2 Site and the Cottam 3 and 3b Sites (the 'Cable Route Corridors').	There would be the introduction of new elements and feature the Cable Route Corridor extending between the Cottam 1 Sit 3a and 3b Sites (the 'Cable Route Corridors').
<u>Aesthetic Aspects of the Landscape</u> Refer to Figure 8.15.1.2 [C6.4.8.15.1.2] which shows that with the Cottam 2 Site, cumulative visibility with the Cottam 1 Site/Sites and Cottam 3a and 3b Sites would not be experienced across the entirety of the 2km study area. This is due to the distance, the intervening woodlands, hedgerows, and tree cover between the Site/Sites. The intervening settlements and built form would also curtail cumulative visibility.	<u>Aesthetic Aspects of the Landscape</u> Refer to Figure 8.15.2.2 [C6.4.8.15.2.2] which shows that with developments would not be experienced across the majority intervening woodlands, hedgerows, and tree cover between t would also curtail cumulative visibility.
There are local patches of intervisibility between the Cottam 2 Site and with the 3a and Cottam 3b Site extending from the:	There are local patches of cumulative visibility which may be and Tillbridge Solar. This cumulative visibility is set out in furt
 South boundary of the Cottam 2 Site, starting at the eastern edge of Corringham and reaching as far as Yawthorpe Beck and Yawthorpe West boundary of the Cottam 2 Site, extending as far as Pilham Lane East boundary of the Cottam 2 Site, extending as far Yawthorpe and Yawthorpe Fox Covert Northwest boundary of the Cottam 2 Site, extending as far as the Cottam 3a and 3b Sites. 	Figure 8.15.2.6 Cottam 1, 2, 3a and 3b Gate Burton Cumulative Gate Burton to the west of Cottam 2, where the intervening s between, where their presence will impair any associated lare Figure 8.15.2.8 Cottam 1, 2, 3a and 3b Tillbridge Solar Cumulative Solar
The Ancient Woodlands and Natural Designations would not be affected by these minor patches of intervisibility.	shows Tillbridge to the south of the Cottam 2 Site, where their to the south of Kexby Road and to the west of the settlement woodlands or major topography, such that the presence of Ti direct and compounded relationship in terms of the landscap
 There is a local patch of intervisibility between the Cottam 2 Site and with the Cottam 3b Site, comprising the: Northern-most tip of the Cottam 2 Site extending across the medieval village of Dunstall as far 	Development would also add to coalescence between the Cot mitigation would however ensure that all existing features wo stage (Year 15) of the watercousres across the Sites and Stud
 as the medieval village of Southorpe; and Southeast of the River Eau, extending as far as Huckerby Farm and Huckerby Bungalows. 	Figure 8.15.2.9 Cottam 1, 2, 3a and 3b West Burton Cumulation the West Burton Development located to the southwest of the
The Ancient Woodlands and Natural Designations would not be affected by these minor patches of intervisibility.	Sturton by Stow and Bransby lie between, where their presen West Burton Site.
 There are local patches of intervisibility between All Sites comprising the: North of the Bonsdale Farm at Pilham, extending across the landscape to the north of the medieval village of Dunstall as far as the medieval village of Southorpe 	The other Cumulative Developments at Bumble Bee Farm, Fie by the intervening settlements of Gainsborough, Lea, Blyton a
 West of the settlement of Corringham, extending from Staplegate House as far Windy Ridge on Pilham Lane 	Overall Character of the Ancient Woodlands and Natural Des

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> ments is Minor with the Tillbridge Development on. The effects would be Negligible at year 15 the low-level nature of the Scheme, together nds and natural designations with new landscape across the Sites and Study Area, all in

and Natural Designations within Cottam 2. The s. However, the woodlands that are least ghton Commons. The natural character of the tat connectivity between the Till Vale and the

g the solar panel areas, the substation area and the Cottam 2 Site and the Cottam 2 and Cottam

2 Site, cumulative visibility with the cumulative study area. This is due to the distance, the . The intervening settlements and built form

ly significant effects, between the Cottam 2 Site thin the following figures:

nents Augmented ZTV [C6.4.8.15.2.6]. This shows of Kexby, Willingham by Stow and Stow lie text with the Gate Burton Site.

pments Augmented ZTV [C6.4.8.15.2.8]. This s' are located directly adjacent to each other, just m. There are no intervening settlements, elopment with the Scheme would give rise to a the settlements. The presence of the Tillbridge he Cottam 2 Sites. The primary and secondary ned leading to an improvement at the operation

nents Augmented ZTV [C6.3.4.15.2.9]. This shows Site where the intervening settlements of Stow, ir any associated landscape context with the

High Marnham are separated from the Scheme am by Stow.



	 West of Springthorpe, extending across the landscape as far as Harpswell Low Farm; and East of Yawthorpe, extending as far as Hemswell. 	Overall, the character of the landscape and the Ancient Woodlands and N character of the local road network that is a key feature and offers scope
	The Ancient Woodlands and Natural Designations would not be affected by these minor patches of intervisibility.	Vale and the Trent flood plain. These relevant characteristics of the landso without undue adverse effects. The cumulative visibility for the Cottam 2 landscape and its Locally Designated features. Moreover, these Ancient V positive role in reducing the overall cumulative effects across the landsca
	Users of linear routes, especially footpaths or other rights of way, or transport routes, may potentially experience the aesthetic aspects of the cumulative sites revealed in succession as a series of sequential views. For further details refer to the following detailed visual receptor sheets:	
	Appendix 8.3.2.2 Individual Viewpoint Receptor Sheets [C6.3.8.3.2.2] Appendix 8.3.2.3 Individual Viewpoint Receptor Sheets [C6.3.8.3.2.3] Appendix 8.3.2.4 Individual Viewpoint Receptor Sheets [C6.3.8.3.2.4]	
	Appendix 8.3.3.2 Individual Residential Receptor Sheets [C6.3.8.3.3.2] Appendix 8.3.3.3 Individual Residential Receptor Sheets [C6.3.8.3.3.3]	
	Appendix 8.3.4.2 Individual Transport Receptor Sheets [C6.3.8.3.4.2] Appendix 8.3.4.3 Individual Transport Receptor Sheets [C6.3.8.3.4.3]	
	Appendix 8.3.5.2 Individual PRoW Receptor Sheets [C6.3.8.3.5.2] Appendix 8.3.5.3 Individual PRoW Receptor Sheets [C6.3.8.3.4.3]	
	<u>Overall Character of the Ancient Woodlands and Natural Designations</u> Overall, the character of the landscape and the Ancient Woodlands and Natural Designations is shaped by the natural character of the local road network that is a key feature and offers scope to improve habitat connectivity between the Till Vale and the Trent flood plain. These relevant characteristics of the landscape have some ability to accommodate change without undue adverse effects. The cumulative visibility for the Cottam 2 Site would not alter the overall character of the landscape and its Locally Designated features. Moreover, these Ancient Woodlands and Natural Designations can play a positive role in reducing the overall cumulative effects across the landscape.	
	The landscape works provided in association with the Sites (such as improvements to existing vegetation and provision of new hedgerows and trees) will be beneficial to the existing situation by the creation of improved connectivity,	
Magnitude	Construction: Low Operation (Year 1): Low Operation (Year 1): with only Embedded Mitigation: Low Operation (Year 15): Very Low Decommissioning: Very Low	Construction: Low Operation (Year 1): Low Operation (Year 1): with only Embedded Mitigation: Low Operation (Year 15): Very Low Decommissioning: Very Low
Type of Effect	Construction: Adverse & Short Term Operation (Year 1): Adverse & Long Term Operation (Year 1): with only Embedded Mitigation: Adverse & Long Term Operation (Year 15): Beneficial & Long Term Decommissioning: Neutral & Short Term	Construction: Adverse & Short Term Operation (Year 1): Adverse & Long Term Operation (Year 1): with only Embedded Mitigation: Adverse & Long Tern Operation (Year 15): Beneficial & Long Term Decommissioning: Neutral & Short Term
Significance of Effect	Construction: Minor Not Significant Operation (Year 1): Minor Not Significant Operation (Year 1): with only Embedded Mitigation: Minor Not Significant Operation (Year 15): Negligible Not Significant Decommissioning: Negligible Not Significant	Construction: Minor Not Significant Operation (Year 1): Minor Not Significant Operation (Year 1): with only Embedded Mitigation: Minor Not Significant Operation (Year 15): Negligible Not Significant Decommissioning: Negligible Not Significant

* Potential exists to use targeted, low-density sheep grazing in appropriate areas of wildflower meadow under panelled areas for short periods once a suitable sward has established. This may allow for diversification of grazing management. Grazing of tussock seeded areas may be appropriate to reduce the sward every three years. Careful monitoring is however required to prevent overgrazing with conservation grazing densities used.

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> Natural Designations is shaped by the natural be to improve habitat connectivity between the Till dscape have some ability to accommodate change 2 Site would not alter the overall character of the t Woodlands and Natural Designations can play a cape.

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Landscape Receptor – Ancient Woodlands and Natural Designations (Cottam 3a and 3b Sites)

Receptor Baseline:

Within the Cottam 3a and 3b Sites, at a regional scale, landscape character is assessed within the East Midlands Regional Landscape Character Assessment as forming part of RLCT Profile: 4a Unwooded Vales, which is shown on Figure 8.5 [C6.4.8.5]. Unwooded Vales is located within the 2km Study Area, but only extending across its eastern most part, then sharing the western most part with RLCT Profile 4b: Wooded Vales. The landscape character type then occupies an eastern part of the 5km Study Area where it shares a boundary with Kirton in Lindsey. The western part of the 5km Study Area then comprises of a mixture of RLCT 2b: Planned and Drained Fens and Carrlands, RLCT 4a: Unwooded Vales and RLCT 4b: Wooded Vales, The Unwooded Vales is generally characterised by mixed agriculture set within an enclosed landscape of low, well-maintained hedgerows.

The Cottam 3 Site can be sub-divided into two distinct land areas.

- Cottam 3a
- Cottam 3b

There are no Ancient Woodlands, Local Nature Reserves, Local Wildlife Sites or Sites of Special Scientific Interest (SSSI) within the Cottam 3a and 3b Site (2km Study Area). There are however two Sites of Special Scientific Interest (SSSI) and Local Nature Reserves located within the Cottam 3a Site (2km radius).

Key Features:

Ancient Woodlands: The closest Ancient Woodland is Wharton Wood (Index MLI50656) that is mainly classified as semi- natural and shares its southern boundary with the lake at Corringham Scroggs. Other woodlands include White's Wood (MLI50649), Bass Wood with Park Springs Wood (MLI50652), Lea Wood (MLI50648), Warren Wood (MLI50647), Willoughton Wood (MLI50654) and Thurlby and Caistor Woods (MLI50653). There are no Ancient Woodlands to the east of the 5km Study Area or outside of it in that direction. Birch Wood (Index MLI50657) also lies to the west close to and within Gainsborough. The woodland is mainly classified as semi-natural with the remaining 4 hectares as plantation and forms a strong group with other woodlands surrounding Karston Lakes Golf Course, such as Wharton Wood to the north and Hornby and Somerby Wood to the south.

Local Nature Reserves (LNRs): The closest Local Nature Reserve is located to the north-west (approximately 5.2km) at Owlet Plantation, just to the west of Blyton. The woodland comprises birch, oak and pine interspersed among open heathland and also supports an important diversity of invertebrates. Remnants of the heathland are still evident, and they form part of the Coversands Heathland. There is good public access over most of the site due to the extensive footpath network which is dry all year due to the sandy soil.

Local Wildlife Sites (LWSs): The closest Local Nature Reserve is located to the north-west (approximately 2.7km) at Owlet Plantation, just to the west of Blyton. The woodland comprises birch, oak and pine interspersed among open heathland and also supports an important diversity of invertebrates. Remnants of the heathland are still evident, and they form part of the Coversands Heathland. There is good public access over most of the site due to the extensive footpath network which is dry all year due to the sandy soil.

Sites of Special Scientific Interest (SSSIs):

The closest SSSI is Scotton Common, located around 1.5km from the Cottam 3a Site and Scotton Beck Fields. According to the Natural England, Scotton Beck Fields covers abound 16 hectares with Scotton Common being slightly smaller, covering around 15ha. Scotton Beck Fields comprises an area of unimproved acidic grassland and heathland botanical communities and in contrast, Scotton Common comprises rare examples of lowland heathland, which supports common lizard, adder, scarce plants, and rare moths. Within the 5km radius of the Cottam 3a and 3b Sites there are a further three SSSIs, which include Scotton, and Laughton Forest Ponds (SSSI) located with the Scotton Common woods, and approximately 2.5km north of the Cottam 3a and 3b Sites. Scotton and Laughton Forest Ponds SSSI comprises peaty heathland pools with open acid grassland and botanically important mire habitats. Laughton Common (part of Peacock Wood and Carmer Wood) is located just over 2km north-west of the Cottam 3a Site and Laughton Common SSSI lies just outside the 2km radius to the northwest of the Cottam 3a Site. Laughton Common SSSI comprises lowland acid grassland, dune, and heath habitat.

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Receptor susceptibility to change	Value of Receptor	Sensitivity	Emb
Receptor susceptibility to change In terms of forces for change for the Cottam 3a and 3b Sites (Natural Designations), recent trends have shown that the management of the oak/birch woodlands are at risk from unsound management and their biodiversity interest could be improved by encouraging natural regeneration of native broadleaved species where possible. Th open character of the limestone plateau is also at risk and any redevelopment of the airfields should take account of this feature including protecting any features of historic interest. The condition of the Coversand Heathlands have also deteriorated through a lack of grazing. Overall , the susceptibility of the Natural Designations for Cottam is conditioned by the areas of broadleaved woodland that is important to landscape character, but often small and fragmented and bolstered by the intervening shelterbelts and hedgerow networks. Expanding, buffering and connecting the fragmented semi- natural habitats would improve their condition and make them more resilient. There is scope for extending access and interpretation of these many features to improve understanding and increase enjoyment of them. The relevant characteristics of the landscape therefore have some ability to accommodate change without undue adverse effects. There is scope to maintain the sense of place and the diversity of the settlements and landscape features through expanding and managing semi-natural habitats and providing more interpretation and access through good green infrastructure links.	Scenic: The fragmented woodlands are distinctive as visual features in the landscape, and where this is not in conflict with priority habitats of heathland, acid, and calcareous grassland they could be enhanced around their edges to create an improved transition with their landscape setting. Cultural: The inland dune systems of Coversands along with the shelterbelts of pines are a key feature along with oak/birch woodland which creates a mosaic across the landscape. Many of these areas are SSSIs such as Laughton Wood and Scotton Common. Natural: The network of hedgerows and species rich permanent grass margins within the farmland have the scope to enhance the connections between semi-natural habitats to enable species movement. Recreation and Enjoyment: The area offers locations to watch the Red Arrows in practice in the context of a wider, distinctive natural environment which adds to the sense of inspiration. Local Distinctiveness and Sense of Place: Access to the viewpoints provides opportunities for people to enjoy long-distance views from the top of the Cliff over the Till Vale and towards Lincoln Cathedral. Health and Wellbeing: Routes for walkers, cyclists and horse riders are key as well as finding links with existing accessible sites and semi-natural habitats, especially woodlands. Important Spatial Function: The wide road verges add to the structural and spatial diversity of the landscape and also contribute to the network of linked semi-natural habitats, especially woodlands. Overall, the value of the Natural Designations for the Cottam 3a and 3b Sites is shaped by the areas of broadleaved woodland that are often small and fragmented, but on a whole help bolster the presence of tree cover in combination with the intervening shelterbelts	Sensitivity Character: The fragmented woodlands are distinctive as visual features in the landscape along with the network of hedgerows and species rich permanent grass margins within the farmland. Quality: The wide road verges add to the structural and spatial diversity of the landscape and also contribute to the network of linked semi-natural habitats across the area and add to the quality of the landscape. Value: Areas have a positive landscape character but include some areas of degradation where agricultural intensification has eroded landscape character, particularly around the edges of settlements. Capacity: The landscape benefits from high levels of visual containment due to the local landform, hedgerows, and shelter belts. The areas of broadleaved woodland that is important to landscape character, but often small and fragmented and bolstered by the intervening shelterbelts and hedgerow networks. The tolerance for landscape charage charage is affected by the potential connectivity between these features.	Emb at th and Emb mitig meat Pane with Pane boun Site I adjac thick thic
Medium (5km Study Area)	Medium (5km Study Area)	Medium	- 0
IVIEUIUM (SKM STUDV Aľea)	Livieulum (SKM Study Area)	i wealum	1

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bedded Mitigation

bedded Mitigation would be taken into account the construction, operation (Year 1 and Year 15) d decommissioning stages of the Scheme. This bedded Mitigation is also referred to as primary tigation and would include the following easures:

nels to be set back 20m from existing woodlands h an ecological buffer between.

els to be set a minimum of 3m from Site indaries.

e boundary fencing to be set back 5m from acent existing hedgerows to allow for proposed ckening and growth.

sting hedges are to be allowed to grow out and be managed to a height of 5m. Hedgerow trees be encouraged to grow out to add further kening and growth to the field boundaries with addition of new hedgerow trees as appropriate, domly spaced along the length of existing dges.

hting will be limited to downlights within ostations and battery banks only and used when intenance or security is required. Lighting will be operated and will be calibrated to vehicle and sonnel movements. All visible lighting would be *W*, installed at a maximum height of 4m with wls fitted to prevent light spillage. Lighting uired within panelled areas will be manually erated. There will be no lighting on perimeter ncing.

e landscape effects **with only** the Embedded tigation taken into account equate to those effects out for the operation stage (Year 1) and this ludes secondary mitigation which will have been ried out but will have had limited physical or dscape character impact at this Embedded tigation stage.



Landscape Receptor - Ancient Woodlands and Natural Designations (Cottam 3a and 3b Sites)

Construction	Operation (Year 1)	Operation (Year 15)	Decommis
Activities during site preparation	Designations lie predominantly to the west/southwest of both the Cottam 3a and 3b	The effects at the Operational Phase at Year 15 without Mitigation equate	A similar proc
/ enabling works, construction,	Sites with Ancient Woodland, Local Nature Reserves and Local Wildlife Sites within the	to those effects at the beginning of Year 1 before any secondary mitigation	of construction
and commissioning with effects	study area but having no physical or visual impact/influence on the Site(s) other than	has been applied. Mitigation embedded in the design will apply as will the	with the Sche
such as construction traffic,	distant views where these may exist. Opportunities for reinforcement of the character	growing out of the existing hedges.	no longer op
noise and vibration from	area within both the Cottam 3a and 3b Sites are available.		This is an ass
construction activities, dust		With secondary mitigation such as planting and grass seeding being taken	the Site in wi
generation, site runoff, mud on	Both Sites lie on the outer limits of the SSSI's impact risk zones of Scotton Becks Fields	into account at the operational stage (Year 15) the following changes to the	assumes rete
roads, and the visual intrusion of	and Scotton Common. Reversion of arable farmland to varied pasture within the	landscape would occur and the effects are set out below.	existing vege
plant and machinery on site. At	Site(s) provides opportunities for some natural regeneration and improved biodiversity		builds upon t
the early stages of the	and potential wildlife links.	Views to the north, south, east, and west of the Cottam 3a and 3b Site/Sites	proposed pri
construction stage, ground, and		will be screened in the close-mid range proximity due to the new	secondary m
lower-level activities such as the			that had bee
	Secondary mitigation such as planting, and grass seeding would be taken into account	hedgerow and shelterbelt planting and the enhancement of existing	
construction of the solar panel	at this stage to include the following changes to the landscape:	hedges which will be managed to a height of 5m. These new and	established a
areas and associated		augmented hedgerows will provide a series of good quality field	baseline. Effe
infrastructure and inverters	Within the Cottam 3a Site reinforcement of the character includes linear bands of	boundaries both formally strengthening the existing and historical field	those arising
would predominantly be	scattered trees to the west together with successional scrub around existing	pattern and creating a multi-layered landscape. Scattered tree belts will	activities for
screened by existing vegetation.	vegetation in the west, south and east.	follow the routes of existing watercourses, strengthening their visibility in	of the decom
		the wider landscape. Views of the longer distance, where hedgerows do	to include sit
During the latter part of the	Within the Cottam 3b Site these include considerable strengthening of the north/south	not block these, will be of a layered, well treed landscape with a backdrop	noise and vib
construction stage, views would	field patterns across the Site with both new and enhanced hedgerow planting and	of some wooded vegetation in places on the horizon. Both new and	decommissio
become available of the elevated	management. An additional new hedgerow across the Site adjacent to the PRoW will	existing vegetation will have established and begun to mature, creating a	activities, dus
activities above the hedgerows,	create a strong east/west link, reinforcing both the visual and physical elements along	much stronger structure to the landscape, and retaining and enhancing	generation a
but these would be limited and	this open area.	the overall character of the area.	runoff.
would not affect the integrity of			
woodlands or other designated	The addition of irregularly spaced hedgerow trees across the Site(s) will help increase	The proposed grassland will have established and will have settled into its	Following
receptors.		natural scheme with some minor appropriate management of differing	decommissio
	the tree cover locally and create additional biodiversity benefits by creating strong links	regimes. The soil quality will be considerably improved through the lack of	land is likely
Other works would be	of native trees between existing woodlands and proposed shelterbelts.	cultivation and the chemical run-off will be reduced around the Site(s)	returned to a
undertaken in connection with		enhancing the water quality generally. There will be considerable	production. 1
the construction including	Successional scrub around the existing railway line vegetation will reinforce this linear	biodiversity gains through the establishment of the varied grassland types	however ben
fencing, gates, boundary	feature, create strong green infrastructure links.	and regimes and a long-term increase in pollinator species and bird and	the significan
treatment and other means of		other species and numbers locally.	enhanced tre
	The strengthening of the field boundaries with both the addition of new hedgerow	other species and numbers locally.	
enclosure and works for the	planting and enhancement of existing hedges, particularly around the existing		hedgerow pla
provision of security and	remnant airfield, will create additional ecological links and strengthen the character of	Growth of existing and proposed vegetation is assumed to be:	has been car
monitoring measures such as	the historical field pattern locally where this has been lost or eroded. Existing field		has matured
CCTV and the laying down of	boundaries will be allowed to grow out where these are currently managed as low	Woodland/trees and shelterbelts: 2.5m max at Year 1, 7.5m max at Year	much strong
internal tracks. There would also	hedges, being managed to a height of 5m. This, together with wide and varied	15.	robust lands
be landscape and biodiversity	grassland buffers to the base of existing and proposed vegetation where currently		retaining, and
mitigation works, including	these are narrow, will create strong and resilient networks with much improved	New hedgerows: 0.6m at Year 1 and 3.5m at Year 15.	the overall ch
planting and the improvement of	biodiversity value.		providing cor
existing hedgerows to all		Existing hedgerows: 0.9m at Year 1 and 5m at Year 15.	biodiversity b
boundaries of the Site/Sites	The planting of oak and birch within the tree belts will further reinforce the character		the years. Bir
creating a much greater level of	of the local woodlands locally.	Shrubs: 0.9m at Year 1 and 5m at Year 15.	fields and we
vegetation locally, creating many	· · · · · · · · · · · · · · · · · · ·		grazing mars
associated beneficial effects.	Opportunities exist to improve areas of coversand heathlands where these exist,	Following mitigation, at Year 15, The existing woodland locally will be	likely to be re
	through managed sheep grazing for short periods on rotation within the panelled	augmented by increased vegetation cover creating both visual and	the potential
These short-lived construction		ecological links across the landscape to the adjoining woodland blocks.	retain grass r
activities would not adversely	areas.	Grassland mixes will have established and will create valuable habitats	maintain son
affect the local woodlands,		with soil structure greatly improved through cessation of arable cultivation.	land use and
existing vegetation, or	Although new vegetation will be immature, existing hedgerows will have begun to grow		of biodiversit
designated areas. There would	out at Year 1 and the varied grassland areas will have become established, starting to	Following mitigation, the Site(s) are able accommodate change without	local area.
be a change to the arable land	create valuable habitats.	undue adverse effects and there will be considerable beneficial effects in	
DE A CHANKE LU LITE ALADIE IALIU		I undue auverse effects and there will be considerable beneficial effects in	1

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SOLAR PROJECT				
	use which will be beneficial to soils and watercourses, significantly increase biodiversity and help to capture carbon. The field boundaries and the associated tree cover would remain intact and help with visual layering across the landscape and the integration of the new panels. There would be no adverse changes to the woodlands or vegetation with buffer planting implemented around these, further protecting these assets. Overall, the local woodland and other vegetated cover, both within the Site and of the wider area, is able to accommodate the changes that arise through the construction of the Site without undue adverse effects. The integrity of all features will be retained and enhancement at ground level through initial grassland planting will have beneficial effects from the outset.	Overall, this will help to link habitats and strengthen the overall character locally and maintain a sense of place. Important opportunities to bolster the local vegetation cover, buffering and connecting existing fragmented vegetation, aims to create a more resilient and biodiverse landscape. Between Years 1 and 15, the following beneficial effects will be achieved in terms of Natural designations: - Grassland reversion - Increased woodland/vegetation cover - A more varied landscape - Improved management of exiting vegetation - Less intensively managed land - Soil improvements - Water improvements - Potential animal grazing - Reinstatement of historic field patterns - Bird mitigation fields - Significantly improved biodiversity - Improved carbon retention/capture - Green energy production Adverse effects: - Panels and structures across landscape - Increased hard standing areas - Potential minor pollution around substations - Loss of food production - Loss of food production - The effects at the Operational Phase at Year 15 without Embedded Mitigation equate to those effects at the Deprational Phase at Year 15 without Embedded Mitigation equate to those effects at the beginning of Year 1 before secondary mitigation has been applied. The Effects set out below include secondary mitigation which will have been carried out but will have had limited physical impact at this stage.	the increased level of vegetation cover locally, the linking and enhancement of existing natural features and the biodiversity benefits that this will bring, creating a stronger, more resilient framework across the local character area. Overall , in terms of mitigation for the Cottam 3a and 3b Sites, due to the loss of habitats that would have been more widespread in this locality, the aim is establish networks of linking habitats to strengthen landscape character. There are few watercourses on the plateau and so the aim is also to manage, where feasible, land adjacent to wetland habitats and wet woodland to buffer them and maintain their hydrology, thus retaining them as landscape features and enhancing their biodiversity interest. The aim is also to find further new uses for disused airfields.	Without Secondary Mitigation having been applied throughout the scheme, the only change to the views/landscape following decommissioning would be the existing hedgerows which will have been allowed to grow out and will have been managed to a height of 5m. It is assumed that these will be retained. With Mitigation, the negative effects of the physical decommissioning will be balanced out by the long term landscape and visual effects of this mitigation.
5km Study A	rea:			
	Very Low	Low	Low	Very Low
Magnitude				
Level of Effect	Neutral & Short Term	Beneficial & Long Term	Beneficial & Long Term	Neutral & Short Term
Significance of Effect	Negligible Not Significant	Minor Not Significant	Minor Not Significant	Negligible Not Significant
Site/Sites and	d Cable Route Corridor:			
Magnitude	Low	Low	Medium	Very Low
Level of Effect	Adverse & Short Term	Beneficial & Long Term	Beneficial & Long Term	Neutral & Short Term
Significance of Effect	Minor Not Significant	Minor Not Significant	Moderate Significant	Negligible Not Significant

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In-Combination Effects [Cumulative Sites]	Cumulative Effects [Cumulative Developments]
<u>In Summary</u> The In-combination effects of the Cottam 3a and 3b Sites with the other Cumulative Sites (Cottam 1 and 2) is Minor at year 1 of operation and Negligible at year 15 with mitigation. This is due to the limited impact as a result of the low-level nature of the Scheme together with the quantum of mitigation. The existing landscape character associated with these Cumulative Sites and Study Area would predominantly provide tree cover along the hedge lines and their margins with a change to grassland with scattered trees, which would give rise to overall benefits to landscape character.	In Summary The Cumulative Effects of the Scheme with the other Cumulative Developm and adverse, giving rise to no likely Significant effects at year 1 of operation with the embedded and additional mitigation. This betterment is due to the with the improvements to the landscape context of these ancient woodland hedgerows and tree planting, giving rise to the vegetative layering of the lan helping reduce to reduce the cumulative effect.
<i>Fabric of the Landscape</i> There would not be the removal of, or changes to the Ancient Woodlands and Natural Designations within Cottam 3a and 3b. The landscape is shaped by the strong presence of agriculture and there is very little Ancient Woodland, but where oak/birch woodland has formed this should be given priority as a feature for enhancement and restoration.	<u>Fabric of the Landscape</u> There would not be the removal of, or changes to the Ancient Woodlands a 3b. The landscape is shaped by the strong presence of agriculture and ther oak/birch woodland has formed this should be given priority as a feature for
There would be the introduction of new elements and features comprising the solar panel areas and the	There would be the introduction of new elements and features comprising
substation area. <u>Aesthetic Aspects of the Landscape</u> Refer to Figure 8.15.1.3 [C6.4.8.15.1.3] which shows that with the Cottam 3a Site, cumulative visibility with the Cottam 1 Site/Sites, Cottam 2 Site and Cottam 3b Site would not be experienced across the majority of the 2km study area. This is due to the distance, the intervening woodlands, hedgerows, and tree cover between the Site/Sites. The intervening settlements and built form would also curtail cumulative visibility between these Site/Sites.	Aesthetic Aspects of the Landscape Refer to Figure 8.15.1.3 [C6.4.8.15.1.3] which shows that with the Cottam 3 cumulative developments would not be experienced across the majority of distance, the intervening woodlands, hedgerows, and tree cover between th built form would also curtail cumulative visibility between these Site/Sites. There are local patches of cumulative visibility which may be focus of likely and Tillbridge Solar. This cumulative visibility is set out in further detail with
 There are local patches of intervisibility between Cottam 3a and 3b Site/Sites, extending from the: Northeast boundary of the Cottam 3a Site/Sites, defined to the west by the Green Respect Burial Park and Park House Farm, and reaching as far as Northorpe in the east East boundary of Cottam 3a Site/Sites, and stopping short of Cold Harbour Farm; and North boundary of the Cottam 3b Site/Sites, extending for a short distance as far as Grange Farm and Top Farm. 	Figure 8.15.2.6 Cottam 1, 2, 3a and 3b Gate Burton Cumulative Developme Gate Burton to the west of Cottam 3a and 3b, where the intervening settlen lie between, where their presence will impair any associated landscape com Figure 8.15.2.8 Cottam 1, 2, 3a and 3b Tillbridge Solar Cumulative Developm
The Ancient Woodlands and Natural Designations would not be affected by these minor patches of intervisibility.	shows Tillbridge to the south of the Cottam 3a and 3b Sites, where their boo other, just to the south of Kexby Road and to the west of the settlement of settlements, woodlands or major topography, such that the presence of Till
 There are local patches of intervisibility between the Cottam 3a, 3b and Cottam 2 Sites, extending from the: South boundary of the Cottam 3b Site, bordered by Pilham to the west and the medieval settlement of Dunstall to the east, and reaching as far as Springthorpe in the south 	give rise to a direct and compounded relationship in terms of the landscape the Tillbridge Development would also add to coalescence between the Cot secondary mitigation would however ensure that all existing features would operation stage (Year 15) of the watercousres across the Sites and Study Ar
 South boundary of the Cottam 3a Site, bordered by the eastern edge of Blyton to the west, reaching Grange Farm and stopping short of the mainline railway; and North boundary of the Cottam 3a Site, following the alignment of the A159 (Laughton Road) and stopping short to the west of the Green Respect Burial Park. 	Figure 8.15.2.9 Cottam 1, 2, 3a and 3b West Burton Cumulative Development the West Burton Development located to the southwest of the Cottam 3a and of Stow, Sturton by Stow and Bransby lie between, where their presence with the West Burton Site.
The Ancient Woodlands and Natural Designations would not be affected by these minor patches of intervisibility.	The other Cumulative Developments at Bumble Bee Farm, Field Farm and F by the intervening settlements of Gainsborough, Lea, Blyton and Willingham
 There is a local patch of intervisibility between All Sites, located to the: East of the Cottam 3b Site and north of the Bonsdale Farm at Pilham, extending across the landscape to the north of the medieval village of Dunstall as far as the medieval village of Southorpe. 	<u>Overall Character of the Ancient Woodlands and Natural Designations</u> Overall, the character of the landscape and the Ancient Woodlands and Nat fragmented woodlands that are distinctive as visual features in the landscap priority habitats of heathland, acid and calcareous grassland they could be

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oments is Minor with the Tillbridge Development ion. The effects would be Negligible at year 15 the low-level nature of the Scheme, together ands and natural designations with new landscape across the Sites and Study Area, all in

and Natural Designations within Cottam 3a and here is very little Ancient Woodland, but where for enhancement and restoration.

ng the solar panel areas and the substation area.

a 3a and 3b Sites, cumulative visibility with the of the 5km study area. This is due to the the Site/Sites. The intervening settlements and

ly significant effects, between the Cottam 3a Site ithin the following figures:

nents Augmented ZTV [C6.4.8.15.2.6]. This shows lements of Kexby, Willingham by Stow and Stow ontext with the Gate Burton Site.

opments Augmented ZTV **[C6.4.8.15.2.8].** This boundaries' are located directly adjacent to each of Fillingham. There are no intervening Fillbridge Development with the Scheme would ape context of the settlements. The presence of Cottam 1 and the Cottam 2 Sites. The primary and uld be retained leading to an improvement at the Area.

nents Augmented ZTV **[C6.3.4.15.2.9].** This shows and 3b Sites where the intervening settlements will impair any associated landscape context with

d High Marnham are separated from the Scheme nam by Stow.

latural Designations is shaped by the cape, and where this is not in conflict with e enhanced around their edges to create an





The Ancient Woodlands and Natural Designations would not be affected by these minor patches of intervisibility.	improved transition with their landscape setting. The cumulative visibilit the overall character of the landscape and its Ancient Woodlands and Na Woodlands and Natural Designations can play a positive role in reducing
Users of linear routes, especially footpaths or other rights of way, or transport routes, may potentially experience the aesthetic aspects of the cumulative sites revealed in succession as a series of sequential views. For further details refer to the following detailed visual receptor sheets:	landscape.
Appendix 8.3.2.2 Individual Viewpoint Receptor Sheets [C6.3.8.3.2.2] Appendix 8.3.2.3 Individual Viewpoint Receptor Sheets [C6.3.8.3.2.3]	
Appendix 8.3.3.2 Individual Residential Receptor Sheets [C6.3.8.3.3.2]	
Appendix 8.3.4.2 Individual Transport Receptor Sheets [C6.3.8.3.4.2] Appendix 8.3.4.3 Individual Transport Receptor Sheets [C6.3.8.3.4.3]	
Appendix 8.3.5.2 Individual PRoW Receptor Sheets [C6.3.8.3.5.2] Appendix 8.3.5.3 Individual ProW Receptor Sheets [C6.3.8.3.4.3]	
<u>Overall Character of the Ancient Woodlands and Natural Designations</u> Overall, the character of the landscape and the Ancient Woodlands and Natural Designations is shaped by the fragmented woodlands that are distinctive as visual features in the landscape, and where this is not in conflict with priority habitats of heathland, acid and calcareous grassland they could be enhanced around their edges to create an improved transition with their landscape setting. The cumulative visibility for the Cottam 3a and 3b Sites would not alter the overall character of the landscape and its Ancient Woodlands and Natural Designations. Moreover, these Ancient Woodlands and Natural Designations can play a positive role in reducing the overall cumulative effects across the landscape.	
The landscape works provided in association with the Sites (such as improvements to existing vegetation and provision of new hedgerows and trees) will be beneficial to the existing situation by the creation of improved connectivity.	
Construction: Low Operation (Year 1): Low Operation (Year 1): with only Embedded Mitigation: Low Operation (Year 15): Very Low	Construction: Low Operation (Year 1): Low Operation (Year 1): with only Embedded Mitigation: Low Operation (Year 15): Very Low Decommissioning: Very Low
Construction: Adverse & Short Term Operation (Year 1): Adverse & Long Term Operation (Year 1): with only Embedded Mitigation: Adverse & Long Term Operation (Year 15): Beneficial & Long Term	Construction: Adverse & Short Term Operation (Year 1): Adverse & Long Term Operation (Year 1): with only Embedded Mitigation: Adverse & Long Ter Operation (Year 15): Beneficial & Long Term Decommissioning: Neutral & Short Term
Construction: Minor Not Significant Operation (Year 1): Minor Not Significant Operation (Year 1): with only Embedded Mitigation: Minor Not Significant Operation (Year 15): Negligible Significant Decommissioning: Negligible Not Significant	Construction: Minor Not Significant Operation (Year 1): Minor Not Significant Operation (Year 1): with only Embedded Mitigation: Minor Not Significant Operation (Year 15): Negligible Not Significant Decommissioning: Negligible Not Significant
	intervisibility. Users of linear routes, especially footpaths or other rights of way, or transport routes, may potentially experience the aesthetic aspects of the cumulative sites revealed in succession as a series of sequential views. For further details refer to the following detailed visual receptor sheets: Appendix 8.3.2.2 Individual Viewpoint Receptor Sheets [C6.3.8.3.2.2] Appendix 8.3.2.3 Individual Viewpoint Receptor Sheets [C6.3.8.3.2.3] Appendix 8.3.2.4 Individual Viewpoint Receptor Sheets [C6.3.8.3.2.4] Appendix 8.3.2.1 Individual Viewpoint Receptor Sheets [C6.3.8.3.2.4] Appendix 8.3.3.2 Individual Residential Receptor Sheets [C6.3.8.3.2.4] Appendix 8.3.3.2 Individual Residential Receptor Sheets [C6.3.8.3.3.2] Appendix 8.3.4.2 Individual Transport Receptor Sheets [C6.3.8.3.4.2] Appendix 8.3.4.3 Individual Transport Receptor Sheets [C6.3.8.3.4.2] Appendix 8.3.4.3 Individual Transport Receptor Sheets [C6.3.8.3.4.3] Appendix 8.3.5.2 Individual PROW Receptor Sheets [C6.3.8.3.4.3] Appendix 8.3.5.2 Individual PROW Receptor Sheets [C6.3.8.3.4.3] Overall, the character of the Ancient Woodlands and Natural Designations Overall, the character of the landscape and the Ancient Woodlands and Natural Designations is shaped by the fragmented woodlands that are distinctive as visual features in the landscape, and where this is not in conflict with priority habitats of heathland, acid and calcareous grassland they could be enhanced around their edges to create an improved transition with their landscape setting. The cumulative visibility for the Cottam 3 and 3b Sites would not alter the overall character of the landscape. The landscape works provided in association with the Sites (such as improvements to existing vegetation and provision of new hedgerows and trees) will be beneficial to the existing situation by the creation of improved connectivity. Construction: Low Operation (Year 1): with only Embedded Mitigation: Low Operation (Year 1): with only Embedded Mitigation: Adverse & Long Term Operation (Year 1): With o

* Potential exists to use targeted, low-density sheep grazing in appropriate areas of wildflower meadow under paneled areas for short periods once a suitable sward has established. This may allow for diversification of grazing management. Grazing of tussock seeded areas may be appropriate to reduce the sward every three years. Careful monitoring is however required to prevent overgrazing with conservation grazing densities used.

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> ility for the Cottam 3a and 3b Sites would not alter Natural Designations. Moreover, these Ancient ing the overall cumulative effects across the

Term

ficant



Landscape Receptors – Cable Route Corridor (Cottam 1 to Cottam Power Station)

Receptor Baseline:

Within Cottam Power Station to Cottam 1 Site/Sites, at a regional scale, landscape character is assessed within the East Midlands Regional Landscape Character Assessment as forming part of RLCT Profile: 3a Floodplain Valleys, which is shown on Figure 8.5 [C6.4.8.5]. Floodplain Valleys extend into the area/areas identified for the Cable Route Corridor and 0.5km from the outer boundary. The Floodplain Valleys mainly occur to the west of a group of settlements that extend south from Gainsborough and include Lea, Knaith, Gate Burton, Marton, Brampton and Torksey.

The areas identified for the Cable Route Corridor and 0.5km Study Area from the outer boundary fall within:

- National Character Area Profile NCA 48
- Regional Landscape Character Type RLCT 3a and RLCT 4a
- Local Landscape Character Area LCA 2 and LCA 3

Key Features:

Land Use: The landscape mainly comprises open arable and pastoral farmland, with some areas of cereal and vegetable cropping to the north of the settlement of Cottam and west of the River Trent. Land to the south of the settlement of Marton between the A156 and the River Trent is extensively in arable use as larger field systems, then with smaller fields of pasture to each side of the river corridor towards the west. Land use to the west and northwest of the Cottam Power Station is also predominantly large-scale arable with smaller fields of pasture to the south of Torksey Ferry Road. Land use between Marton and Stow is also predominantly arable with the exception of fields around Stow Park at Till Bridge Lane, which are smaller scale pasture.

Topography and Watercourses: The landscape is characterised by a low-lying terrain, centered on the powerful presence of the River Trent and its floodplain. The River Till is also a key watercourse where its middle reaches drain the land between Sturton by Stow in the north and Saxilby in the south. This section of the river is embanked as the water level is higher than that of the surrounding land. The landform at this location rises to approximately 15m AOD around the settlement of Sturton by Stow where it then falls towards the east and the River Till. To the west, the landform continues at around 10m AOD with levels rising to a high point of 16m AOD to the southwest of Brampton Grange with similar high points at Bunker's Hill Warren, then falling to around 5m AOD at the River Trent. Landform to the west of the River Trent falls to approximately 3m AOD around Horse Pasture Lane where Seymour Drain passes north to south (just to the north of Cottam Power Station). To the west of Cottam Power Station there are no major watercourses and landform is around 5 to 10m AOD.

Communications and Infrastructure: This is broadly defined by the A1133 (Newark Road), the A156 and the A1500 (Stow Park Road then Till Bridge Lane). The A1500 takes a formal straight alignment, whereas the A156 and A1133 take a meandering course serving the settlements of Knaith, Gate Burton, Marton, and Brampton. The local road network serves a number of farmsteads and smaller settlements and takes a sparse, irregular pattern to the east of the River Trent. In contrast, to the west of the Trent, the local road network forms a 'grid' pattern with a greater concentration of local roads. The mainline railway (Lincoln to Gainsborough) also passes across the landscape (north to south) with some areas in cutting, that helps lose its presence in the landscape.

Settlements, Industry, Commerce and Leisure: This is mostly defined by the large settlement of Gainsborough, with smaller settlements that typically villages of medieval origin. To the east, the A15 (Ermine Street) follows a straight alignment and is defined by a string of compact settlements. To the west, the coal fired power stations exert their visual influence over a wide area, particularly the plumes that rise from them and the pylons and power lines that are linked to them. There are no small villages between Marton and Brampton to the east of the Trent and settlement to the west of the Trent includes that larger settlement of South Leverton, Treswell, Rampton and Cottam. The transport network receptors are also covered in more detail under **Appendix 8.3.4** of the assessment.

Public Rights of Way (PRoW) and Access: The PRoW and Access receptors are covered in more detail under Appendix 8.3.5 of the assessment.

Nationally and Locally Designated Landscapes: The Laughton Wood AGLV only just falls within the Study Area just to the north of Marton, where its southern tip is bordered by the mainline railway and Willingham Road. This AGLV is centered on the flat, open landscape that is dominated by large areas of woodland sandwiched between the settlements of East ferry, Laughton and Scotter. The area is dominated by the large conifer planation of Laughton Forest. The River Trent and its associated washlands forms part of the visual boundary to the west. The landscape is very flat except for the shallow ridge running north south form Hardwick Hill. There are wide panoramic views across this landscape and a strong perception of big skies except where the blocks of conifers give a strong sense of enclosure and closes down some views. There are also pockets of birch-fringed heathland within the margins of the plantations, including the nature reserve of Scotton.

Scheduled Monuments, Listed Buildings, Conservation Areas and Registered Parks and Gardens: This includes listed buildings at Stow comprising the Grade I listed Church of St Mary (List Entry: 1146624) with other Grade II listed buildings including the Threshing Barn at Church End Farm. With Marton, this includes the Grade I listed Church of St. Margaret of Antioch (List Entry: 1359484) and other Grade II listed buildings such as the Ingleby Arms Public House. At Cottam, this includes the Grade II listed Church of Holy Trinity (List Entry: 1212380).

Ancient Woodlands and Natural Designations: This includes the Local Wildlife Site (LWS) to the west of the River Trent in the loop of the river at Torksey.

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 Insto protect the open and unsettled character of leadocape from inappropriate development and tree planting around settlement fringes can at the planting around settlement fringes can at the planting around settlement fringes can at the endors to file. Summarized the endors to file. Summarized the endors the fringes can and engineered solutions as also changing with the glanticape. In the transfer is planting around settlement fringes can and engineered solutions such as the true for landscape restoration projects to siss with mitigation of this change. The potential to shape the future of the landscape interventions such as a diversity and nature conservation initiatives. Indicape interventions such as addressity and nature conservation initiatives. Indicape interventions such as addressity and nature conservation initiatives. Indicape interventions such as addressity and nature conservation initiatives. Indicape interventions such as addressity and nature conservation initiatives. Indicape interventions such as addressity and nature conservation initiatives. Indicape interventions such as addressity and nature conservation initiatives. Indicape interventions such as addressity and nature conservation initiatives. Indicape interventions such as addressity interventions associated with fload risk, the shifting rise character such and provide interventions associated with fload risk, the shifting rise character with element such and such and the provide interventions is thas are portionable within a pastical fload/plain with arger scale fram work and provem substand bubbles spender the endocape. Indicape fraction and gravel twitter planting may also be appropriate. Indicape fraction of the area where the vare responder the landscape. Indicape fraction of the area where so the hadscape. Indicape fraction of the area where so the badscape.	Receptor susceptibility to change	Value of Receptor	Sensitivity	
rrounding towns and villages is also a key	In terms of forces for change, the Floodplain Valleys aims to protect the open and unsettled character of the landscape from inappropriate development and that tree planting around settlement fringes can help with integration and help contribute to the overall perception of a well treed landscape. The changes from flood risk and engineered solutions are also changing the landscape, but there is potential for landscape restoration projects to assist with mitigation of this change. The potential for river landscape to change is also a key consideration, but there is potential to introduce positive landscape interventions such as biodiversity and nature conservation initiatives. Overall , the susceptibility of the Floodplain Valleys is conditioned by several key forces for change that have the potential to shape the future of the landscape. These include the impact of settlement on the edges of the river floodplain, the interventions associated with flood risk, the shifting of river channels, sand and gravel extraction and power and energy infrastructure. There are however also significant benefits to be gained from a range of landscape and biodiversity interventions such as restoration projects. The aim of the Floodplain Valleys should be to plant small-scale woodlands and linear riverine belts of planting or associated with lakes and pools within the pastoral floodplain with larger scale farm woods with more open agricultural landscapes. Limited native tree planting may also be appropriate. The visual intrusion from sand and gravel extraction is also a 2 recognized feature of the landscape, but in producing restoration plans there is an opportunity to maximize biodiversity benefits. The impact on long distance views from surrounding towns and villages is also a key consideration.	 network to the west of the River Trent, which follows a 'grid'. <u>Cultural</u>: This is shaped by the historic evidence of the Roman period, with the network of long, straight roads that pass north south, with east west roads that take a more meandering alignment. <u>Natural</u>: The wet and often peaty low-lying areas are key in supporting some habitats and types of woodland. <u>Recreation and Enjoyment</u>: The tranquil experiential qualities are strong in many places along the banks of the River Trent. A sense of history is also experienced through the medieval settlement pattern that remain broadly intact and are a focus for recreation and enjoyment. <u>Local Distinctiveness and Sense of Place</u>: The line of settlements, aligned approximately north to south along the road network (that closely follow the River Trent) retain much of their historic character and a distinctive 'sense of place' to the landscape. <u>Health and Wellbeing</u>: Rural tranquility remains a strong feature over the area, however significant development pressures exist from the major roads that traverse this landscape. This area however is generally traversed by a smaller more informal historic road network that passes east to west connecting the Trent to the Roman routes on the ridge line. <u>Important Spatial Function</u>: Areas of pasture and grassland habitats add to the spatial function of the area where they are present particularly due to the change of intimacy within the landscape. Overall, the value of the Detailed Landscape Receptors for the Cable Route Corridor (Cottam 1 Site/Sites to Cottam Power Station) are shaped by the relative attractiveness of the landscape to the west of the River Trent where the road network follows a 'grid' pattern to reflect the prevailing field and drainage pattern. There are tranquil areas along the banks of the River Trent, but there are also pressures on the character of the landscape from the major road networks that run north south and <td>described as unique where vast stretches of floodplain retain an intact and traditional character. <u>Quality:</u> Areas have a positive landscape character with elements that would have a medium tolerance to change such as the unsettled character of the landscape that is competing with the impact of settlement o the edges of the floodplain. <u>Value:</u> The floodplain landscape provides facilities that are well-used and valued by local communities and visitors including for informal recreation and nature, notably for overwintering birds. <u>Capacity:</u> The remote areas have some vulnerability to unsympathetic development, but most landscape features are commonplace that could be readily</td><td></td>	described as unique where vast stretches of floodplain retain an intact and traditional character. <u>Quality:</u> Areas have a positive landscape character with elements that would have a medium tolerance to change such as the unsettled character of the landscape that is competing with the impact of settlement o the edges of the floodplain. <u>Value:</u> The floodplain landscape provides facilities that are well-used and valued by local communities and visitors including for informal recreation and nature, notably for overwintering birds. <u>Capacity:</u> The remote areas have some vulnerability to unsympathetic development, but most landscape features are commonplace that could be readily	
edium (0.5km Study Area) Medium (0.5km Study Area) Medium	Medium (0.5km Study Area)	Medium (0.5km Study Area)	Medium	

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Embedded Mitigation

Embedded Mitigation would be taken into account at the construction, operation (Year 1 and Year 15) and decommissioning stages of the Scheme. This Embedded Mitigation is also referred to as primary mitigation and would include the following measures:

Panels to be set a minimum of 3m from Site boundaries.

Site boundary fencing to be set back 5m from adjacent existing hedgerows to allow for proposed thickening and growth.

Existing hedges are to be allowed to grow out and will be managed to a height of 5m. Hedgerow trees will be encouraged to grow out to add further thickening and growth to the field boundaries with the addition of new hedgerow trees as appropriate, randomly spaced along the length of existing hedges.

Lighting will be limited to downlights within substations and battery banks only and used when maintenance or security is required. Lighting will be PIR operated and will be calibrated to vehicle and personnel movements. All visible lighting would be 50W, installed at a maximum height of 4m with cowls fitted to prevent light spillage. Lighting required within panelled areas will be manually operated. There will be no lighting on perimeter fencing.

The landscape effects **with only** the Embedded Mitigation taken into account equate to those effects set out for the operation stage (Year 1) and this includes secondary mitigation which will have been carried out but will have had limited physical or landscape character impact at this Embedded Mitigation stage.



Landscape Recentors - Cable Route Corridor (Cottam 1 to Cottam Power Station)

	Landscape Receptors – Cable Route Corridor (Cottam 1 to Cot	ttam Power Station)		
	Construction	Operation (Year 1)	Operation (Year 15)	Decommissioning
	For the above visual receptors there would be an appreciation of the digging and the presence of small-scale machinery for example along the length of the Cable Route Corridor as it is installed. However, this would not be above that typically associated with utility installation of this nature and would be limited to a short-term duration. During this time the installation would appear as a minor curiosity alongside an existing busy highway route. There is a need for HDD construction techniques at a number of locations across the Cable Route Corridor, however, this will depend on the results of the ground investigations and the final detailed design. At certain crossing locations such as railways; and watercourses such as the Rivers Trent and Till, HDD will be required. This is addressed in the Crossing Schedule [EN010133/APP/C7.17]. The installation of the Cable Route Corridor is not expected to result in any tree or hedgerow loss at these crossing points. In relation to the Cable Route Corridor crossing the Trent, this is a necessary part of the scheme. The cable will be directionally drilled under the river and so no permanent above ground structures are proposed. During the construction period there are likely to be temporary construction compounds then these will be removed.	Following installation of the ducts / pipes each designated work area will be backfilled and the ground re- instated to match the existing conditions.	Following installation of the ducts / pipes each designated work area will be backfilled and the ground re- instated to match the existing conditions.	Following backfilling and ground reinstatement, the ducts / pipes at each location would remain in situ and not be removed. Following installation, the land is returned to its original use and this would remain through the decommissioning stage.
	identified for the Cable Route Corridor will not yield any likely significant effects on these dredging tips. In relation to noise from directional drilling, the noise concerned with work to install the cable crossing beneath the River Trent is addressed in the Noise Chapter [EN010133/APP/C6.15] . In terms of the navigational amenity for river users, any construction impacts will not be evident due to the large separation distance.			
	In relation to construction activities, a full barrier / Heras fencing and signage will be installed around each designated work area. Each work area will then be excavated to expose all utilities present and to co-ordinate and prepare the area for installation of the proposed ducts / pipes. Some locations may require shuttering along the trench. There are no likely significant effects, since the works would be temporary and activities will be planned and co-ordinated before works commence in each work area. Any lighting required for safety purposes would be directed to avoid light spill into surrounding areas. Welfare facilities will be provided at each designated work area including canteen, toilets and a drying room. The exact location of the ducts / pipes and working areas would be confined to designated locations to ensure operations are controlled are precisely associated with each working area.			
	The extent of the designated work area is dependent on the voltage of the cables where the number of circuits will affect the width of cable trenches required. The range of typical cable trench widths relating to the 132kV and 400kV cables is 0.6 to 1.1 metres. However, the width and spacing of the cable trenches may differ depending on environmental constraints, engineering requirements or if crossing third party apparatus (e.g., railway lines). In addition to the trenches, land will be required in the corridor for access and soil and cable 'lay down'. Construction compounds along this route will also be required. Any existing overhead power lines will be retained, and no new overhead lines will be required.			
Study A	rea:	1	1	
nitude	Low	Very Low	Very Low	Very Low
l of	Adverse & Short Term	Neutral & Long Term	Neutral & Long Term	Neutral & Short Term
ct ificance fect	Minor Not Significant	Negligible Not Significant	Negligible Not Significant	Negligible Not Significant

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Landscape Receptors - Cable Route Corridor (Cottam 1 Site/Sites to Cottam Power Station)

The visual effects for the Cable Route Corridor (Cottam 1 Site/Sites to Cottam Power Station) Receptors are set out within the Viewpoint Receptor Sheets at Appendix 8.3.2.3 [C6.3.8.2.3.] and Appendix 8.3.2.4 [C6.3.8.3.2.4] the Residential Overview Sheets at Appendix 8.3.3.1 [C6.3.8.3.3.1] the Transport Overview Sheets at Appendix 8.3.4.1 [C6.3.8.3.4.1] and the PRoW Overview Sheets at Appendix 8.3.5.1 [C6.3.8.3.5.1].

In-Combination Effects [Cumulative Sites]	Cumulative Effects [Cum
In Summary	In Summary
The In-combination Effects of the Cable Route Corridor (Cottam 1 to Cottam Power Station) with the other Cumulative Sites and Cable	The Cumulative Effects of the So
Route Corridors is Negligible at the construction, operation (year 1 and year 15) and decommissioning stages with embedded and	Cumulative Developments is No
additional mitigation The low-level nature of the Scheme, together with the improvements to the wider landscape context with new	no likely Significant effects at o
hedgerows and tree planting, would give rise to additional vegetative layering of the landscape, all helping reduce to reduce the	be Negligible at year 15 and de
cumulative effect.	mitigation. The low-level natur
Fabric of the Landscape	wider landscape context with r
<u>Fabric of the Landscape</u> There would not be the removal of, or changes in landscape elements or features of the landscape within the Cable Route Corridor	additional vegetative layering of cumulative effect.
(Cottam 1 to Cottam Power Station). The landscape is shaped by the relative attractiveness of the landscape to the west of the River Trent	
where the road network follows a 'grid' pattern to reflect the prevailing field and drainage pattern. There are tranquil areas along the	Fabric of the Landscape
banks of the River Trent, but there are also pressures on the character of the landscape from the major road networks that run north	There would not be the remov
south and closely follow the River Trent	landscape within the Cable Ro
	Station). The landscape is shap
There would be the introduction of new elements and features comprising the Cable Route Corridor extending between the Cottam	west of the River Trent where
Power Station to join with the Cottam 1 Site/Sites (the 'Cable Route Corridor').	prevailing field and drainage p River Trent, but there are also
Aesthetic Aspects of the Landscape	major road networks that run
Refer to Figure 8.15.1.1 [C6.4.8.15.1.1] which shows that with the Cottam 1 Site/Sites, cumulative visibility with the Cable Route Corridor,	
Cottam 2 Site, and Cottam 3a and 3b Sites and the Cable Routes would not be experienced across the majority of the 2km study area. This	There would be the introduction
is due to the distance, the intervening woodlands, hedgerows, and tree cover between the Site/Sites. The intervening settlements and	Route Corridor extending betw
built form would also curtail cumulative visibility between these cumulative sites and the Cable Route Corridors.	Site/Sites (the 'Cable Route Cor
There are very minor patches of cumulative intervisibility between the Cottam 1 Site/Sites and Cottam 2 Site, located to the:	Aesthetic Aspects of the Landsca
 west of Sturton by Stow, extending from West Syke Lane as far as Normanby by Stow. 	Refer to Figure 8.15.2.1 [C6.4.8
	Corridor, cumulative visibility v
The Land Use, Topography and Watercourses, Communications and Infrastructure, Settlements, Industry, Commerce and Leisure,	experienced across the majori
Nationally and Locally Designated Landscapes, Scheduled Monuments, Listed Buildings, Conservation Areas, Registered Parks and Gardens and Ancient Woodlands and Natural Designations would not be affected by these minor patches of intervisibility.	intervening woodlands, hedge intervening settlements and be
Gardens and Ancient woodiands and Natural Designations would not be affected by these minor patches of intervisionity.	intervening settlements and bi
There are very minor patches of cumulative intervisibility between the Cottam 1 Site/Sites, Cottam 2, and Cottam 3a Sites, located to the:	There are local patches of cum
 northeast of Sturton by Stow, extending between Tillbridge Road and Ingham Road. 	effects, between the Cable Rou
The Land Use, Topography and Watercourses, Communications and Infrastructure, Settlements, Industry, Commerce and Leisure,	and West Burton Solar Park. The
Nationally and Locally Designated Landscapes, Scheduled Monuments, Listed Buildings, Conservation Areas, Registered Parks and	the following figures:
Gardens and Ancient Woodlands and Natural Designations would not be affected by these minor patches of intervisibility.	Figure 8.15.2.6 Cottam 1, 2, 3a
	Augmented ZTV [C6.4.8.15.2.6
There are very minor patches of cumulative intervisibility between the Cottam 1 Site/Sites, Cottam 2, and Cottam 3b Sites, located to the:	where the intervening settlem
	where their presence will impa
northeast of Sturton by Stow, extending between School Lane Farm and Ingham Road.	Burton Site.
	Figure 8.15.2.8 Cottam 1, 2, 3a
	Augmented ZTV [C6.4.8.15.2.8

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ve Developments]

including the Cable Route Corridor with the other le with the Tillbridge Development, giving rise to ction and year 1 of operation. The effects would issioning stages with the embedded and additional Scheme, together with the improvements to the lgerows and tree planting, would give rise to ndscape, all helping reduce to reduce the

changes in landscape elements or features of the idor (Cottam 1 Site/Sites to Cottam Power ne relative attractiveness of the landscape to the l network follows a 'grid' pattern to reflect the There are tranquil areas along the banks of the res on the character of the landscape from the outh and closely follow the River Trent

ew elements and features comprising the Cable Cottam Power Station to join with the Cottam 1

which shows that within the Cable Route cumulative developments would not be 5km study area. This is due to the distance, the nd tree cover between the Site/Sites. The n would also curtail cumulative visibility.

visibility which may be focus of likely significant idor and Gate Burton Energy Park, Tillbridge Solar ulative visibility is set out in further detail within

Gate Burton Cumulative Developments hows Gate Burton to the west of the Cottam Sites, Kexby, Willingham by Stow and Stow lie between, associated landscape context with the Gate

Tillbridge Solar Cumulative Developments hows Tillbridge to the south of the Cottam 2 Site



SOLAR PROJECT		
	The Land Use, Topography and Watercourses, Communications and Infrastructure, Settlements, Industry, Commerce and Leisure, Nationally and Locally Designated Landscapes, Scheduled Monuments, Listed Buildings, Conservation Areas, Registered Parks and Gardens and Ancient Woodlands and Natural Designations would not be affected by these minor patches of intervisibility. There are local patches of intervisibility between All Sites comprising the landscape to the: • east boundary of the Cottam 1 North Site/Sites, extending from Glentworth in the north as far as Ingham in the south. The Land Use, Topography and Watercourses, Communications and Infrastructure, Settlements, Industry, Commerce and Leisure, Nationally and Locally Designated Landscapes, Scheduled Monuments, Listed Buildings, Conservation Areas, Registered Parks and Gardens and Ancient Woodlands and Natural Designations would not be affected by these minor patches of intervisibility.	and north of the Cottam 1 Site, where their bou each other, just to the south of Kexby Road and Fillingham. There are no intervening settlement that the presence of Tillbridge Development wit and compounded relationship in terms of the la Corridor. The presence of the Tillbridge Develop between the Cottam 1 and the Cottam 2 Sites. T would however ensure that all existing features improvement at the operation stage (Year 15) a Figure 8.15.2.9 Cottam 1, 2, 3a and 3b West Bun Augmented ZTV [C6.3.4.15.2.9] . This shows the the southwest of the Cottam Sites where the int by Stow and Bransby lie between, and where th landscape context with the West Burton Site.
	Appendix 8.3.2.2 Individual Viewpoint Receptor Sheets [C6.3.8.3.2.2]	
	Appendix 8.3.2.3 Individual Viewpoint Receptor Sheets [C6.3.8.3.2.3] Appendix 8.3.2.4 Individual Viewpoint Receptor Sheets [C6.3.8.3.2.4]	The other Cumulative Developments at Bumble Marnham are separated from the Scheme by th Gainsborough, Lea, Blyton and Willingham by S
	Appendix 8.3.3.2 Individual Residential Receptor Sheets [C6.3.8.3.3.2]	
	Appendix 8.3.3.3 Individual Residential Receptor Sheets [C6.3.8.3.3.3]	
		Overall Character of the Landscape
	Appendix 8.3.4.2 Individual Transport Receptor Sheets [C6.3.8.3.4.2]	Overall, the character of the landscape is shape
	Appendix 8.3.4.3 Individual Transport Receptor Sheets [C6.3.8.3.4.3]	is typified by the minor road network to the west 'grid. The tranquil experiential qualities are stro
	Appendix 8.3.5.2 Individual PRoW Receptor Sheets [C6.3.8.3.5.2]	the River Trent. A sense of history is also experi
	Appendix 8.3.5.3 Individual PRoW Receptor Sheets [C6.3.8.3.4.3]	pattern that remain broadly intact and are a foo cumulative visibility for the Cable Route Corrido
	<u>Overall Character of the Landscape</u> Overall, the character of the landscape is shaped by the attractiveness of the landscape is typified by the minor road network to the west of the River Trent, which follows a 'grid. The tranquil experiential qualities are strong in many places along the banks of the River Trent. A sense of history is also experienced through the medieval settlement pattern that remain broadly intact and are a focus for recreation and enjoyment. The cumulative visibility for the Cable Route Corridor (Cottam 1 Site/Sites to Cottam Power Station) would not alter the overall character of the landscape.	Station) would not alter the overall character of
	Construction: Very Low	Construction: Very Low
	Operation (Year 1): Very Low	Operation (Year 1): Very Low
Magnitude	Operation (Year 1): with only Embedded Mitigation: Very Low	Operation (Year 1): with only Embedded Mitiga
	Operation (Year 15): Low	Operation (Year 15): Very Low
	Decommissioning: Very Low	Decommissioning: Very Low
	Construction: Adverse & Short Term	Construction: Adverse & Short Term
Type of	Operation (Year 1): Adverse & Long Term	Operation (Year 1): Adverse & Long Term
Effect	Operation (Year 1): with only Embedded Mitigation: Adverse & Long Term	Operation (Year 1): with only Embedded Mitiga
Lilect	Operation (Year 15): Beneficial & Long Term	Operation (Year 15): Neutral & Long Term
	Decommissioning: Neutral & Short Term	Decommissioning: Neutral & Short Term
	Construction: Negligible Not Significant	Construction: Negligible Not Significant
Significance	Operation (Year 1): Negligible Not Significant	Operation (Year 1): Negligible Not Significant
of Effect	Operation (Year 1): with only Embedded Mitigation: Negligible Not Significant	Operation (Year 1): with only Embedded Mitiga
or Litett	Operation (Year 15): Negligible Not Significant	Operation (Year 15): Negligible Not Significant
	Decommissioning: Negligible Not Significant	Decommissioning: Negligible Not Significant

Environmental Statement Landscape and Visual Impact Assessment Appendix 8.2.11.1: Cable Analysis & Evaluation [Reference: EN010133/APP/C6.3.8.2.11.1] Jan 2023

> re their boundaries are located directly adjacent to y Road and to the west of the settlement of settlements, woodlands or major topography, such opment with the Scheme would give rise to a direct ms of the landscape context of the Cable Route dge Development would also add to coalescence m 2 Sites. The primary and secondary mitigation ng features would be retained leading to an (Year 15) across the Sites and Study Area.

3b West Burton Cumulative Developments shows the West Burton Development located to here the intervening settlements of Stow, Sturton nd where their presence will impair any associated rton Site.

at Bumble Bee Farm, Field Farm and High heme by the intervening settlements of ngham by Stow.

pe is shaped by the attractiveness of the landscape k to the west of the River Trent, which follows a ties are strong in many places along the banks of also experienced through the medieval settlement nd are a focus for recreation and enjoyment. The ute Corridor (Cottam 1 Site/Sites to Cottam Power haracter of the landscape.

dded Mitigation: Very Low

Term dded Mitigation: Adverse & Long Term Term erm cant gnificant dded Mitigation: Negligible **Not Significant** Significant



Landscape Receptor – Cable Route Corridor (Cottam 1 Site to Cottam 2 Site)

Receptor Baseline:

The areas identified for the Cable Route Corridor and 0.5km Study Area from the outer boundary fall within:

- National Character Area Profile NCA 48
- Regional Landscape Character Type RLCT 4a
- Local Landscape Character Area LCA 3 •

Key Features:

Land Use: The landscape mainly comprises gently undulating and low-lying landform where the landscape follows a north-south pattern due to the orientation of the underlying Triassic and Jurassic geology. The landscape mainly comprises open arable and pastoral farmland with good hedgerow boundaries. A collection of larger field systems are found where Kexby Road meets with Cow Lane (the junction with Glentworth Road). There are also rectangular woodland blocks at this location, that divide the arable fields, reducing their scale in the landscape. These woodland blocks are also connected by wide shelterbelts.

Topography and Watercourses: The landscape is associated with the distinct landform ridge and around Grayingham, Blyborough, Willhoughton, Hemswell and Harpswell, to the east of the Cable Route Corridor. Blyborough is particularly a backdrop for views across the Till Vale due to the abundance of woodland cover associated with Blyborough Hall that forms a strong feature on the ascending scarp slope. The scarp slope then supports further woodlands around Glentworth that also appear as a distinctive feature on the scarp slope and help to define landscape pattern. The River Till is also a key watercourse, and its middle reaches drain the land to the are embanked between Saxilby in the south as far as Sturton by Stow in the north, as the water level is higher than that of the surrounding land. This river system forms part of a gently undulating and low-lying landform in the main, Ditches feed into the wider drainage network of the River Till.

Communications and Infrastructure: This is broadly defined by a landscape that is crossed by minor roads and those that descend from the ridge-top route of the B1398 as steep lanes provide valuable views over the Till Vale. These small roads form part of a local road network running in a predominantly north south and east west direction across the landscape. The cable corridor follows a route along Gypsy Lane and Cow Lane (which run north south) then crossing several east west roads, including Common Lane at Heapham, Bratt Field Middle Road and Bratt Field Road South at Sturgate and School Lane at Springthorpe.

Settlements, Industry, Commerce and Leisure: This is mostly defined by the settlements of Willingham by Stow, Kexby, Upton, Sturgate and Springthorpe, where the Cable Route Corridor passes to the east of these settlements. The transport network receptors are also covered in more detail under **Appendix 8.3.4** of the assessment.

Public Rights of Way and Access: The PRoW and Access receptors are covered in more detail under Appendix 8.3.5 of the assessment.

Nationally and Locally Designated Landscapes: The Ridge AGLV is located outside the Study Area. This AGLV is centered on the landscape associated with the distinct landform ridge and around Grayingham, Blyborough, Willhoughton, Hemswell and Harpswell, to the east of the Cable Route Corridor, which defines this low-lying landscape to the east, and this is an important landscape feature. The landscape mainly comprises open arable and pastoral farmland with good hedgerow boundaries.

Scheduled Monuments, Listed Buildings, Conservation Areas and Registered Parks and Gardens: This includes the Grade II listed Corringham Windmill (List Entry: 1359417), otherwise there are no other listed buildings within the Study Area. Glentworth and Fillingham are noted as a backdrop for views across the Till Vale due to the abundance of woodland cover associated with Fillingham Castle that forms a strong feature on the ascending scarp slope. The scarp slope then supports further woodlands around Glentworth that also appear as a distinctive feature on the scarp slope and help to define landscape pattern.

Ancient Woodlands and Natural Designations: There are no Ancient Woodlands, Local Nature Reserves, Local Wildlife Sites or Special Scientific Interest. The Study Area includes the Willingham to Fillingham Road Verges Local Wildlife Site (LWS). This is a 3 – 3.5m wide roadside verge where the main habitats are calcareous grassland and neutral grassland (unimproved, semi-improved). This LWS is present due to the network of quiet lanes that lead to the villages, especially where they are associated with the watercourses, otherwise the floodplain grazing marsh is the most extensive semi-natural habitat focused along the Trent. Where woodland cover is limited, these watercourses and quiet lanes provide an important substitute woodland and woodland edge habitat as well as being significant linear features in the landscape

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Cottam

Receptor susceptibility to change	Value of Receptor	Sensitivity	E
In terms of forces for change, the Unwooded Vales aims to	<u>Scenic:</u> The attractiveness of the landscape is typified by the strong minor road	<u>Character:</u> The	E
protect existing rural landscape features, in particular the	network, which is wide and sinuous in nature and reflects the strong east to west	interruptions at bridge	a
restoration of hedgerows since the most widespread change	alignment of the field patterns. North south roads also feature within this network,	crossings are a	a
has been in agricultural intensification and the change from	which allow views across the scenic landscape.	significant component of	tł
pastoral to arable cropping that has resulted in the loss of		the landscape that	а
hedges, and consequently, increase in field size. The loss of	<i><u>Cultural</u></i> : This character extends to comprise the collection of medieval deserted	provide local points of	W
pasture is particularly evident around settlements, where	settlements that populate the area between the higher ridge line and the Trent to	interest, and which are	
grazing animals and smaller field sizes contribute to the	the west.	locally distinctive.	P
setting and structure of several villages. Many of the rural			b
villages have not seen widespread expansion but	<u>Natural:</u> Ancient hedgerows are still evident and sinuous belts of trees and shrubs	<u><i>Quality:</i></u> The extensive	
development pressures continue with the demand for	define ancient parish boundaries. The landscape feels exposed in parts, but the	expanses of semi-	Si
housing, commerce and industry creating visual intrusion	combination of the bends in the local lanes and small blocks of woodlands provide	natural habitat, rivers,	ad
and extending the urban fringe. For development associated	a stronger sense of enclosure. The woodlands within this landscape pattern are	and streams are an	рі
with the rural villages, specific mechanisms include Village	important as natural features.	important landscape	
Design Statements, and tree planting around settlement		feature such the River	E
fringes to help integrate new development.	<u>Recreation and Enjoyment:</u> The local road network provides access for recreation;	Till where the course can	aı
	however, the mown grass verges detract from the natural character of the area.	be observed by tracing	H
Overall, the susceptibility of the Unwooded Vales is		sinuous belts of riparian	0
conditioned by managing growth, ensuring development is	Local Distinctiveness and Sense of Place: The presence of the east west road	habit and riverside trees,	th
appropriate in terms of type, scale, and location. The flat,	network creates a local distinctiveness and the right-angled bends in them offer a	which gives the area a	h
open landscape is also a key consideration and whilst the aim	more natural 'sense of place'.	positive character.	sp
is to plan new tree planting around key settlements,			
woodland does not form a significant component of this	<u>Health and Wellbeing:</u> Rural tranquility remains a strong feature over the area,	<u>Value:</u> Wide panoramic	Li
landscape, and in considering its open and expansive	however significant development pressures exist from the major roads that	views are possible from	รเ
character, extensive new woodland planting would be	traverse the landscape. This area however is generally traversed by a smaller more	the low hills and ridges	w
generally inappropriate.	informal historic road network that passes east to west connecting the Trent to the	that form watersheds	Li
	Roman routes on the ridge line.	between watercourses.	Cá
The aims for the Unwooded Vales should be to plan new tree		This contrasts with the	m
planting around key settlements and other suitable locations.	Important Spatial Function: There is a strong relationship between scenic quality	lower lying areas where	in
Trees should be typically grouped in small plantations/copses	and settlement where many villages derive their character from distinctive views,	intact hedgerows and	c
or as individual trees within hedgerows. The creation of new	local landmarks, and features around their edges. There are also robust	belts of riverside trees	re
hedgerows and permanent pasture along watercourses is	hedgerows with smaller fields and many trees in these locations that assist with	truncate views.	m
also a priority, enhancing visibility of steams and dykes,	closing down of views across the area adding to the intimacy of the landscape		0
whilst increasing the occurrence of semi- natural habitats.	overall.	<u><i>Capacity:</i></u> The landscape	
Although the remaining hedgerow network in generally		has some vulnerability	TI
strong, there is nevertheless evidence of decline in several	Overall , the value of the Detailed Landscape Receptors for the Cable Route	to unsympathetic	Ei
areas, with gaps and few hedgerow trees.	Corridor (Cottam 1 Site/Sites to Cottam 2 Site) is shaped by the natural character	development, but	e
	of the local road network that offers scope to improve habitat connectivity	features are generally	0
However, there is significant benefit with appropriate tree	between the Till Vale and the Trent flood plain. In terms of scenic value, the district	commonplace that could	Se
planting that could be used in and around settlements to	has relatively few tourist 'attractions' and many visitors just simply enjoy the	be readily replaced.	Cá
increase the occurrence of semi-natural habitats and	pleasant drives along across the local road network, including the views towards		0
maintain the perception of a 'well-treed' landscape. The	the historic churches, and the long views between the Till Vale and the Lincolnshire		Eı
relevant characteristics of the landscape therefore have a	Cliff. The rectangular woodland blocks are also a key feature.		
moderate ability to accommodate change without undue			
adverse effects.			

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Embedded Mitigation

Embedded Mitigation would be taken into account at the construction, operation (Year 1 and Year 15) and decommissioning stages of the Scheme. This Embedded Mitigation is also referred to as primary mitigation and would include the following measures:

Panels to be set a minimum of 3m from Site boundaries.

Site boundary fencing to be set back 5m from adjacent existing hedgerows to allow for proposed thickening and growth.

Existing hedges are to be allowed to grow out and will be managed to a height of 5m. Hedgerow trees will be encouraged to grow out to add further thickening and growth to the field boundaries with the addition of new hedgerow trees as appropriate, randomly spaced along the length of existing hedges.

Lighting will be limited to downlights within substations and battery banks only and used when maintenance or security is required. Lighting will be PIR operated and will be calibrated to vehicle and personnel movements. All visible lighting would be 50W, installed at a maximum height of 4m with cowls fitted to prevent light spillage. Lighting required within panelled areas will be manually operated. There will be no lighting on perimeter fencing.

The landscape effects **with only** the Embedded Mitigation taken into account equate to those effects set out for the operation stage (Year 1) and this includes secondary mitigation which will have been carried out but will have had limited physical or landscape character impact at this Embedded Mitigation stage.



Whilst the landform of the Unwooded Vales is typically low and subdued, rising landform often provides locations where glimpse of neighboring elevated lands is often sufficient to provide a sense of place and add to the recreation and enjoyment of the area. Typically, these locations occur around Thorpe le Fallows and Coates.			
Medium (0.5km Study Area)	Medium (0.5km Study Area)	Medium	1
Medium (Cable Route Corridor)	Medium to Low (Cable Route Corridor)	Medium to Low	

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Cable Boute Corridor (Cottam 1 Site to Cottam 2 Site)

	Landscape Receptors – Cable Route Corridor (Cottam 1 Site	e to Cottam 2 Site)		
	Construction	Operation (Year 1)	Operation (Year 15)	Decommissioning
	For the above visual receptors there would be an appreciation of the digging and the presence of small-scale machinery for example along the length of the Cable Route Corridor as it is installed. However, this would not be above that typically associated with utility installation of this nature and would be limited to a short-term duration. During this time the installation would appear as a minor curiosity alongside an existing busy highway route. There is a need for HDD construction techniques at a number of locations across the Cable Route Corridor, however, this will depend on the results of the ground investigations and the final detailed design. At certain crossing locations such as railways; and watercourses such as the Rivers Trent and Till, HDD will be required. This is addressed in the Crossing Schedule [EN010133/APP/C7.17]. It is not expected that the installation of the Cable Route Corridor will result in any tree or hedgerow loss at these crossing points. In terms of existing Dredging Tips, these are associated with the continued navigation of the River Trent and the stretch of river identified for the Cable Route Corridor will not yield any likely significant effects on these dredging tips. In relation to noise from directional drilling, the noise concerned with work to install the cable crossing beneath the River Trent is	Following installation of the ducts / pipes each designated work area will be backfilled and the ground re- instated to match the existing conditions.	Following installation of the ducts / pipes each designated work area will be backfilled and the ground re- instated to match the existing conditions.	Following backfilling and ground reinstatement, the ducts / pipes at each location would remain in situ and not be removed. Following installation, the land is returned to its original use and this would remain through the decommissioning stage.
	addressed in the Noise Chapter [EN010133/APP/C6.15] . In terms of the navigational amenity for river users, any construction impacts will not be evident due to the large separation distance.			
	In relation to the Cable Route Corridor crossing the Trent, this is a necessary part of the scheme. The cable will be directionally drilled under the river and so no permanent above ground structures are proposed. During the construction period there are likely to be temporary construction compounds then these will be removed.			
	In terms of construction activities, a full barrier / Heras fencing and signage will be installed around each designated work area. Each work area will then be excavated to expose all utilities present and to co-ordinate and prepare the area for installation of the proposed ducts / pipes. Some locations may require shuttering along the trench. There are no likely significant effects, since the works would be temporary and activities will be planned and co-ordinated before works commence in each work area. Any lighting required for safety purposes would be directed to avoid light spill into surrounding areas. Welfare facilities will be provided at each designated work area including canteen, toilets and a drying room. The exact location of the ducts / pipes and working areas would be confined to designated locations to ensure operations are controlled are precisely associated with each working area.			
	The extent of the designated work area is dependent on the voltage of the cables where the number of circuits will affect the width of cable trenches required. The range of typical cable trench widths relating to the 132kV and 400kV cables is 0.6 to 1.1 metres. However, the width and spacing of the cable trenches may differ depending on environmental constraints, engineering requirements or if crossing third party apparatus (e.g., railway lines). In addition to the trenches, land will be required in the corridor for access and soil and cable 'lay down'. Construction compounds along this route will also be required. Any existing overhead power lines will be retained, and no new overhead lines will be required.			
5km Study A	rea:	l 	1	
Magnitude	Low	Very Low	Very Low	Very Low
Level of Effect	Adverse & Short Term	Neutral & Long Term	Neutral & Long Term	Neutral & Short Term
Significance of Effect	Minor Not Significant	Negligible Not Significant	Negligible Not Significant	Negligible Not Significant

Environmental Statement Landscape and Visual Impact Assessment Appendix 8.2.11.2: Cable Analysis & Evaluation [Reference: EN010133/APP/C6.3.8.2.11.2] JAN 2023



Landscape Receptors – Cable Route Corridor (Cottam 1 Site/Sites to Cottam 2 Site)

The visual effects for the Cable Route Corridor (Cottam 1 Site/Sites to Cottam Power Station) Receptors are set out within the Viewpoint Receptor Sheets at Appendix 8.3.2.3 [C6.3.8.2.3.] and Appendix 8.3.2.4 [C6.3.8.3.2.4] the Residential Overview Sheets at Appendix 8.3.3.1 [C6.3.8.3.3.1] the Transport Overview Sheets at Appendix 8.3.4.1 [C6.3.8.3.4.1] and the PRoW Overview Sheets at Appendix 8.3.5.1 [C6.3.8.3.5.1].

In-Combination Effects [Cumulative Sites]	Cumulative Effects [Cumulative Developmen
In Summary	In Summary
The In-combination Effects of the Cable Route Corridor (Cottam 2 to Cottam 3a and 3b) with the other	The Cumulative Effects of the Scheme including the Cable
Cumulative Sites and Cable Route Corridors is Negligible at the construction, operation (year 1 and year	Negligible with the Tillbridge Development, giving rise to n
15) and decommissioning stages with embedded and additional mitigation The low-level nature of the	operation. The effects would be Negligible at year 15 and
Scheme, together with the improvements to the wider landscape context with new hedgerows and tree	mitigation. The low-level nature of the Scheme, together w
planting, would give rise to additional vegetative layering of the landscape, all helping reduce to reduce	hedgerows and tree planting, would give rise to additional
the cumulative effect.	reduce the cumulative effect.
Fabric of the Landscape	Fabric of the Landscape
There would not be the removal of, or changes to the landscape elements or features within the Cable	There would not be the removal of, or changes to the land
Route Corridor (Cottam 1 Site/Sites to Cottam 2 Site). The landscape is shaped by the local road	(Cottam 1 Site/Sites to Cottam 2 Site). The landscape is sha
network that offers scope to improve habitat connectivity between the Till Vale and the Trent flood	habitat connectivity between the Till Vale and the Trent flo
plain. In terms of scenic value, the district has relatively few tourist 'attractions and many visitors just	tourist 'attractions and many visitors just simply enjoy the
simply enjoy the pleasant drives along across the local road network, including the views towards the	the views towards the historic churches, and the long view
historic churches, and the long views between the Till Vale and the Lincolnshire Cliff. The rectangular	rectangular woodland blocks are also a key feature.
woodland blocks are also a key feature.	
	There would be the introduction of new elements and feat
There would be the introduction of new elements and features comprising the solar panel areas, the	the Cable Route Corridor extending between the Cottam 1
substation area and the Cable Route Corridor extending between the Cottam 1 Site/Sites and the	Cottam 3a and 3b Sites (the 'Cable Route Corridors').
Cottam 2 Site and the Cottam 2 and Cottam 3a and 3b Sites (the 'Cable Route Corridors').	A soft stis Associate of the Low descent
A sath stir A sussets of the Landscene	Aesthetic Aspects of the Landscape
<u>Aesthetic Aspects of the Landscape</u>	Refer to Figure 8.15.2.1 [C6.4.8.15.2.1] which shows that w cumulative developments would not be experienced acros
Refer to Figure 8.15.1.2 [C6.4.8.15.1.2] which shows that with the Cottam 2 Site, cumulative visibility with the Cottam 1 Site/Sites and Cottam 3a and 3b Sites would not be experienced across the entirety of	distance, the intervening woodlands, hedgerows, and tree
the 2km study area. This is due to the distance, the intervening woodlands, hedgerows, and tree cover	built form would also curtail cumulative visibility.
between the Site/Sites. The intervening settlements and built form would also curtail cumulative	
visibility.	There are local patches of cumulative visibility which may b
visioney.	Corridor and Gate Burton Energy Park, Tillbridge Solar and
There are local patches of intervisibility between the Cottam 2 Site and with the 3a and Cottam 3b Sites	further detail within the following figures:
extending from the:	
• South boundary of the Cottam 2 Site, starting at the eastern edge of Corringham and reaching	Figure 8.15.2.6 Cottam 1, 2, 3a and 3b Gate Burton Cumul
as far as Yawthorpe Beck and Yawthorpe	Gate Burton to the west of the Cottam Sites, where the inte
	between, where their presence will impair any associated
The Land Use, Topography and Watercourses, Communications and Infrastructure, Settlements,	
Industry, Commerce and Leisure, Nationally and Locally Designated Landscapes, Scheduled	Figure 8.15.2.8 Cottam 1, 2, 3a and 3b Tillbridge Solar Curr
Monuments, Listed Buildings, Conservation Areas, Registered Parks and Gardens and Ancient	shows Tillbridge to the south of the Cottam 2 Site and nort
Woodlands and Natural Designations would not be affected by these minor patches of intervisibility.	directly adjacent to each other, just to the south of Kexby F
	no intervening settlements, woodlands or major topograp
There is a local patch of intervisibility between the Cottam 2 Site and with the Cottam 3b Site,	Scheme would give rise to a direct and compounded relation
comprising the:	Corridor. The presence of the Tillbridge Development wou
• Southeast of the River Eau, extending as far as Huckerby Farm and Huckerby Bungalows.	Cottam 2 Sites. The primary and secondary mitigation would be disperse of the primary and secondary mitigation would be disperse of
The Lond Line Tenermonia and Michaelance Community in the south for the start of the	leading to an improvement at the operation stage (Year 1
The Land Use, Topography and Watercourses, Communications and Infrastructure, Settlements, Industry, Commerce and Leisure, Nationally and Locally Designated Landscapes, Scheduled	

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dor with the other Cumulative Developments is ficant effects at construction and year 1 of oning stages with the embedded and additional ovements to the wider landscape context with new ayering of the landscape, all helping reduce to

ents or features within the Cable Route Corridor local road network that offers scope to improve terms of scenic value, the district has relatively few ves along across the local road network, including he Till Vale and the Lincolnshire Cliff. The

ising the solar panel areas, the substation area and nd the Cottam 2 Site and the Cottam 2 Site and

ble Route Corridor, cumulative visibility with the ity of the 5km study area. This is due to the een the Site/Sites. The intervening settlements and

ikely significant effects, between the Cable Route n Solar Park. This cumulative visibility is set out in

pments Augmented ZTV [C6.4.8.15.2.6]. This shows tlements of Kexby, Willingham by Stow and Stow lie ontext with the Gate Burton Site.

elopments Augmented ZTV [C6.4.8.15.2.8]. This tam 1 Site, where their boundaries are located the west of the settlement of Fillingham. There are t the presence of Tillbridge Development with the rms of the landscape context of the Cable Route to coalescence between the Cottam 1 and the ensure that all existing features would be retained e Sites and Study Area.





SOLAR PROJECT		-
	 Monuments, Listed Buildings, Conservation Areas, Registered Parks and Gardens and Ancient Woodlands and Natural Designations would not be affected by these minor patches of intervisibility There are local patches of intervisibility between All Sites comprising the: North of the Bonsdale Farm at Pilham, extending across the landscape to the north of the medieval village of Dunstall as far as the medieval village of Southorpe The Land Use, Topography and Watercourses, Communications and Infrastructure, Settlements, Industry, Commerce and Leisure, Nationally and Locally Designated Landscapes, Scheduled Monuments, Listed Buildings, Conservation Areas, Registered Parks and Gardens and Ancient Woodlands and Natural Designations would not be affected by these minor patches of intervisibility. Users of linear routes, especially footpaths or other rights of way, or transport routes, may potentially experience the aesthetic aspects of the cumulative sites revealed in succession as a series of sequential views. For further details refer to the following detailed visual receptor sheets: Appendix 8.3.2.2 Individual Viewpoint Receptor Sheets [C6.3.8.3.2.2] Appendix 8.3.2.4 Individual Viewpoint Receptor Sheets [C6.3.8.3.2.4] Appendix 8.3.3.2 Individual Residential Receptor Sheets [C6.3.8.3.3.2] Appendix 8.3.3.3 Individual PROW Receptor Sheets [C6.3.8.3.4.2] Appendix 8.3.4.2 Individual PROW Receptor Sheets [C6.3.8.3.4.2] Appendix 8.3.5.2 Individual PROW Receptor Sheets [C6.3.8.3.4.3] Appendix 8.3.5.3 Individual PROW Receptor Sheets [C6.3.8.3.4.3]	 Figure 8.15.2.9 Cottam 1, 2, 3a and 3b West Burton Cumulative Development the West Burton Development located to the southwest of the Cottam Site Sturton by Stow and Bransby lie between, and where their presence will im West Burton Site. The other Cumulative Developments at Bumble Bee Farm, Field Farm and I by the intervening settlements of Gainsborough, Lea, Blyton and Willinghai Overall Character of the Landscape Overall, the character of the landscape is shaped by the strong minor road and reflects the strong east to west alignment of the field patterns. North s which allow views across the scenic landscape. The cumulative visibility for to Cottam 2 Site) would not alter the overall character of the landscape.
Magnitude	Construction: Very Low Operation (Year 1): Very Low Operation (Year 1): with only Embedded Mitigation: Very Low Operation (Year 15): Low Decommissioning: Very Low	Construction: Very Low Operation (Year 1): Very Low Operation (Year 1): with only Embedded Mitigation: Very Low Operation (Year 15): Very Low Decommissioning: Very Low
Type of Effect	Construction: Adverse & Short Term Operation (Year 1): Adverse & Long Term Operation (Year 1): with only Embedded Mitigation: Adverse & Long Term Operation (Year 15): Beneficial & Long Term Decommissioning: Neutral & Short Term	Construction: Adverse & Short Term Operation (Year 1): Adverse & Long Term Operation (Year 1): with only Embedded Mitigation: Adverse & Long Term Operation (Year 15): Neutral & Long Term Decommissioning: Neutral & Short Term
Significance of Effect	Construction: Negligible Not Significant Operation (Year 1): Negligible Not Significant Operation (Year 1): with only Embedded Mitigation: Negligible Not Significant Operation (Year 15): Negligible Not Significant Decommissioning: Negligible Not Significant	Construction: Negligible Not Significant Operation (Year 1): Negligible Not Significant Operation (Year 1): with only Embedded Mitigation: Negligible Not Signific Operation (Year 15): Negligible Not Significant Decommissioning: Negligible Not Significant

Environmental Statement Landscape and Visual Impact Assessment Appendix 8.2.11.2: Cable Analysis & Evaluation [Reference: EN010133/APP/C6.3.8.2.11.2] JAN 2023

> ments Augmented ZTV [C6.3.4.15.2.9]. This shows ites where the intervening settlements of Stow, impair any associated landscape context with the

> nd High Marnham are separated from the Scheme ham by Stow.

ad network, which is wide and sinuous in nature h south roads also feature within this network, for the Cable Route Corridor (Cottam 1 Site/Sites

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Landscape Receptor - Cable Route Corridor (Cottam 2 Site to Cottam 3a and 3b Sites)

Receptor Baseline:

The areas identified for the Cable Route Corridor and 0.5km Study Area from the outer boundary fall within:

- National Character Area Profiles NCA 45 and NCA 48
- Regional Landscape Character Type RLCT 4a
- Local Landscape Character Area LCA 3

Key Features:

Land Use: The landscape mainly comprises open agricultural land with small pockets of woodland, where the settlements and villages, such as Pilham and Aisby, break up the landscape. There are a very few large woodlands in the immediate landscape that helps to retain inspirational long views towards the south and east towards Yawthorpe and Aisby. The landscape mainly comprises larger field systems that are irregular in pattern, especially where they are dissected by the meandering alignment of the tributaries of the River Till and associated with the settlements of Pilham and Aisby. Fields are more geometric in pattern to the north of the Study Area, where they border the mainline railway.

Topography and Watercourses: The landscape is characterised by fields that are divided by ditches and dykes. Some of these fields remain separated by hedgerows with trees and there are more minor tributaries of the River Till that cross in a diagonal alignment, in particular between the settlements of Pilham and Aisby. The landscape is generally flat, with topography varying only very slightly in elevation, typically with levels of approximately 20m AOD similar to the outlying landscape. The alignment of roads tends to cut across the diagonal tributaries, unlike the landscape to the west where the roads follow the watercourses, for example Laughton Road, which takes a north-east route from Gainsborough, is almost true to the River Trent and passes through the settlements of Laughton and Laughton Common before reaching the A159 (Laughton Road).

Communications and Infrastructure: This is broadly defined by the small roads running in a predominantly east west or north south direction across the landscape and many are bordered by isolated farmsteads and residential dwellings, often with very narrow grass verges and high hedgerows that add elements of intimacy to these lanes. Aisby Beck cuts across the area to the north and then to the south of Aisby. Many of the tributaries pass through the Medieval settlements of Southorpe Village, Dunstall Village and Gilby Village.

Settlements, Industry, Commerce and Leisure: This is mostly defined by a wider settlement pattern that includes the Medieval villages of Southorpe, Dunstall and Gilby, but these are located outside the Study Area. The settlements of Blyton and Pilham are also strong features in the landscape where the church spires are captured in views across the area, but they are also located outside the Study Area. The transport network receptors are also covered in more detail under **Appendix 8.3.4** of the assessment.

Public Rights of Way and Access: The PRoW and Access receptors are covered in more detail under Appendix 8.3.5 of the assessment.

Nationally and Locally Designated Landscapes: The Gainsborough AGLV2 is located outside the Study Area. This is centered on the landscape associated with the outskirts of Gainsborough to the west of the Cable Route Corridor. This is the low-lying, gently undulating terrain that rises to the north-east of Gainsborough in the vicinity of Thonock Grove and Castle Hills. This relatively elevated land extends as far south as Marton and this eastern boundary of the AGLV marks a very distinct transition between the Trent Valley area and the Till Vale where significant blocks of woodland mark the boundary.

Scheduled Monuments, Listed Buildings, Conservation Areas and Registered Parks and Gardens: The Study Area does not include any Scheduled Monuments, Listed Buildings, Conservation Areas or Registered Parks and Gardens.

Ancient Woodlands and Natural Designations: There are no Ancient Woodlands or Natural Designations within the Study Area, but there are small pockets of woodland mainly concentrated to the east that include geometric shaped shelterbelts and also woodland plantations consisting of predominantly native species at Yawthorpe Fox Covert and Blyborough Covert.

Cottam

Receptor susceptibility to change	Value of Receptor	Sensitivity	Embedded Mitigation
n terms of forces for change, the Unwooded Vales aims to	<u>Scenic:</u> The fragmented woodlands are distinctive as visual features	<u><i>Character:</i></u> The roads and watercourses	Embedded Mitigation would be taken
protect existing rural landscape features, in particular the	in the landscape.	combine to give a subtle grain to the	into account at the construction,
estoration of hedgerows since the most widespread change		landscape. The interruptions at the bridge	operation (Year 1 and Year 15) and
nas been in agricultural intensification and the change from	<u><i>Cultural:</i></u> Views to the villages and their churches are a feature of the	crossing provide local points of interest	decommissioning stages of the Scher
pastoral to arable cropping that has resulted in the loss of	area. The landscape is remote due to the poorly connected road	and the opportunity to capture views	This Embedded Mitigation is also
hedges, and consequently, and increase in field size. The loss	networks. As a result, this local area is defined by compact villages	across the landscape.	referred to as primary mitigation and
of pasture is particularly evident around settlements, where	and dispersed farmsteads.		would include the following measures
grazing animals and smaller field sizes contribute to the		<u><i>Quality:</i></u> The landscape shows evidence of	C C
setting and structure of several villages.	<u>Natural:</u> The sense of natural enjoyment that helps promote health	historic settlement with farms and	Panels to be set a minimum of 3m fro
5	and wellbeing stems from the local lanes, small villages, arable fields,	nucleated villages and small hamlets such	Site boundaries.
Overall, the susceptibility of the Unwooded Vales is	and the peacefulness of the landscape.	as Aisby, Corringham and Pilham. The	
conditioned by managing growth, ensuring development is		landscape surrounding these settlements	Site boundary fencing to be set back !
appropriate in terms of type, scale, and location. The flat,	<u>Recreation and Enjoyment:</u> The area offers opportunity to create	retain a deeply rural and tranquil	from adjacent existing hedgerows to
open landscape is also a key consideration and whilst the aim	more links between settlements and the surrounding countryside	character.	allow for proposed thickening and
is to plan new tree planting around key settlements,	since many afford wide countryside settings and there is a limited		growth.
woodland does not form a significant component of this	network of public rights of way.	<u>Value:</u> Whilst the landform of the	growth.
landscape.	l letwork of public rights of way.		Evicting hadges are to be allowed to
andscape.	Least Distinctions and Course of Disconstruction with	Unwooded Vales is typically low and	Existing hedges are to be allowed to
The landscape receptor is moderately susceptible to the	Local Distinctiveness and Sense of Place: Tranquility is associated with	subdued, rising landform often provides	grow out and will be managed to a
proposed development, and a moderate ability to	the local lanes, and this creates a particular sense of place. The area	locations where glimpse of neighboring	height of 5m. Hedgerow trees will be
	is relatively sparsely populated with isolated residential properties	elevated landscape is often sufficient to	encouraged to grow out to add furthe
accommodate the specific proposed change, because the	and farmsteads. The settings of the rural settlements also contribute	provide a sense of place and add to the	thickening and growth to the field
relevant characteristics of the landscape have some ability to	to the character of the landscape.	recreation and enjoyment of the area.	boundaries with the addition of new
accommodate it without undue adverse effects, taking			hedgerow trees as appropriate,
account of the existing character and quality of the	<u>Health and Wellbeing:</u> Roads and minor farm tracks are bordered by	<u><i>Capacity:</i></u> The most widespread change has	randomly spaced along the length of
landscape, and/or achievement of relevant planning policies	wide verges and hedgerows, and this contributes to their function in	been in agricultural intensification and the	existing hedges.
and strategies.	providing an open setting to villages and the overall contribution to	change from pastoral to arable cropping	
	health and well-being.	that has resulted in the loss of hedges, and	Lighting will be limited to downlights
The aims for the Unwooded Vales should be to plan new tree		consequently, and increase in field size,	within substations and battery banks
planting around key settlements and other suitable locations.	Important Spatial Function: The smaller settlements provide an	which affects the capacity of the landscape	only and used when maintenance or
Trees should be typically grouped in small plantations/copses	important spatial function, where they mainly comprise villages,	to absorb change.	security is required. Lighting will be Pl
or as individual trees within hedgerows. The creation of new	farmsteads, and isolated residential dwellings. The land drains and	_	operated and will be calibrated to veh
hedgerows and permanent pasture along watercourses is	minor tributaries of also add a marked change in the landscape.		and personnel movements. All visible
also a priority, enhancing visibility of steams and dykes,			lighting would be 50W, installed at a
whilst increasing the occurrence of semi- natural habitats.	Overall , the value of the Detailed Landscape Receptors for the Cable		maximum height of 4m with cowls fitt
Although the remaining hedgerow network in generally	Route Corridor (Cottam 2 Site to Cottam 3a and 3b Sites) is shaped		to prevent light spillage. Lighting
strong, there is nevertheless evidence of decline in several	by the river tributaries that mainly follow a sinuous alignment		required within panelled areas will be
areas, with gaps and few hedgerow trees.	running in all directions. The landscape has a strong rural character		manually operated. There will be no
	and recreation is provided by the numerous local lanes since the		lighting on perimeter fencing.
However, there is significant benefit with appropriate tree	public rights of way are scarce, some of the local lanes remain		
planting that could be used in and around settlements to	tranquil and these features contribute strongly to the 'sense of		
ncrease the occurrence of semi-natural habitats and	place'. As a result, the landscape is devoid of large-scale landscape		The landscape effects with only the
naintain the perception of a 'well-treed' landscape. The	· · · · · · · · · · · · · · · · · · ·		Embedded Mitigation taken into acco
elevant characteristics of the landscape therefore have a	features and development due to the poorly connected transport		equate to those effects set out for the
noderate ability to accommodate change without undue	network.		operation stage (Year 1) and this
adverse effects.			includes secondary mitigation which
			have been carried out but will have h
Whilet the landform of the University Velocie to missibulity			
Whilst the landform of the Unwooded Vales is typically low			limited physical or landscape characte
and subdued, rising landform often provides locations where			impact at this Embedded Mitigation
glimpse of neighboring elevated lands is often sufficient to			stage.

Cottam
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provide a sense of place and add to the recreation and		
enjoyment of the area. Typically, these locations occur		
around Thorpe le Fallows and Coates.		
Medium (0.5km Study Area)	Medium (0.5km Study Area)	Medium
Medium (Cable Route Corridor)	Medium to Low (Cable Route Corridor)	Medium to Low

Construction	Operation (Year 1)	Operation (Year 15)	Decommissioning
For the above visual receptors there would be an appreciation of the digging and the presence of small-scale machinery for example along the length of the Cable Route Corridor as it is installed. However, this would not be above that typically associated with utility installation of this nature and would be limited to a short-term duration. During this time the installation would appear as a minor curiosity alongside an existing busy highway route. There is a need for HDD construction techniques at a number of locations across the Cable Route Corridor, however, this will depend on the results of the ground investigations and the final detailed design. At certain crossing locations such as railways; and watercourses such as the Rivers Trent and Till, HDD will be required. This is addressed in the Crossing Schedule [EN010133/APP/C7.17] . It is not anticipated that the installation of the Cable Route Corridor will result in any tree or hedgerow loss at these crossing points. In relation to the Cable Route Corridor crossing the Trent, this is a necessary part of the scheme. The cable will be directionally drilled under the river and so no permanent above ground structures are proposed. During the construction period there are likely to be temporary construction compounds then these will be removed. In terms of existing Dredging Tips, these are associated with the continued navigation of the River Trent and the stretch of river identified for the Cable Route Corridor will not yield any likely significant effects on these dredging tips. In relation to noise from directional drilling, the noise concerned with work to install the cable crossing beneath the River Trent is addressed in the Noise Chapter [EN010133/APP/C6.15] . In terms of the navigational amenity for river users, any construction impacts will not be evident due to the large separation distance. In terms of construction activities, a full barrier / Heras fiencing and signage will be installed around each designated work area. Each work area will then be	Following installation of the ducts / pipes each designated work area will be backfilled and the ground re- instated to match the existing conditions.	Following installation of the ducts / pipes each designated work area will be backfilled and the ground re- instated to match the existing conditions.	Following backfilling and ground reinstatement, the ducts / pipes at each location would remain in situ and not be removed. Following installation, the land is returned to its original use and this would remain through the decommissioning stage.



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	The extent of the designated work area is dependent on the voltage of the cables where the number of circuits will affect the width of cable trenches required. The range of typical cable trench widths relating to the 132kV and 400kV cables is 0.6 to 1.1 metres. However, the width and spacing of the cable trenches may differ depending on environmental constraints, engineering requirements or if crossing third party apparatus (e.g., railway lines). In addition to the trenches, land will be required in the corridor for access and soil and cable 'lay down'. Construction compounds along this route will also be required. Any existing overhead power lines will be retained, and no new overhead lines will be required.		
5km Study A	rea:		
Magnitude	Low	Very Low	Very Low

Adverse & Short Term	Neutral & Long Term	Neutral & Lo
Minor Not Significant	Negligible Not Significant	Negligible N

Landscape Receptors – Cable Route Corridor (Cottam 2 Site to Cottam 3a and 3b Sites)

The visual effects for the Cable Route Corridor (Cottam 1 Site/Sites to Cottam Power Station) Receptors are set out within the Viewpoint Receptor Sheets at **Appendix 8.3.2.3 [C6.3.8.2.3.]** and **Appendix 8.3.2.4 [C6.3.8.3.2.4]** the Residential Overview Sheets at Appendix 8.3.3.1 [C6.3.8.3.3.1] the Transport Overview Sheets at Appendix 8.3.4.1 [C6.3.8.3.4.1] and the PRoW Overview Sheets at Appendix 8.3.5.1 [C6.3.8.3.5.1].

In-combination Effects [Cumulative Sites]	Cumulative Effects [Cumulative Developments]
<u>In Summary</u> The In-combination Effects of the Cable Route Corridor (Cottam 2 to Cottam 3a and 3b) with the other Cumulative Sites and Cable Route Corridors is Negligible at the construction, operation (year 1 and year 15) and decommissioning stages with embedded and additional mitigation The low-level nature of the Scheme, together with the improvements to the wider landscape context with new hedgerows and tree planting, would give rise to additional vegetative layering of the landscape, all helping reduce to reduce the cumulative effect.	<u>In Summary</u> The Cumulative Effects of the Scheme including the Cable Route Corrid Negligible with the Tillbridge Development, giving rise to no likely Signi would be Negligible at year 15 with the embedded and additional mitig with the improvements to the wider landscape context with new hedge vegetative layering of the landscape, all helping reduce to reduce the co
<i>Fabric of the Landscape</i> There would not be the removal of, or changes to the landscape elements or features within the Cable Route Corridor (Cottam 2 Site to Cottam 3a and 3b Sites). The landscape is shaped by Views to the villages and their churches are a feature of the area. The landscape is remote due to the poorly connected road networks. As a result, this local area is defined by compact villages and dispersed farmsteads.	Fabric of the LandscapeThere would not be the removal of, or changes to the landscape eleme(Cottam 2 Site to Cottam 3a and 3b Sites). The landscape is shaped byfeature of the area. The landscape is remote due to the poorly connectdefined by compact villages and dispersed farmsteads.There would be the introduction of new elements and features comprithe Cottam 2 Site and Cottam 3a and 3b Sites, extending across the character

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	Very Low
ong Term	Neutral & Short Term
Not Significant	Negligible Not Significant

or with the other Cumulative Developments is icant effects at year 1 of operation. The effects ation. The low-level nature of the Scheme, together rows and tree planting, would give rise to the imulative effect.

nts or features within the Cable Route Corridor /iews to the villages and their churches are a ed road networks. As a result, this local area is

ing the Cable Route Corridor connecting between racter area in a north south direction.



There would be the introduction of new elements and features comprising the Cable Route Corridor connecting between the Cottam 2 Site and Cottam 3a and 3b Sites, extending across the character area in a north south direction.

Aesthetic Aspects of the Landscape

Refer to Figure 8.15.1.2 [C6.4.8.15.1.2] and Figure 8.15.1.3 [C6.4.8.15.1.3] which shows that with the Cottam 3a Site, cumulative visibility with the Cottam 1 Site/Sites, Cottam 2 Site and Cottam 3b Site would not be experienced across the majority of the 2km study area. This is due to the distance, the intervening woodlands, hedgerows, and tree cover between the Site/Sites. The intervening settlements and built form would also curtail cumulative visibility between these Site/Sites.

There are local patches of intervisibility between the Cottam 3a and 3b Sites, extending from the:

• North boundary of the Cottam 3b Site/Sites, extending for a short distance as far as Grange Farm and Top Farm.

The Land Use, Topography and Watercourses, Communications and Infrastructure, Settlements, Industry, Commerce and Leisure, Nationally and Locally Designated Landscapes, Scheduled Monuments, Listed Buildings, Conservation Areas, Registered Parks and Gardens and Ancient Woodlands and Natural Designations would not be affected by these minor patches of intervisibility.

There are local patches of intervisibility between the Cottam 3a and 3b Sites and the Cottam 2 Site, extending from the:

- South boundary of the Cottam 3b Site, bordered by Pilham to the west and the medieval settlement of Dunstall to the east, and reaching as far as Springthorpe in the south; and
- South boundary of the Cottam 3a Site, bordered by the eastern edge of Blyton to the west, reaching Grange Farm and stopping short of the mainline railway.

The Land Use, Topography and Watercourses, Communications and Infrastructure, Settlements, Industry, Commerce and Leisure, Nationally and Locally Designated Landscapes, Scheduled Monuments, Listed Buildings, Conservation Areas, Registered Parks and Gardens and Ancient Woodlands and Natural Designations would not be affected by these minor patches of intervisibility.

There is a local patch of intervisibility between All Sites, located to the:

• East of the Cottam 3b Site and north of the Bonsdale Farm at Pilham, extending across the landscape to the north of the medieval village of Dunstall as far as the medieval village of Southorpe.

The Land Use, Topography and Watercourses, Communications and Infrastructure, Settlements, Industry, Commerce and Leisure, Nationally and Locally Designated Landscapes, Scheduled Monuments, Listed Buildings, Conservation Areas, Registered Parks and Gardens and Ancient Woodlands and Natural Designations would not be affected by these minor patches of intervisibility.

Users of linear routes, especially footpaths or other rights of way, or transport routes, may potentially experience the aesthetic aspects of the cumulative sites revealed in succession as a series of sequential views. For further details refer to the following detailed visual receptor sheets:

Appendix 8.3.2.2 Individual Viewpoint Receptor Sheets [C6.3.8.3.2.2] Appendix 8.3.2.3 Individual Viewpoint Receptor Sheets [C6.3.8.3.2.3] Appendix 8.3.2.4 Individual Viewpoint Receptor Sheets [C6.3.8.3.2.4]

Appendix 8.3.3.2 Individual Residential Receptor Sheets [C6.3.8.3.3.2] Appendix 8.3.3.3 Individual Residential Receptor Sheets [C6.3.8.3.3.3]

Appendix 8.3.4.2 Individual Transport Receptor Sheets [C6.3.8.3.4.2] Appendix 8.3.4.3 Individual Transport Receptor Sheets [C6.3.8.3.4.3]

Aesthetic Aspects of the Landscape

Refer to Figure 8.15.2.2 [C6.4.8.15.2.2] and 8.15.2.3 [C6.4.8.15.2.3] which shows that with the Cable Route Corridor, cumulative visibility with the cumulative developments would not be experienced across the majority of the 5km study area. This is due to the distance, the intervening woodlands, hedgerows, and tree cover between the Site/Sites. The intervening settlements and built form would also curtail cumulative visibility.

There are local patches of cumulative visibility which may be focus of likely significant effects, between the Cable Route Corridor and Tillbridge Solar. This cumulative visibility is set out in further detail within the following figures:

Figure 8.15.2.6 Cottam 1, 2, 3a and 3b Gate Burton Cumulative Developments Augmented ZTV [C6.4.8.15.2.6]. This shows Gate Burton to the west of the Cottam Sites, where the intervening settlements of Kexby, Willingham by Stow and Stow lie between, where their presence will impair any associated landscape context with the Gate Burton Site.

Figure 8.15.2.8 Cottam 1, 2, 3a and 3b Tillbridge Solar Cumulative Developments Augmented ZTV [C6.4.8.15.2.8]. This shows Tillbridge to the south of the Cottam 2 Site and north of the Cottam 1 Site, where their boundaries are located directly adjacent to each other, just to the south of Kexby Road and to the west of the settlement of Fillingham. There are no intervening settlements, woodlands or major topography, such that the presence of Tillbridge Development with the Scheme would give rise to a direct and compounded relationship in terms of the landscape context of the Cable Route Corridor. The presence of the Tillbridge Development would also add to coalescence between the Cottam 1 and the Cottam 2 Sites. The primary and secondary mitigation would however ensure that all existing features would be retained leading to an improvement at the operation stage (Year 15) across the Sites and Study Area.

Figure 8.15.2.9 Cottam 1, 2, 3a and 3b West Burton Cumulative Developments Augmented ZTV [C6.3.4.15.2.9]. This shows the West Burton Development located to the southwest of the Cottam Sites where the intervening settlements of Stow, Sturton by Stow and Bransby lie between, and where their presence will impair any associated landscape context with the West Burton Site.

The other Cumulative Developments at Bumble Bee Farm, Field Farm and High Marnham are separated from the Scheme by the intervening settlements of Gainsborough, Lea, Blyton and Willingham by Stow.

Overall Character of the Landscape

Overall, the character of the landscape is shaped by a strong rural character and recreation is provided by the numerous local lanes since the public rights of way are scarce. Some of the local lanes remain tranquil and these features contribute strongly to the 'sense of place'. As a result, the landscape is devoid of large-scale landscape features and development due to the poorly connected transport network. The cumulative visibility for the Cable Route Corridor (Cottam 2 Site to Cottam 3a and 3b Sites) would not alter the overall character of the landscape.



	Appendix 8.3.5.2 Individual PRoW Receptor Sheets [C6.3.8.3.5.2]	
	Appendix 8.3.5.3 Individual PRoW Receptor Sheets [C6.3.8.3.4.3]	
	<u>Overall Character of the Landscape</u> Overall, the character of the landscape is shaped by a strong rural character and recreation is provided by the numerous local lanes since the public rights of way are scarce. Some of the local lanes remain tranquil and these features contribute strongly to the 'sense of place'. As a result, the landscape is devoid of large-scale landscape features and development due to the poorly connected transport network. The cumulative visibility for the Cable Route Corridor (Cottam 2 Site to Cottam 3a and 3b Sites) would not alter the overall character of the landscape.	
Magnitude	Construction: Very Low Operation (Year 1): Very Low Operation (Year 1): with only Embedded Mitigation Operation (Year 15): Very Low Decommissioning: Very Low	Construction: Very Low Operation (Year 1): Very Low Operation (Year 1): with only Embedded Mitigation: Very Low Operation (Year 15): Very Low Decommissioning: Very Low
Type of Effect	Construction: Adverse & Short Term Operation (Year 1): Adverse & Long Term Operation (Year 1) with only Embedded Mitigation: Adverse & Long Term Operation (Year 15): Beneficial & Long Term Decommissioning: Neutral & Short Term	Construction: Adverse & Short Term Operation (Year 1): Adverse & Long Term Operation (Year 1) with only Embedded Mitigation: Adverse & Long Tern Operation (Year 15): Neutral & Long Term Decommissioning: Neutral & Short Term
Significance of Effect	Construction: Negligible Not Significant Operation (Year 1): Negligible Not Significant Operation (Year 1) with only Embedded Mitigation: Negligible Operation (Year 15): Negligible Not Significant Decommissioning: Negligible Not Significant	Construction: Negligible Not Significant Operation (Year 1): Negligible Not Significant Operation (Year 1) with only Embedded Mitigation: Negligible Operation (Year 15): Negligible Not Significant Decommissioning: Negligible Not Significant

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Landscape Receptor – Regional Scale Landscape Character – 4a: Unwooded Vales (Cottam 1 Substation Site – West A)

Receptor Baseline:

Within the Cottam 1 Site/Sites, at a regional scale, landscape character is assessed within the East Midlands Regional Landscape Character Assessment as forming part of RLCT Profile: 4a Unwooded Vales, which is shown on Figure 8.5 [C6.4.8.5]. Unwooded Vales extends across the majority of the 2km and 5km Study Area apart from the eastern most edge where it shares a boundary with RLCT Profile: 6a Limestone Scarps and Dipslopes. The western extent of the 5km Study Area is also host to a small part of RLCT Profile 3a: Floodplain Valleys and RLCT Profile: 4b Wooded Vales.

The Sites within Cottam 1 can be sub-divided into two distinct land areas:

- Cottam 1 North
- Cottam 1 South •

Key Features:

Cottam 1 North:

This refers to the area located to the north of Ingham Road and to the west of this area there are the settlements of Kexby, Willingham by Stow, Normanby by Stow and Stow, which are located to each side of the B1241 (Sturton Road and Stow Road). To the centre of this area is the small hamlet of Coates and to the east there are the settlements of Fillingham and Ingham, which are located to each side of the B1398. The area is bisected by a secondary road, known as Fillingham Lane which then runs into Willingham Road, and which links the settlements of Willingham by Stow to Fillingham. The landscape mainly comprises productive arable and pastoral farmland, but there are areas of cereal and vegetable cropping to the east of Willingham by Stow around Stone Pit Lane where hedgerow removal has created some very large fields under single crop. Most of the Unwooded Vales retain a deeply rural and tranquil character, with farms and small nucleated villages located throughout areas of productive farmland, linked by narrow winding lanes and roads. Watercourses are often bordered by a narrow alluvial floodplain that wind through the landscape along shallow valleys, appearing little more than gentle folds in the landscape. This pattern of drainage is particularly evident between the settlement of Coates and Normanby by Stow and Willingham by Stow in the west of the Cottam 1 Site/Sites. This area boasts an extensive network of field drains including tributaries of the River Till that are only discernable by tracing alder and willow trees, rusty pastures, and belts of riparian habitat across the landscape. There are localised concentrations of woodland cover between Coates and Willingham by Stow that include Normanby Gorse and New Plantation, despite the overall tendency for limited woodland cover across the area.

Character Context:

The Cottam 1 Site/Sites is mainly located within RLCT 4a: Unwooded Vales, where the land area is found to the north and south of Ingham Road and in the context of the settlements of Coates, Thorpe in the Fallows, Sturton by Stow, Bransby, Kexby, Willingham by Stow, Normanby by Stow and Stow. To the east of the Cottam 1 Site/Sites, the landscape character type RLCT 6a: Limestone Scarps and Dipslopes shares the outer 2km Study Area (with RLCT 4a) and then extends into the 5km Study Area. The ridgeline (to the east) then gives strong containment where the settlements of Fillingham, Ingham and Cammeringham mark the boundary with the B1398.

RLCT 4a: Unwooded Vales landscape character type is main host to the Cottam 1 Site/Sites within the 2km Study Area and the 5km Study Area.

RLCT 4a is considered to form part of the immediate landscape context for the Cottam 1 Site/Sites.



Receptor susceptibility to change	Value of Receptor	Sensitivity	Embedded Mitigation
In terms of forces for change, the Unwooded Vales aims to protect existing rural landscape features, in particular the restoration of hedgerows since the most widespread change has been in agricultural intensification and the change from pastoral to arable cropping that has resulted in the loss of hedges, and consequently, increase in field size. The loss of pasture is particularly evident around settlements, where grazing animals and smaller field sizes contribute to the setting and structure of several villages. Many of the rural villages have not seen widespread expansion but development pressures continue with the demand for housing, commerce and industry creating visual intrusion and extending the urban fringe. For development associated with the rural villages, specific mechanisms include Village Design Statements, and tree planting around settlement fringes to help integrate new development into the landscape. Overall , the susceptibility of the Unwooded Vales is conditioned by managing growth, ensuring development is appropriate in terms of type, scale, and location. The flat, open landscape is also a key consideration and whilst the aim is to plan new tree planting around key settlements, woodland does not form a significant component of this landscape, and in considering its open and expansive character, extensive new woodland planting would be generally inappropriate. The landscape receptor is moderately susceptible to the proposed development, and a moderate ability to accommodate the specific proposed change, because the relevant characteristics of the landscape have some ability to accommodate it without undue adverse effects, taking account of the existing character and quality of the landscape, and/or achievement of relevant planning policies and strategies.	 Scenic: The Unwooded Vales appeal to the visual senses where the roads and watercourses combine to give a subtle grain to the landscape. The interruptions at the bridge crossing provide local points of interest and the opportunity to capture views across the landscape to the higher landform fringing the Vales, Cultural: The landscape shows evidence of historic settlement with farms and nucleated willages and small hamlets such as Thorpe le Fallows and Coates. The landscape surrounding these settlements retain a deeply rural and tranquil character with farms linked by minor lanes and roads. There are Roman roads that pass across the area such as Tillbridge Lane indicating that these low-lying areas provided convenient routes through the hills and wetlands. Natural: The extensive expanses of semi-natural habitat, rivers and streams are an important landscape feature such as the River Till where the course can be observed by tracing sinuous belts of riparian habit and riverside trees, particularly within the area to the south of Ingham Road. Overall, in such a managed agricultural environment, networks of hedgerows and hedgerow trees gain significance in offering a refuge for birds and insects. Recreation and Enjoyment: The Unwooded Vales are valued for recreation which often focused on the locations where panoramic views are possible from elevated locations from rising land at the edges of the Vales. Whilst the landform of the Unwooded Vales is typically low and subdued, rising landform often provide s locations where glimpse of neightoring elevated are often sufficient to provide a sense of place and add to the recreation and enjoyment of the area. Typically, these locations coccur around Thorpe le Fallows and Coates. Local Distinctiveness. This contrasts with the lower lying areas where intact hedgerows and belts of riverside trees truncate views. Health and Wellbeing: The Unwooded Vales provide a very limited network of PRoW leading	Character: Medium landscape tolerance with some scope for change to landscape character. Enhancing the visibility of streams, dykes and other watercourses in the landscape would bring forward some positive benefits. Quality: The most widespread change has been in agricultural intensification, where the change from pastoral to arable cropping has resulted in loss of hedges, and consequently increase in field sizes. Value: The landscape shows evidence of historic settlement with farms, nucleated villages, and small hamlets such as Thorpe le Fallows and Coates, which are features value that are not highly recognised. Capacity: Features are evident, but they are locally commonplace. Some features make a minimal contribution to landscape character and scope for mitigation would therefore help to reinforce their prominence in the landscape.	Embedded Mitigation would be taken into account at the construction, operation (Year 1 and Year 15) and decommissioning stages of the Scheme. This Embedded Mitigation is also referred to as primary mitigation and would include the following measures: A 2m buffer around the proposed development will be provided between construction areas and boundary fencing. A max. 2.4m high steel palisade fence will surround all substation equipment. Additional deer fencing is to be considered outside of this boundary – to be 2.5m high. Existing hedges are to be allowed to grow out and will be managed to a height of 5m. Hedgerow trees will be encouraged to grow out with the addition of new hedgerow trees as appropriate, randomly spaced along the length of existing hedges. Lighting will be limited to downlights within substations and battery banks only and used when maintenance is required. The landscape effects with only the Embedded Mitigation taken into account equate to those effects set out for the operation stage (Year 1) and this includes secondary mitigation which will have been carried out but will have had limited physical or landscape character impact at this Embedded Mitigation stage.
		1	1
Medium (5km Study Area)	Medium (5km Study Area)	Medium	



Construction	Operation (Year 1)	Operation (Year 15)	Decommissioning
The 400kv substation (option A) is located to the	The Site lies within the Unwooded Vales LCA 4a. The	Secondary mitigation such as planting, and grass seeding would be taken into account at	A similar process to tha
northwestern extents of the Cottam 1 Site/Sites	substation will be relatively prominent in some views	operation stage (Year 15) to include the following changes to the landscape:	construction stage, but
within field G1 with one battery storage area of	across the landscape which is relatively intact in this		the Scheme being no lo
a maximum 70,000m2 contained within this	area. There are however some detracting views across	Growth of existing and proposed vegetation is assumed to be:	operational. This is an
field block.	the wider landscape including the Cottam Power		assessment of the Site
	Station, which is a major, but distant feature to several	Woodland/trees and shelterbelts: 2.5m max at Year 1, 7.5m max at Year 15.	winter but assumes
The substation will consist of electrical	views. The substation will not therefore adversely		retention of existing
infrastructure such as transformers, switchgear	affect the overall integrity of the Character Area in	New hedgerows: 0.6m at Year 1 and 3.5m at Year 15.	vegetation and builds u
and metering equipment required to facilitate	terms of its height but there will be an adverse impact		the proposed primary
the export of electricity from each site. The	over the close to mid-range views and to the Character	Existing hedgerows: 0.9m at Year 1 and 5m at Year 15.	secondary mitigation t
Substation will include office space and welfare	Area in terms of loss of almost 10ha of land which is to		had been established a
facilities and may include operational	be replaced with hardstanding and impermeable	Shrubs: 0.9m at Year 1 and 5m at Year 15.	future baseline. Effects
monitoring and maintenance equipment.	surfacing.		those arising from acti
Hardstanding and parking spaces will be		Following mitigation, at Year 15, The existing woodland locally will be augmented by	for the duration of the
provided, and a maintenance access road which	Designations lie predominantly to the west/southwest	increased vegetation cover creating both visual and ecological links across the landscape	decommissioning to in
connects to South Lane, just south of Lowfield	of both the Cottam 1 North and South Sites with	to the adjoining woodland blocks. The Cottam 1 West substation site will contain a	site traffic, noise and
Farm. In total, the area covered by the	Ancient Woodland, Local Nature Reserves and Local	relatively large area of hardstanding and structures, some of which are up to 13m in	vibration from
substation will cover approximately 26,000m2.	Wildlife Sites within the study area but having no	height.	decommissioning activ
	physical or visual impact/influence on the Site(s) other		dust generation and si
The control buildings will be a painted block	than distant views where these may exist.	Following mitigation, there will be beneficial effects across the Site as a whole generally	runoff.
building with external colours and finishes to be	Opportunities for reinforcement of the character area	in the increased level of vegetation cover locally, the linking and enhancement of existing	
confirmed prior to construction.	within the Cottam 1 Site/Sites are available.	natural features and the biodiversity benefits that this will bring, creating a stronger,	Following decommissi
		more resilient framework across the local character area. The substation area however	the land is likely to be
The substation will comprise an area of 249m x	The Site at Cottam 1 West lies outside the outer limits	will be predominantly hard standing with limited beneficial groundcover vegetation.	returned to arable
86.3m to include a 4m wide access road off	of any of the SSSI's impact risk zones locally.		production. The Site w
South Lane to the east, buffers around the		By Year 15, the Site at Cottam 1 generally will present a 'well treed' landscape in line with	however benefit from
developed area and 2.4m high steel palisade	In terms of mitigation for the two AGLV's associated	the character area aims, the existing vegetation having been allowed to grow out and	significantly enhanced
fencing. Deer fencing is to be considered	with this Site, due to their distance and varied	new trees, hedgerows and scrub having fully established and begun to mature. The	and hedgerow plantin
beyond these limits to a height of 2.5m.	relationship with the Site, it is the overall scheme of	overall scene will be relatively well vegetated, with scattered and irregularly spaced	has been carried out a
	mitigation that will reinforce the landscape character	trees, following the existing lines of both historic field boundaries and the road network	has matured to create
The height of the substation equipment will	where this has been lost or eroded in the last century	as well as local watercourses. The area to the west of the Cottam 1 West Site is relatively	much stronger and ro
vary, with low level busbars at 7m high-, and	to intensive arable farming.	well vegetated around Willingham by Stow which will help to soften many views. More	landscape, retaining, a
high-level busbars reaching a maximum height	, , , , , , , , , , , , , , , , , , ,	exposed areas to the west, south and north will benefit from the proposed mitigation.	enhancing the overall
of 13m.	There will be a much greater level of tree cover over		character and providir
	the Site(s) although this will be immature at this point.	The structures of the substation will be predominantly screened to a height of 5m by	considerable biodivers
Lighting will be in the form of downlighting to		adjacent and intervening hedgerows with hedgerow trees having reached a height of	benefits over the years
be used for maintenance and security purposes.		7.5m helping to soften views from across the wider landscape. There will however be	mitigation fields are lik
	Local PRoW are not unduly affected by the	views of the taller parts of the substation structure which reach 13m in parts. Proposed	be retained and the
Cottam 1 West A site is set to have a Battery	development although some minor roads used for	and existing trees will help to soften the views of this but will not obscure them.	potential may exist to
Energy Storage System (BESS) to one section to	recreational purposes will be impacted by the increase	Targeted tree planting, aimed at mitigating the most sensitive views will have matured	grass margins to main
the north of the proposed substation and within	in traffic levels, noise and disruption. Several short	and achieved this goal with further softening in the longer term possible.	some varied land use
field G1. Impermeable surfacing around the	PRoW routes exist to the west of Willingham by Stow		high level of biodivers
BESS with drainage to a bunded lagoon of	but views from these routes are predominantly	Following mitigation, although the Site is able accommodate this change, there will be	the local area.
approximately 410m3 will store water required	obscured by the built form and existing vegetation.	moderate adverse effects on the land use, views from local PRoW and other minor roads	
in the event of a fire.		used for recreation. The structures will form a relatively dominant feature within some	
	To the north of field C26 at the south of the Cottam 1	views from local area and some wider areas having an adverse effect on the Character	
Batteries will be housed within containers. The	North Site, a footpath, Stow/83/1, runs through the	Area as a whole. Local AGLVs are unlikely to be adversely but views may exist from the	
maximum dimensions of individual modular	Site adjacent to an area proposed for bird mitigation.	higher land to the east. No Heritage Assets are likely to be unduly affected by the change	
battery storage container and interconnector	Views towards the substation are predominantly	in the view, any potential views causing less than substantial harm to their settings.	
within a BESS compound is 2m by 3m footprint	obscured by adjacent intervening vegetation and to a	Local and National designations will not be adversely affected. Communication links	
and up to 3.5m in height. The maximum	great degree by the woodland at Normanby Gorse.	locally will become busier, the Fillingham Road and South Lane particularly being	



 dimensions of modular battery storage and		affected as well as routes out from these roads to the east and west. The
interconnector containing strings within a BESS compound is 24m by 3m footprint and up to 3.5m in height. Each BESS will require heating,	The proposed development will have little effect on local industry and commerce although the introduction of the solar farm will provide additional	Willingham by Stow will be adversely affected by the views out towards the with some properties and routes having glimpsed views across the landsc relatively well vegetated road network in this area will however help to sof
ventilation and air conditioning or liquid cooling system to ensure the efficiency of the batteries.	traffic to the roads and lanes locally, particularly around the substation.	reduce any views.
In terms of battery storage, the area covered by hardstanding totals some 700,000m ² with the overall substation and battery storage area approaching 10 ha in total. This will have a Major Adverse effect on land use, landscape	The settlements locally will be protected through the proposed mitigation in and around the Site(s), with strong boundary vegetation screening views into the Site and enhancing the settlement settings where these abut the proposed development. Where views	In terms of battery storage, the area covered by hardstanding totals some with the overall substation and battery storage area approaching 10 ha in have a Major Adverse effect on land use, landscape character and the natu over this area. There will be beneficial effects in the increased level of vegetation cover lo
character and the natural assets over this area as well as communication links with large quantities of materials required for the hardstanding and impermeable surfacing.	cannot be screened, these will be softened by proposed tree planting. The development will have no adverse effects on the	linking and enhancement of existing natural features and the biodiversity this will bring, creating a stronger, more resilient framework across the loc area of the 4a Unwooded Vales. Overall, at Year 15, the effect of the devel substation will be reduced to Moderate Adverse through the proposed tar
Integrated conversion units are laid out across the Sites to include transformers, inverters and swtich gear. These are to be a maximum of 15m x 5m x 3.5m high and will therefore be seen	larger settlements within the area due to its distance from these features. There is potential that a small number of farm buildings will be lost/reutilised due to the change in	mitigation.
within the context of the panelled areas.	the arable production within the Site(s).	
Properties potentially affected: N: Slate House Farm, South View, Magin Moor Farm, Uphill Farm directly north but bungalow on opp side of Fillingham Lane, Carisbroke Farm2 storey), The Cottage (2 storey) W: Woods Farm E: Lowfields Farm, Moor Farm	This generally flat, low-lying Site at the Cottam 1 Site is part of the shallow broad river valleys locally and would benefit from the protection of minor waterways associated with the Trent and Till rivers as well as the man-made diches and dykes. Topography, soils and drainage will be affected by the high level of impermeable hardstanding around the substation and battery storage site although this will be mitigated by the proposed water storage lagoon.	
Activities during site preparation / enabling works, include the importing of large quantities of hard materials, construction, and commissioning with effects such as construction traffic, noise and vibration from construction activities, dust generation, site runoff, mud on roads, and the visual intrusion of plant and machinery on site.	Within the Cottam 1 Site, the following secondary mitigation will be implemented at the operation stage (Year 1) to enhance the regional landscape character: The existing hedgerow to the north of the Site will help to mitigate views from properties and users of Willingham Lane. A new hedgerow is proposed to the northeastern boundary of fields G2 and G3 with	
During the latter part of the construction stage, views would become available of the elevated activities above the existing hedgerows. Part of this activity would be temporary and short term whilst the structure of the substation would remain for the duration of the development and would be long term.	development offset 100m from this lane and the adjacent properties of Lowfields Farm and Moor Farm. A shelterbelt is proposed to the south of field G3 running east west between fields G3 and G4 to the south and along the existing watercourse. A 15m grassland buffer sets this shelterbelt away from the watercourse. A further shelterbelt is proposed to the	
Overall, the construction of the substation and battery area would amount to considerable disruption and traffic during this phase and would have Major Adverse effects on the communication links locally and the Character Area.	south of field G1 directly adjacent to the substation and battery storage areas. Existing vegetation to the north, northeast and east of field G4 will be enhanced and allowed to grow out, with new hedgerow trees added to further soften views.	

The settlement of	
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rsity benefits that	
ne local character	
development of the	
d targeted	



	_		
		An enhanced hedgerow to the western boundary of the Site along Stonepit Lane (a dead-end lane) will augment the existing vegetation and small field pattern boundary planting which exists to the west of this lane. A new hedgerow west of field G4 is proposed, adjacent to exiting vegetation and a new hedgerow to the south is proposed where none currently exists towards the eastern section of this boundary. Small field patterns along Fillingham Lane to the north help to mitigate views from this road. Overall, this increases in the vegetative cover locally with shelterbelts, new and enhanced hedgerows with hedgerow trees will help to mitigate views into the Site. Overall, new and enhanced planting will help to link habitats and strengthen the overall character locally. Important opportunities to bolster the local vegetation cover, buffering and connecting existing fragmented vegetation, aims to create a more resilient and biodiverse landscape for the longer term. Although new vegetation will be immature, existing hedgerows will have begun to grow out at Year 1. Overall, at Year 1, the effects of the proposed mitigation will not be felt due to the scale and density of the hard standing areas and the built form which will dominate the local area. The effects overall will be Major Adverse.	
5km Study A	rea:		
JKIII Study A		Low	Low
Magnitude	Very Low	Low	Low
Level of Effect	Adverse & Short Term	Adverse & Long Term	Adverse & Long Term
C ¹ 1 <i>C</i> ¹			Minere Net Circuit Grant

	Significance	Negligible Not Significant	
	of Effect		
Substation Site Cottam 3a: Lan		te Cottam 3a: Land Use	

Substation Si	ubstation Site Cottam 3a: Land Use		
Magnitude	High	High	Medium
0			

Minor Not Significant

Minor Not Significant

Very Low
Very Low
Very Low
Very Low
Very Low Neutral & Short Term
Neutral & Short Term
Neutral & Short Term Negligible Not
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Neutral & Short Term Negligible Not Significant
Neutral & Short Term Negligible Not Significant





Level of	Adverse & Short Term	Adverse & Long Term	Adverse & Long Term	Neutral & Short Term
Effect				
Significance	Moderate-Major Significant	Moderate-Major Significant	Moderate Significant	Minor Not Significant
of Effect				
Substation Site Cottom 3a: Topography and Watercourses				
	High	High	Medium	Low
Magnitude				
Level of	Adverse & Short Term	Adverse & Long Term	Adverse & Long Term	Neutral & Short Term
Effect				
Significance	Moderate-Major Significant	Moderate-Major Significant	Moderate Significant	Minor Not Significant
of Effect				



In-Combination Effects [Cumulative Sites]	Cumulative Effects [Cumulative Developme
<u>In Summary</u> The In-combination effects upon LCA – 4a of the Cottam 1 Substation-West A and Cumulative Sites is Moderate at year 1 of operation and Minor at year 15 with mitigation. This is due to the limited impact upon the LCA as a result of the nature of the Scheme, the segregated nature of the Sites; together with the existing landscape character associated with the fabric of the landscape of the Sites and Study Area. Embedded and Secondary Mitigation proposed would screen the panels and therefore the effects upon landscape character are reduced in combination with the Substation.	<u>In Summary</u> The Cumulative Effects upon LCA – 4a of the Scheme (inc of operation and Negligible at year 15 with mitigation. Thi of the Scheme, together with the existing landscape chara Study Area. Embedded and Secondary Mitigation propose character are reduced in combination with the Substation
<i>Fabric of the Landscape</i> There would not be the removal of or changes in individual elements or features of the landscape within	<i><u>Fabric of the Landscape</u></i> There would not be the removal of or changes in individu
the character area. There would be the introduction of new elements and features comprising the solar panel areas and the substation area within the character area.	There would be the introduction of new elements and fea within the character area
Aesthetic Aspects of the Landscape Refer to Figure 8.15.1.1 [C6.4.8.15.1.1] which shows that with the Cottam 1 Site/Sites, cumulative visibility with the Cottam 2 Site and Cottam 3a and 3b Sites would not be experienced across the majority of the 2km study area. This is due to the distance, the intervening woodlands, hedgerows, and tree cover between the Site/Sites. The intervening settlements and built form would also curtail cumulative visibility between these Site/Sites.	Aesthetic Aspects of the Landscape Refer to Figure 8.15.2.1 [C6.4.8.15.2.1] which shows that we developments would not be experienced across the majo intervening woodlands, hedgerows, and tree cover betwe also curtail cumulative visibility.
There are very minor patches of cumulative intervisibility which may be a focus of likely significant effects, between the Cottam 1 Site/Sites and Cottam 2 Site, located to the:	Site/Sites and Gate Burton Energy Park, Tillbridge Solar ar further detail within the following figures:
 east of Upton and to the south of Sturgate Airfield south of Kexby in the locality of Valley Farm east of Willingham by Stow in the locality of the residential property known as Carisbrooke east of Stow, just to the east of the property known as Tam Howes; and 	Figure 8.15.2.6 Cottam 1, 2, 3a and 3b Gate Burton Cumu Figure 8.15.2.8 Cottam 1, 2, 3a and 3b Tillbridge Solar Cum Figure 8.15.2.9 Cottam 1, 2, 3a and 3b West Burton Cumu
 west of Sturton by Stow, extending from West Syke Lane as far as Normanby by Stow. There are very minor patches of cumulative intervisibility between the Cottam 1 Site/Sites, Cottam 2 Site, 	<u>Overall Landscape Character of the Unwooded Vales</u> Overall, the character of the Unwooded Vales is shaped b sense of rural tranguility. In contrast, the low levels of wo
 and Cottam 3a Site, located to the: northeast of Sturton by Stow, extending between Tillbridge Road and Ingham Road. 	comprising an arable land use within a scattered pattern more strategic road network north to south. These relevant
 There are very minor patches of cumulative intervisibility between the Cottam 1 Site/Sites, Cottam 2 Site, and Cottam 3b Site, located to the: northeast of Sturton by Stow, extending between School Lane Farm and Ingham Road. 	accommodate change without undue adverse effects. The would not alter the overall character of the landscape wit
Users of linear routes, especially footpaths or other rights of way, or transport routes, may potentially experience the aesthetic aspects of the cumulative sites revealed in succession as a series of sequential views. For further details refer to the following detailed visual receptor sheets:	
Appendix 8.3.2.2 Individual Viewpoint Receptor Sheets [C6.3.8.3.2.2] Appendix 8.3.2.3 Individual Viewpoint Receptor Sheets [C6.3.8.3.2.3] Appendix 8.3.2.4 Individual Viewpoint Receptor Sheets [C6.3.8.3.2.4]	
Appendix 8.3.3.2 Individual Residential Receptor Sheets [C6.3.8.3.3.2] Appendix 8.3.3.3 Individual Residential Receptor Sheets [C6.3.8.3.3.3]	
Appendix 8.3.4.2 Individual Transport Receptor Sheets [C6.3.8.3.4.2] Appendix 8.3.4.3 Individual Transport Receptor Sheets [C6.3.8.3.4.3]	

ns) and Cumulative Developments is Minor at year 1 mited impact upon the LCA as a result of the nature with the fabric of the landscape of the Sites and the panels and therefore the effects upon landscape

eatures of the landscape within the character area.

ig the solar panel areas and the substation area

Site/Sites, cumulative visibility with the cumulative tudy area. This is due to the distance, the . The intervening settlements and built form would

likely significant effects, between the Cotton 1 Solar Park. This cumulative visibility is set out in

nents Augmented ZTV [C6.4.8.15.2.6] pments Augmented ZTV [C6.4.8.15.2.8] nents Augmented ZTV [C6.3.4.15.2.9]

icultural presence, with wide areas retaining a strong eate a relatively open and expansive landscape nked by a series of minor roads east to west and a cs of the landscape have some ability to of cumulative visibility for the Cottam 1 Site/Sites ed Vales Character Area.



	Appendix 8.3.5.2 Individual PRoW Receptor Sheets [C6.3.8.3.5.2] Appendix 8.3.5.3 Individual PRoW Receptor Sheets [C6.3.8.3.4.3]	
	Overall Landscape Character of the Unwooded Vales Overall, the character of the Unwooded Vales is shaped by the strong agricultural presence, with wide areas retaining a strong sense of rural tranquility. In contrast, the low levels of woodland cover create a relatively open and expansive landscape comprising an arable land use within a scattered pattern of settlement, linked by a series of minor roads east to west and a more strategic road network north to south. These relevant characteristics of the landscape have some ability to accommodate change without undue adverse effects. The minor patches of cumulative visibility for the Cottam 1 Site/Sites would not alter the overall character of the landscape within the Unwooded Vales Character Area. Add justification text	
	Construction: Medium	Construction: Low
	Operation (Year 1): Medium	Operation (Year 1): Low
2	Operation (Vear 1): with only Embedded Mitigation: Medium	Operation (Vear 1): with only Embedded Mitigation: Low

			Construction. Low
		Operation (Year 1): Medium	Operation (Year 1): Low
	Magnitude	Operation (Year 1): with only Embedded Mitigation: Medium	Operation (Year 1): with only Embedded Mitigation: Low
	_	Operation (Year 15): Low	Operation (Year 15): Very Low
		Decommissioning: Low	Decommissioning: Very Low
		Construction: Adverse & Short Term	Construction: Adverse & Short Term
	Type of	Operation (Year 1): Adverse & Long Term	Operation (Year 1): Adverse & Long Term
		Operation (Year 1): with only Embedded Mitigation: Adverse & Long Term	Operation (Year 1): with only Embedded Mitigation: Adverse & Long Ter
	Effect	Operation (Year 15): Neutral & Long Term	Operation (Year 15): Neutral & Long Term
		Decommissioning: Neutral & Short Term	Decommissioning: Neutral & Short Term
		Construction: Moderate Significant	Construction: Minor Not Significant
	Significance	Operation (Year 1): Moderate Significant	Operation (Year 1): Minor Not Significant
	•	Operation (Year 1): with only Embedded Mitigation: Moderate Significant	Operation (Year 1): with only Embedded Mitigation: Minor
	of Effect	Operation (Year 15): Minor Not Significant	Operation (Year 15): Negligible Not Significant
		Decommissioning: Minor Not Significant	Decommissioning: Negligible Not Significant

Term		



Landscape Receptor – Regional Scale Landscape Character – 4a: Unwooded Vales (Cottam 1 Substation Site – West B)

Receptor Baseline:

Within the Cottam 1 Site/Sites, at a regional scale, landscape character is assessed within the East Midlands Regional Landscape Character Assessment as forming part of RLCT Profile: 4a Unwooded Vales, which is shown on Figure 8.5 [C6.4.8.5]. Unwooded Vales extends across the majority of the 2km and 5km Study Area apart from the eastern most edge where it shares a boundary with RLCT Profile: 6a Limestone Scarps and Dipslopes. The western extent of the 5km Study Area is also host to a small part of RLCT Profile 3a: Floodplain Valleys and RLCT Profile: 4b Wooded Vales.

The sites within Cottam 1 can be sub-divided into two distinct land areas:

- Cottam 1 North
- Cottam 1 South •

Key Features:

Cottam 1 North:

This refers to the area located to the north of Ingham Road and to the west of this area there are the settlements of Kexby, Willingham by Stow, Normanby by Stow and Stow, which are located to each side of the B1241 (Sturton Road and Stow Road). To the centre of this area is the small hamlet of Coates and to the east there are the settlements of Fillingham and Ingham, which are located to each side of the B1398. The area is bisected by a secondary road, known as Fillingham Lane which then runs into Willingham Road, and which links the settlements of Willingham by Stow to Fillingham. The landscape mainly comprises productive arable and pastoral farmland, but there are areas of cereal and vegetable cropping to the east of Willingham by Stow around Stone Pit Lane where hedgerow removal has created some very large fields under single crop. Most of the Unwooded Vales retain a deeply rural and tranquil character, with farms and small nucleated villages located throughout areas of productive farmland, linked by narrow winding lanes and roads. Watercourses are often bordered by a narrow alluvial floodplain that wind through the landscape along shallow valleys, appearing little more than gentle folds in the landscape. This pattern of drainage is particularly evident between the settlement of Coates and Normanby by Stow and Willingham by Stow in the west of the Cottam 1 Site/Sites. This area boasts an extensive network of field drains including tributaries of the River Till that are only discernable by tracing alder and willow trees, rusty pastures, and belts of riparian habitat across the landscape. There are localised concentrations of woodland cover between Coates and Willingham by Stow that include Normanby Gorse and New Plantation, despite the overall tendency for limited woodland cover across the area.

Character Context:

The Cottam 1 Site/Sites is mainly located within RLCT 4a: Unwooded Vales, where the land area is found to the north and south of Ingham Road and in the context of the settlements of Coates, Thorpe in the Fallows, Sturton by Stow, Bransby, Kexby, Willingham by Stow, Normanby by Stow and Stow. To the east of the Cottam 1 Site/Sites, the landscape character type RLCT 6a: Limestone Scarps and Dipslopes shares the outer 2km Study Area (with RLCT 4a) and then extends into the 5km Study Area. The ridgeline (to the east) then gives strong containment where the settlements of Fillingham, Ingham and Cammeringham mark the boundary with the B1398.

RLCT 4a: Unwooded Vales landscape character type is main host to the Cottam 1 Site/Sites within the 2km Study Area and the 5km Study Area.

RLCT 4a is considered to form part of the immediate landscape context for the Cottam 1 Site/Sites.



Receptor susceptibility to change	Value of Receptor	Sensitivity	Embedded Mitigation
In terms of forces for change, the Unwooded	Scenic: The Unwooded Vales appeal to the visual senses where the roads and watercourses	<u>Character:</u> Medium landscape	Embedded Mitigation would be taken into
Vales aims to protect existing rural landscape	combine to give a subtle grain to the landscape. The interruptions at the bridge crossing	tolerance with some scope for	account at the construction, operation
features, in particular the restoration of	provide local points of interest and the opportunity to capture views across the landscape to	change to landscape character.	(Year 1 and Year 15) and decommissioning
hedgerows since the most widespread change	the higher landform fringing the Vales,	Enhancing the visibility of streams,	stages of the Scheme. This Embedded
has been in agricultural intensification and the		dykes and other watercourses in	Mitigation is also referred to as primary
change from pastoral to arable cropping that	<u><i>Cultural:</i></u> The landscape shows evidence of historic settlement with farms and nucleated	the landscape would bring forward	mitigation and would include the following
has resulted in the loss of hedges, and	villages and small hamlets such as Thorpe le Fallows and Coates. The landscape surrounding	some positive benefits.	measures:
consequently, increase in field size. The loss of	these settlements retain a deeply rural and tranquil character with farms linked by minor		
pasture is particularly evident around	lanes and roads. There are Roman roads that pass across the area such as Tillbridge Lane	<u>Quality:</u> The most widespread	
settlements, where grazing animals and	indicating that these low-lying areas provided convenient routes through the hills and	change has been in agricultural	
smaller field sizes contribute to the setting and	wetlands.	intensification, where the change	A 2m buffer around the proposed developmer
structure of several villages. Many of the rural		from pastoral to arable cropping	will be provided between construction areas and boundary fencing.
villages have not seen widespread expansion	<u>Natural:</u> The extensive expanses of semi-natural habitat, rivers and streams are an important	has resulted in loss of hedges, and	and boundary rencing.
but development pressures continue with the	landscape feature such as the River Till where the course can be observed by tracing sinuous	consequently increase in field sizes.	A max. 2.4m high steel palisade fence will
demand for housing, commerce and industry	belts of riparian habit and riverside trees, particularly within the area to the south of Ingham		surround all substation equipment.
creating visual intrusion and extending the	Road. Overall, in such a managed agricultural environment, networks of hedgerows and	Value: The landscape shows	
urban fringe. For development associated with	hedgerow trees gain significance in offering a refuge for birds and insects.	evidence of historic settlement with	Additional deer fencing is to be considered
the rural villages, specific mechanisms include		farms, nucleated villages, and small	outside of this boundary – to be 2.5m high.
Village Design Statements, and tree planting	<u>Recreation and Enjoyment:</u> The Unwooded Vales are valued for recreation which often	hamlets such as Thorpe le Fallows	
around settlement fringes to help integrate	focused on the locations where panoramic views are possible from elevated locations from	and Coates, which are features	Existing hedges are to be allowed to grow out
new development into the landscape.	rising land at the edges of the Vales. Whilst the landform of the Unwooded Vales is typically	value that are not highly	and will be managed to a height of 5m. Hedgerow trees will be encouraged to grow ou
• • • • • • • • • • • • • • • • • • •	low and subdued, rising landform often provides locations where glimpse of neighboring	recognised.	with the addition of new hedgerow trees as
Overall, the susceptibility of the Unwooded	elevated are often sufficient to provide a sense of place and add to the recreation and	Canacity Fastures are evident but	appropriate, randomly spaced along the length
Vales is conditioned by managing growth,	enjoyment of the area. Typically, these locations occur around Thorpe le Fallows and Coates.	<u>Capacity:</u> Features are evident, but	of existing hedges.
ensuring development is appropriate in terms	Local Distinctiveness and Sense of Place: The landscape has a 'strong sense of place' with major	they are locally commonplace. Some features make a minimal	
of type, scale, and location. The flat, open landscape is also a key consideration and		contribution to landscape character	Lighting will be limited to downlights within
1 3	landform features flanking the lower lying areas creating broad scale visual containment	and scope for mitigation would	substations and battery banks only and used
whilst the aim is to plan new tree planting around key settlements, woodland does not	along the ridgeline to the east at Cammeringham, Ingham and Fillingham. Wide panoramic views are also possible from the low hills and ridges that form watersheds between	therefore help to reinforce their	when maintenance is required.
form a significant component of this	watercourses. This contrasts with the lower lying areas where intact hedgerows and belts of	prominence in the landscape.	The landscape effects with only the
landscape, and in considering its open and	riverside trees truncate views.	prominence in the landscape.	
expansive character, extensive new woodland			Embedded Mitigation taken into account equate to those effects set out for the
planting would be generally inappropriate.	<u>Health and Wellbeing</u> : The Unwooded Vales provide a very limited network of PRoW leading		operation stage (Year 1) and this includes
	to the dependence on the more direct arterial routes that run east to west across the area		secondary mitigation which will have been
The landscape receptor is moderately	linked by a series of narrow straight lanes.		carried out but will have had limited
susceptible to the proposed development, and	inited by a series of harrow straight lanes.		physical or landscape character impact at
a moderate ability to accommodate the	Important Spatial Function: The landscape benefits from high levels of visual containment		this Embedded Mitigation stage.
specific proposed change, because the	despite the low levels of woodland cover. Instead, the local landform, hedgerows and shelter		this Embedded Millgallon Slage.
relevant characteristics of the landscape have	belts create visual containment and give the Vales Landscape an intimate character.		
some ability to accommodate it without undue	sette treate troat containment and give the vales Euroscope an intimate character.		
adverse effects, taking account of the existing	Overall , the value of the Unwooded Vales is shaped by the strong agricultural character,		
character and quality of the landscape, and/or	with wide areas retaining a strong sense of rural tranquility. In contrast, the low levels of		
achievement of relevant planning policies and	woodland cover create a relatively open and expansive landscape. In recent decades, the		
strategies.	productivity of the land has stimulated widespread change in the rural landscape.		
Medium (5km Study Area)	Medium (5km Study Area)	Medium	
Medium (Substation Site)	Medium (Substation Site)	Medium	



Construction	Operation (Year 1)	Operation (Year 15)	Decommissionin
The 400kv substation (option B with additional	The Site lies within the Unwooded Vales LCA 4a. The substation will be	Secondary mitigation such as planting and grass seeding	A similar process to t
battery storage areas - BESS) is located to the	relatively prominent in some views across the landscape which is relatively	would be taken into account at operation stage (Year 15) to	construction stage, bu
north western extents of the Cottam 1 Site/Sites	intact in this area. There are however some detracting views across the	include the following changes to the landscape:	Scheme being no long
within fields G1, G2 and G3 with four areas of	wider landscape including the Cottam Power Station, which is a major, but		operational. This is ar
battery storage area totalling 152,000m ²	distant feature to a number of views. The substation will not therefore	Growth of existing and proposed vegetation is assumed to	of the Site in winter b
contained within these field blocks.	adversely affect the overall integrity of the Character Area in terms of its	be:	retention of existing v
	height but there will be an adverse impact over the close to mid-range		builds upon the prop
The substation will consist of electrical	views and to the Character Area in terms of loss of almost 10ha of land	Woodland/trees and shelterbelts: 2.5m max at Year 1, 7.5m	and secondary mitiga
infrastructure such as transformers, switchgear	which is to be replaced with hardstanding and impermeable surfacing.	max at Year 15.	been established as tl
and metering equipment required to facilitate			baseline. Effects are t
the export of electricity from each site. The	Designations lie predominantly to the west/southwest of both Cottam 1	New hedgerows: 0.6m at Year 1 and 3.5m at Year 15.	from activities for the
Substation will include office space and welfare	North and South Sites with Ancient Woodland, Local Nature Reserves and		the decommissioning
facilities and may include operational	Local Wildlife Sites within the study area but having no physical or visual	Existing hedgerows: 0.9m at Year 1 and 5m at Year 15.	site traffic, noise and v
monitoring and maintenance equipment.	impact/influence on the Site(s) other than distant views where these may		from decommissionin
Hardstanding and parking spaces will be	exist. Opportunities for reinforcement of the character area within the	Shrubs: 0.9m at Year 1 and 5m at Year 15.	dust generation and s
provided and a maintenance access road which	Cottam 1 Site/Sites are available.		
connects to South Lane, just south of Lowfield		Following mitigation, at Year 15, The existing woodland locally	Following decommissi
Farm. In total, the area covered by the	The Site at Cottam 1 West lies outside the outer limits of any of the SSSI's	will be augmented by increased vegetation cover creating	land is likely to be retu
substation will cover approximately 26,000m ² .	impact risk zones locally.	both visual and ecological links across the landscape to the	arable production. Th
		adjoining woodland blocks. The Cottam 1 West substation	however benefit from
The control buildings will be a painted block	In terms of mitigation for the two AGLV's associated with this Site, due to	site will contain a relatively large area of hardstanding and	significantly enhanced
building with external colours and finishes to be	their distance and varied relationship with the Site, it is the overall scheme	structures, some of which are up to 13m in height.	hedgerow planting the
confirmed prior to construction.	of mitigation that will reinforce the landscape character where this has		carried out and has m
The substation will comprise on error of 240m v	been lost or eroded in the last century to intensive arable farming.	Following mitigation, there will be beneficial effects across	create a much stronge
The substation will comprise an area of 249m x 86.3m to include a 4m wide access road off	There will be a much greater level of tree cover over the Site(s) although	the Site as a whole generally in the increased level of	landscape, retaining a the overall character a
South Lane to the east, buffers around the	this will be immature at this point.	vegetation cover locally, the linking and enhancement of existing natural features and the biodiversity benefits that	considerable biodiver
developed area and 2.4m high steel palisade		this will bring, creating a stronger, more resilient framework	over the years. Bird m
fencing. Deer fencing is to be considered		across the local character area. The substation area however	fields are likely to be r
beyond these limits to a height of 2.5m.	Local PRoW are not unduly affected by the development although some	will be predominantly hard standing with limited beneficial	the potential may exis
	minor roads used for recreational purposes will be impacted by the	groundcover vegetation.	grass margins to main
The height of the substation equipment will	increase in traffic levels, noise and disruption. A number of short PRoW		varied land use and a
vary, with low level busbars at 7m high, and	routes exist to the west of Willingham by Stow but views from these routes	By Year 15, the Site at Cottam 1 generally will present a 'well	biodiversity in the loca
high level busbars reaching a maximum height	are predominantly obscured by the built form and existing vegetation.	treed' landscape in line with the character area aims, the	
of 13m.		existing vegetation having been allowed to grow out and new	
	To the north of field C26 at the south of the Cottam 1 North Site, a	trees, hedgerows and scrub having fully established and	
Lighting will be in the form of downlighting to	footpath, Stow/83/1, runs through the Site adjacent to an area proposed	begun to mature. The overall scene will be relatively well	
be used for maintenance and security purposes.	for bird mitigation. Views towards the substation are predominantly	vegetated, with scattered and irregularly spaced trees,	
	obscured by adjacent intervening vegetation and to a great degree by the	following the existing lines of both historic field boundaries	
Cottam 1 West B site is set to have two Battery	woodland at Normanby Gorse.	and the road network as well as local watercourses. The area	
Energy Storage System (BESS) within fields G1		to the west of the Cottam 1 West Site is relatively well	
with two further storage areas either side of the	The proposed development will have little effect on local industry and	vegetated around Willingham by Stow which will help to	
access road in fields G2 and G3. Impermeable	commerce although the introduction of the solar farm will provide	soften many views. More exposed areas to the west, south	
surfacing around the BESS with drainage to a	additional traffic to the roads and lanes locally, particularly around the	and north will benefit from the proposed mitigation.	
bunded lagoon of approximately 410m3 will	substation.		
store water required in the event of a fire.		The structures of the substation will be predominantly	
	The settlements locally will be protected through the proposed mitigation	screened to a height of 5m by adjacent and intervening	
Batteries will be housed within containers. The	in and around the Site(s), with strong boundary vegetation screening views	hedgerows with hedgerow trees having reached a height of	
maximum dimensions of individual modular	into the Site and enhancing the settlement settings where these abut the	7.5m helping to soften views from across the wider	
battery storage container and interconnector	proposed development. Where views cannot be screened, these will be	landscape. There will however be views of the taller parts of	
within a BESS compound is 2m by 3m footprint	softened by proposed tree planting.	the substation structure which reach 13m in parts. Proposed	



and up to 3.5m in height. The maximum		and existing trees will help to soften the views of this but will	
dimensions of modular battery storage and	The development will have no adverse effects on the larger settlements	not obscure them. Targeted tree planting, aimed at mitigating	
interconnector containing strings within a BESS	within the area due to its distance from these features.	the most sensitive views will have matured and achieved this	
compound is 24m by 3m footprint and up to		goal with further softening in the longer term possible.	
3.5m in height. Each BESS will require heating,	There is potential that a small number of farm buildings will be		
ventilation and air conditioning or liquid cooling	lost/reutilised due to the change in the arable production within the Site(s).	Following mitigation, although the Site is able accommodate	
system to ensure the efficiency of the batteries.		this change, there will be moderate adverse effects on the	
system to ensure the encloney of the batteries.	This generally flat, low-lying Site at Cottam 1 is part of the shallow broad	land use, views from local PRoW and other minor roads used	
In terms of battery storage, the area covered by	river valleys locally and would benefit from the protection of minor	for recreation. The structures will form a relatively dominant	
hardstanding totals some 152,000m ² with the	waterways associated with the Trent and Till rivers as well as the man-	feature within some views from local area and some wider	
overall substation and battery storage area	made diches and dykes. Topography, soils and drainage will be affected by	areas having an adverse effect on the Character Area as a	
approaching 17.8 ha in total. This will have a	the high level of impermeable hardstanding around the substation and	whole. Local AGLVs are unlikely to be adversely but views	
Major Adverse effect on land use, landscape character and the natural assets over this area	battery storage site although this will be mitigated by the proposed water	may exist from the higher land to the east. No Heritage	
	storage lagoon.	Assets are likely to be unduly affected by the change in the	
as well as communication links with large		view, any potential views causing less than substantial harm	
quantities of materials being imported for the	Within the Cottam 1 Site/Sites, the following secondary mitigation will be	to their settings. Local and National designations will not be	
hardstanding and impermeable surfacing.	implemented at the operation stage (Year 1) to enhance the regional	adversely affected. Communication links locally will become	
	landscape character:	busier, the Fillingham Road and South Lane particularly being	
Integrated conversion units are laid out across		affected as well as routes out from these roads to the east	
the Sites to include transformers, inverters and	The existing hedgerow to the north of the Site will help to mitigate views	and west. The settlement of Willingham by Stow will be	
switch gear. These are to be a maximum of 15m	from properties and users of Willingham Lane. A new hedgerow is	adversely affected by the views out towards the substation	
x 5m x 3.5m high and will therefore be seen	proposed to the northeastern boundary of fields G2 and G3 with	with some properties and routes having glimpsed views	
within the context of the panelled areas.	development offset 100m from this lane and the adjacent properties of	across the landscape. The relatively well vegetated road	
	Lowfields Farm and Moor Farm.	network in this area will however help to soften and reduce	
Properties potentially affected: N: Slate House		any views.	
Farm, South View, Magin Moor Farm, Uphill	A shelterbelt is proposed to the south of field G3 running east west		
Farm directly north but bungalow on opp side	between fields G3 and G4 to the south and along the existing watercourse.	In terms of battery storage, the area covered by hardstanding	
of Fillingham Lane, Carisbroke Farm (2 storey),	A 15m grassland buffer sets this shelterbelt away from the watercourse. A	totals some 152,000 with the overall substation and battery	
The Cottage (2 storey)	further shelterbelt is proposed to the south of field G1 directly adjacent to	storage area approaching 17.8 ha in total. This will have a	
W: Woods Farm	the substation and battery storage areas.	Major Adverse effect on land use, landscape character and	
E: Lowfields Farm, Moor Farm		the natural assets over this area.	
E. Lowields Farin, Moor Farin	Existing vegetation to the north, northeast and east of field G4 will be		
	enhanced and allowed to grow out, with new hedgerow trees added to	There will be beneficial effects in the increased level of	
	further soften views.	vegetation cover locally, the linking and enhancement of	
Activities during site preparation / enabling		existing natural features and the biodiversity benefits that	
works, include the importing of large quantities	An enhanced hedgerow to the western boundary of the Site along Stonepit	this will bring, creating a stronger, more resilient framework	
of hard materials, construction, and	Lane (a dead-end lane) will augment the existing vegetation and small field	across the local character area of the 4a Unwooded Vales.	
commissioning with effects such as construction	pattern boundary planting which exists to the west of this lane.	Overall, at Year 15, the effect of the development of the	
traffic, noise and vibration from construction		substation will be reduced to Moderate Adverse through the	
activities, dust generation, site runoff, mud on	A new hedgerow west of field G4 is proposed, adjacent to exiting	proposed targeted mitigation.	
roads, and the visual intrusion of plant and	vegetation and a new hedgerow to the south is proposed where none		
machinery on site.	currently exists towards the eastern section of this boundary.		
During the latter part of the construction stage,	Small field patterns along Fillingham Lane to the north help to mitigate		
views would become available of the elevated	views from this road.		
activities above the existing hedgerows. Part of			
this activity would be temporary and short term	Overall, this increases in the vegetative cover locally with shelterbelts, new		
whilst the structure of the substation would	and enhanced hedgerows with hedgerow trees will help to mitigate views		
remain for the duration of the development and	into the Site.		
would be long term.			
	Overall, new and enhanced planting will help to link habitats and		
Overall, the construction of the substation and	strengthen the overall character locally. Important opportunities to bolster		
battery area would amount to considerable	the local vegetation cover, buffering and connecting existing fragmented		
disruption and traffic during this phase and	vegetation, aims to create a more resilient and biodiverse landscape for		
would have Major Adverse effects on the	the longer term.		
communication links locally and the Character			
Area.		1	



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		Although new vegetation will be immature, existing hedgerows will have begun to grow out at Year 1. Overall, at Year 1, the effects of the proposed mitigation will not be felt due to the scale and density of the hard standing areas and the built form which will dominate the local area. The effects overall will be Major Adverse.		
5km Study A	rea:			
Magnitude	Very Low	Low	Low	Very Low
Level of Effect	Adverse & Short Term	Adverse & Long Term	Adverse & Long Term	Neutral & Short Term
Significance of Effect	Negligible Not Significant	Minor Not Significant	Minor Not Significant	Negligible Not Significant
Substation S	ite Option B: Land Use	•	·	
Magnitude	High	High	Medium	Low
Level of Effect	Adverse & Short Term	Adverse & Long Term	Adverse & Long Term	Neutral & Short Term
Significance of Effect	Moderate-Major Significant	Moderate-Major Significant	Moderate Significant	Minor Not Significant
Substation S	ite Option B: Topography and Wat	tercourses		
Magnitude	High	High	Medium	Low
Level of Effect	Adverse & Short Term	Adverse & Long Term	Adverse & Long Term	Neutral & Short Term
Significance of Effect	Moderate-Major Significant	Moderate-Major Significant	Moderate Significant	Minor Not Significant

Very Low



he In-combination effects upon LCA - 4a of the Cottam 1 Substation West B and Cumulative Sites is T foderate at year 1 of operation and Minor at year 15 with mitigation. This is due to the limited impact o pon the LCA as a result of the nature of the Scheme, the segregated nature of the Sites; together with o pen the LCA as a result of the nature associated with the fabric of the landscape of the Sites; and Study Area. o mbedded and Secondary Mitigation proposed would screen the panels and therefore the effects upon od indicate at eac. fm T abric of the Landscape fm T here would not be the removal of or changes in individual elements or features of the landscape within T nee existing and scape control of new elements and features comprising the solar panel areas and the ubstation area within the character area. M <i>esthetic Aspects of the Landscape</i> fm T effects between the Site/Sites. fm R abjointy of the 2km study area. This is due to the distance, the intervening woodlands, hedgerows, and therefore the cottam 1 Site/Sites, cumulative isibility with the Cottam 2 Site and Cottam 3 and 3b Sites would not be experimed across the anajority of the 2km study area. This is due to the distance, the intervening woodlands, hedgerows, and therefore the cottam 1 Site/Sites and Cottam 2 Site, located to the: e e east of Upton and to the south of Sturgate Ai	
pon the LCA as a result of the nature of the Scheme, the segregated nature of the Sites; together with the existing landscape character associated with the fabric of the landscape of the Sites and Study Area. Simbedded and Secondary Witigation proposed would screen the panels and therefore the effects upon indscape character are reduced in combination with the Substation. <i>abric of the Landscape</i> here would not be the removal of or changes in individual elements or features of the landscape within the character area. <i>A</i> <i>eta character area.</i> <i>A</i> <i>eta character area.</i> <i>eta character area.</i> <i>eta character area.</i> <i>esthetic Aspects of the Landscape</i> <i>eff</i> to Figure 8.15.1.1 [C6.4.8.15.1.1] which shows that with the Cottam 1 Site/Sites, cumulative is sibility with the Cottam 2 Site and Cottam 3 and 3b Sites would not be experienced across the algority of the 2km study area. This is due to the distance, the intervening woodlands, hedgerows, and <i>ee cover between the Site/Sites.</i> The intervening settlements and built form would also curtail umulative visibility between these Site/Sites and Cottam 2 Site, located to the: <i>e</i> east of Upton and to the south of Sturgate Airfield <i>s</i> south of Kexby in the locality of the residential property known as Carisbrooke <i>e</i> east of Sturton by Stow, extending from West Syke Lane as far as Normanby by Stow. <i>west of Sturton by Stow, extending from West Syke Lane as far as Normanby by Stow.</i> <i>west of Sturton by Stow, extending between Tillbridge Road and Ingham Road.</i> <i>west of Sturton by Stow, extending between School Lane Farm and Ingham Road.</i> <i>west of Sturton by Stow, extending between School Lane Farm and Ingham Road.</i> <i>west of Sturton by Stow, extending between School Lane Farm and Ingham Road.</i> <i>west of Sturton by Stow, extending between School Lane Farm and Ingham Road.</i> <i>west of Sturton by Stow, extending between School Lane Farm and Ingham Road.</i> <i>west of Sturton by Stow, extending between School Lane Farm and Ingham Road.</i> <i>west of linear rout</i>	<u>In Summary</u> The Cumulative Effects upon LCA – 4a of the Scheme (inclu
 he existing landscape character associated with the fabric of the landscape of the Sites and Study Area. mbedded and Secondary Mitigation proposed would screen the panels and therefore the effects upon indscape character are reduced in combination with the Substation. <i>abric of the Landscape</i> here would not be the removal of or changes in individual elements or features of the landscape within the character area. <i>esthetic Aspects of the Landscape</i> effect to Figure 8.15.1.1 [C6.4.8.15.1.1] which shows that with the Cottam 1 Site/Sites, cumulative isibility with the Cottam 2 Site and Cottam 3a and 3b Sites would not be experienced across the ajority of the 2km study area. This is due to the distance, the intervening woodlands, hedgerows, and ec cover between the Site/Sites. The intervening settlements and built form would also curtail umulative visibility between these Site/Sites. here are very minor patches of cumulative intervisibility which may be a focus of likely significant ffects, between the Cottam 1 Site/Sites and Cottam 2 Site, located to the: east of Vultion and to the south of Sturgate Airfield south of Kexby in the locality of Valley Farm east of Sturton by Stow, extending from West Syke Lane as far as Normanby by Stow. west of Sturton by Stow, extending between Tillbridge Road and Ingham Road. northeast of Sturton by Stow, extending between School Lane Farm and Ingham Road. northeast of Sturton by Stow, extending between School Lane Farm and Ingham Road. sers of linear routes, especially footpaths or other rights of way, or transport routes, may potentially xperience the aesthetic aspects of the cumulative sites revealed in succession as a series of sequential lews. For further details refer to the following detailed visual receptor sheets: 	of operation and Negligible at year 15 with mitigation. This
baric of the Landscape F here would not be the removal of or changes in individual elements or features of the landscape within the character area. T where would be the introduction of new elements and features comprising the solar panel areas and the ubstation area within the character area. A esthetic Aspects of the Landscape E effer to Figure 8.15.1.1 [C6.4.8.15.1.1] which shows that with the Cottam 1 Site/Sites, cumulative isibility with the Cottam 2 Site and Cottam 3a and 3b Sites would not be experienced across the algority of the 2km study area. This is due to the distance, the intervening woodlands, hedgerows, and ee cover between the Site/Sites. The intervening settlements and built form would also curtail umulative visibility between thes Site/Sites. T mulative visibility between the Site/Sites and Cottam 2 Site, located to the: • east of Upton and to the south of Sturgate Airfield • south of Kexby in the locality of Valley Farm • east of Sturton by Stow, extending from West Syke Lane as far as Normanby by Stow. Site here are very minor patches of cumulative intervisibility between the Cottam 1 Site/Sites, Cottam 2, northeast of Sturton by Stow, extending between Tillbridge Road and Ingham Road. W west of Sturton by Stow, extending between School Lane Farm and Ingham Road. W where are very minor patches of cumulative intervisibility between the Cottam 1 Site/Sites, Cottam 2, northeast of Sturton by Stow, extending between School Lane Farm and Ingham Road. W <td< td=""><td>of the Scheme, together with the existing landscape charac Study Area. Embedded and Secondary Mitigation proposed character are reduced in combination with the Substation.</td></td<>	of the Scheme, together with the existing landscape charac Study Area. Embedded and Secondary Mitigation proposed character are reduced in combination with the Substation.
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 here are very minor patches of cumulative intervisibility between the Cottam 1 Site/Sites, Cottam 2, nd Cottam 3b Sites, located to the: northeast of Sturton by Stow, extending between School Lane Farm and Ingham Road. Isers of linear routes, especially footpaths or other rights of way, or transport routes, may potentially xperience the aesthetic aspects of the cumulative sites revealed in succession as a series of sequential iews. For further details refer to the following detailed visual receptor sheets: 	would not alter the overall character of the landscape withi
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ppendix 0.3.2.3 individual viewpoint Receptor Sheets [co.3.6.3.2.3]	
ppendix 8.3.2.4 Individual Viewpoint Receptor Sheets [C6.3.8.3.2.4]	
ppendix 8.3.3.2 Individual Residential Receptor Sheets [C6.3.8.3.3.2]	
ppendix 8.3.3.3 Individual Residential Receptor Sheets [C6.3.8.3.3.3]	
ppendix 8.3.4.2 Individual Transport Receptor Sheets [C6.3.8.3.4.2]	

ons) and Cumulative Developments is Minor at year 1 limited impact upon the LCA as a result of the nature with the fabric of the landscape of the Sites and the panels and therefore the effects upon landscape

features of the landscape within the character area.

ng the solar panel areas and the substation area

1 Site/Sites, cumulative visibility with the cumulative study area. This is due to the distance, the es. The intervening settlements and built form would

ely significant effects, between the Cotton 1 Site/Sites k. This cumulative visibility is set out in further detail

ments Augmented ZTV [C6.4.8.15.2.6] lopments Augmented ZTV [C6.4.8.15.2.8] oments Augmented ZTV [C6.3.4.15.2.9]

ricultural presence, with wide areas retaining a strong eate a relatively open and expansive landscape nked by a series of minor roads east to west and a ics of the landscape have some ability to of cumulative visibility for the Cottam 1 Site/Sites led Vales Character Area.



SOLAR PROJECT		
	Appendix 8.3.4.3 Individual Transport Receptor Sheets [C6.3.8.3.4.3]	
	Appendix 8.3.5.2 Individual PRoW Receptor Sheets [C6.3.8.3.5.2] Appendix 8.3.5.3 Individual PRoW Receptor Sheets [C6.3.8.3.4.3]	
	<u>Overall Landscape Character of the Unwooded Vales</u> Overall, the character of the Unwooded Vales is shaped by the strong agricultural presence, with wide areas retaining a strong sense of rural tranquility. In contrast, the low levels of woodland cover create a relatively open and expansive landscape comprising an arable land use within a scattered pattern of settlement, linked by a series of minor roads east to west and a more strategic road network north to south. These relevant characteristics of the landscape have some ability to accommodate change without undue adverse effects. The minor patches of cumulative visibility for the Cottam 1 Site/Sites would not alter the overall character of the landscape within the Unwooded Vales Character Area.	
Magnitude	Construction: Medium Operation (Year 1): Medium Operation (Year 1): with only Embedded Mitigation: Medium Operation (Year 15): Low Decommissioning: Low	Construction: Low Operation (Year 1): Low Operation (Year 1): with only Embedded Mitigation: Low Operation (Year 15): Very Low Decommissioning: Very Low
Type of Effect	Construction: Adverse & Short Term Operation (Year 1): Adverse & Long Term Operation (Year 1): with only Embedded Mitigation: Adverse & Long Term Operation (Year 15): Neutral & Long Term Decommissioning: Neutral & Short Term	Construction: Adverse & Short Term Operation (Year 1): Adverse & Long Term Operation (Year 1): with only Embedded Mitigation: Adverse & Long Terr Operation (Year 15): Neutral & Long Term Decommissioning: Neutral & Short Term
Significance of Effect	Construction: Moderate Significant Operation (Year 1): Moderate Significant Operation (Year 1): with only Embedded Mitigation: Moderate Significant Operation (Year 15): Minor Not Significant Decommissioning: Minor Not Significant	Construction: Minor Not Significant Operation (Year 1): Minor Not Significant Operation (Year 1): with only Embedded Mitigation: Minor Operation (Year 15): Negligible Not Significant Decommissioning: Negligible Not Significant

Term		



Landscape Receptor – Regional Scale Landscape Character – 4a: Unwooded Vales (Cottam 2 Substation Site)

Receptor Baseline:

Within the Cottam 2 Site, at a regional scale, landscape character is assessed within the East Midlands Regional Landscape Character Assessment as forming part of RLCT Profile: 4a Unwooded Vales, which is shown on Figure 8.5 [C6.4.8.5]. Unwooded Vales extends across the entirety of the 2km Study Area and then extends into the 5km Study Area where at its eastern most edge it shares a boundary with RLCT Profile: 6a Limestone Scarps and Dipslopes. The western extent of the 5km Study Area is also host to a large part of RLCT Profile: 4b Wooded Vales.

There are also areas defined as 'Built Up Area' that extend from Gainsborough towards Blyton and Corringham following the main transport routes. The settlements of Willoughton and Hemswell are located on the boundary with RLCT Profile 6a Limestone Scarps and Dipslopes.

Key Features:

The main settlement of Gainsborough is located just within the 5km Study Area at the eastern edge. Other settlements include Blyton, Pilham, Corringham, Blyborough, Willoughton, Hemswell, Harpswell, Springthorpe and Heapham. The main highway corridors include the A631 (Corringham Road leading to Harpswell Lane), B1398 (Middle Street) and the A159 (Thonock Road). Key characteristics of the Unwooded Vales landscape character include an extensive, low lying rural landscape underlain by Triassic and Jurassic mudstones and clays and widespread superficial deposits. There are expansive long distance and panoramic views from higher ground at the margin of the vales from the edge of settlements such as Hemswell and Willhoughton. The scarp slope that follows the edge of the vales gives a sense of visual containment. There are also low hills and ridges which gain visual prominence in an otherwise gently undulating landscape. The complex drainage patterns of watercourses flow within the shallow undulations often flanked by pasture and riparian habitats, which adds to the character of the area. There is limited woodland cover, and instead the landscape relies on shelterbelts and hedgerow trees to gain a greater visual significance. The Unwooded Vales within the East Midlands region is sparsely settled with small villages and dispersed farms, linked together by quiet rural lanes. This road pattern is a common feature within the Cottam 2 Site where the settlements of Corringham, Yawthorpe, Aisby and Pilham are linked by a series local lanes and tracks. The Unwooded Vales generally have a strong sense of place, with major landform features flanking the lower lying areas creating broad scale visual containment. Rivers and streams are also an important landscape feature, and these include Aisby Beck, Corringham Beck and Yawthorpe Beck.

Character Context:

The Cottam 2 Site is mainly located within RLCT 4a: Unwooded Vales, where the land area is found to the north of the A631 (Corringham Road) and in the context of the settlements of Pilham, Corringham and Springthorpe. To the east of the Cottam 2 Site, RLCT 6a: Limestone Scarps and Dipslopes shares the outer 5km Study Area. The ridgeline (to the east) then gives strong containment where the settlements of Willhoughton, Hemswell and Harpswell mark the boundary with the B1398.

RLCT 4a: Unwooded Vales landscape character type is host to the Cottam 2 Site within the 2km study area and the 5km study area.

RLCT 4a is considered to form part of the immediate landscape context for the Cottam 2 Site.



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Receptor susceptibility to change	Value of Receptor	Sensitivity	Embedded Mitigation
In terms of forces for change, the Unwooded	<u>Scenic:</u> The Unwooded Vales appeal to the visual senses where the roads and	<u><i>Character:</i></u> Wide panoramic views	Embedded Mitigation would be taken into
Vales aims to protect existing rural landscape	watercourses combine to give a subtle grain to the landscape. The interruptions at the	also possible from the low hills and	account at the construction, operation
features, in particular the restoration of	bridge crossings, such as Aisby Beck, provide local points of interest and the opportunity	ridges that form watersheds	(Year 1 and Year 15) and decommissioning
hedgerows since the most widespread change	to capture views across the landscape to the higher landform fringing the Vales.	between watercourses. This	stages of the Scheme. This Embedded
has been in agricultural intensification and the		contrasts with the lower lying areas	Mitigation is also referred to as primary
change from pastoral to arable cropping that has	<i><u>Cultural</u></i> : The landscape shows evidence of historic settlement with farms and nucleated	where intact hedgerows and belts of	mitigation and would include the following
resulted in the loss of hedges, and consequently,	villages and small hamlets such as Yawthorpe. The landscape surrounding these	riverside trees truncate views.	measures:
an increase in field size. The loss of pasture is	settlements retain a deeply rural and tranquil character with farms linked by minor lanes		
particularly evident around settlements, where	and roads. There are Roman roads that pass across the area such as Middle Street	<u><i>Quality:</i></u> The landscape shows	A 2m buffer around the proposed
grazing animals and smaller field sizes contribute	indicating that these low-lying areas provided convenient routes through the hills and	evidence of historic settlement with	development will be provided between
to the setting and structure of several villages.	wetlands.	farms and nucleated villages and	construction areas and boundary fencing.
Many of the rural villages have not seen		small hamlets such as Yawthorpe.	
widespread expansion but development	Natural: The extensive expanses of semi-natural habitat, rivers and streams are an	The landscape surrounding these	A max 2.4m high steel palisade fence will
pressures continue with the demand for housing,	important landscape feature such as Yawthorpe Beck and Coringham Beck. Overall, in	settlements retain a deeply rural and	surround all substation equipment.
commerce and industry creating visual intrusion	such a managed agricultural environment, networks of hedgerows and hedgerow trees	tranquil character with farms linked	
and extending the urban fringe. For development	gain significance in offering a refuge for birds and insects.	by minor lanes and roads.	Additional deer fencing is to be considered
associated with the rural villages, specific			outside of this boundary – to be 2.5m high.
mechanisms include Village Design Statements,	<u>Recreation and Enjoyment</u> : The Unwooded Vales are valued for recreation which often	<u>Value:</u> Whilst the landform of the	
and tree planting around settlement fringes to	focused on the locations where panoramic views are possible from elevated locations	Unwooded Vales is typically low and	Existing hedges are to be allowed to grow
help integrate new development into the	from rising land at the edges of the Vales. Whilst the landform of the Unwooded Vales is	subdued, rising landform often	out and will be managed to a height of 5m.
landscape.	typically low and subdued, rising landform often provides locations where glimpses of	provides locations where glimpses of	Hedgerow trees will be encouraged to
	neighboring elevated lands are often sufficient to provide a sense of place and add to	neighboring elevated lands are often	grow out with the addition of new
Overall, the susceptibility of the Unwooded	the recreation and enjoyment of the area. Typically, these locations occur around	sufficient to provide a sense of place	hedgerow trees as appropriate, randomly
Vales is conditioned by managing growth,	Hemswell and Willoughton.	and add to the recreation and	spaced along the length of existing hedges.
ensuring development is appropriate in terms of		enjoyment of the area.	
type, scale, and location. The flat, open	Local Distinctiveness and Sense of Place: The landscape has a 'strong sense of place' with		Lighting will be limited to downlights within
landscape is also a key consideration and whilst	major landform features flanking the lower lying areas creating broad scale visual	<u>Capacity:</u> Features are locally	substations and battery banks only and
the aim is to plan new tree planting around key	containment along the ridgeline to the east at Willhoughton, Hemswell Harpswell and	commonplace and in moderate	used when maintenance is required.
settlements, woodland does not form a	Hemswell Cliff.	condition. Although the remaining	
significant component of this landscape, and in		hedgerow network is generally	The landscape effects with only the
considering its open and expansive character,	<u>Health and Wellbeing:</u> The Unwooded Vales provide a very limited network of PRoW	strong, there is nevertheless	Embedded Mitigation taken into account
extensive new woodland planting would be	leading to the dependence on the more direct arterial routes that run east to west across	evidence of decline in several areas,	equate to those effects set out for the
generally inappropriate.	the area linked by a series of narrow straight lanes.	with gaps and few hedgerow trees.	operation stage (Year 1) and this includes
The landscape receptor is moderately	Important Spatial Function: The landscape benefits from high lovels of visual containment		secondary mitigation which will have been carried out but will have had limited
susceptible to the proposed development, and a	<i>Important Spatial Function:</i> The landscape benefits from high levels of visual containment despite the low levels of woodland cover. Instead, the local landform, hedgerows and		physical or landscape character impact at
moderate ability to accommodate the specific	shelter belts create visual containment and give the Vales Landscape an intimate		this Embedded Mitigation stage.
proposed change, because the relevant	character.		uns enbeuded Millgalion slage.
characteristics of the landscape have some			
ability to accommodate it without undue adverse	Overall, the value of the Unwooded Vales is shaped by the strong agricultural character,		
effects, taking account of the existing character	where in recent decades, the productivity of the land has stimulated widespread change		
and quality of the landscape, and/or	in the rural landscape. Large areas of permanent grassland have been ploughed up and		
achievement of relevant planning policies and	the removal of hedgerows and ditches to accommodate large scale machinery has lost		
strategies.	many clues of former field patterns.		
Medium (5km Study Area)	Medium (5km Study Area)	Medium	
Medium (Substation Site)	Medium (Substation Site)	Medium	



Landscape Receptor – Regional Scale Landscape Character – 4a: Unwooded Vales (Cottam 2 Substation Site) Construction **Operation (Year 1) Operation (Year 15)** The 132ky substation is set within the centre of the Landscape receptors affected by development (to differing degrees) are set out Secondary mitigation such as planting, and gras Cottam 2 Site. It measures 64m x 51m maximum below: would be taken into account at operation stage including buffers, access roads and boundary include the following changes to the landscape: fencing at 2.4m high. The height of the structure Designations lie predominantly to the west/southwest of both the Cottam 2 Site sits at 6.435m at its tallest for the high-level with Ancient Woodland, Local Nature Reserves and Local Wildlife Sites within Growth of existing and proposed vegetation is a busbars and low-level busbars sitting at 3.995m. be: the study area but having no physical or visual impact/influence on the Site The substation is likely to take 12 months to other than distant views where these may exist. Opportunities for construct. Woodland/trees and shelterbelts: 2.5m max at reinforcement of the character area are available. max at Year 15. Integrated conversion units are laid out The Site lies just beyond the outer limits of the SSSI's impact risk zones of all across the Sites to include transformers, New hedgerows: 0.6m at Year 1 and 3.5m at Ye neighbouring SSSIs. inverters and switch gear. These are to be a maximum of 15m x 5m x 3.5m high and will Existing hedgerows: 0.9m at Year 1 and 5m at Y The land use will change from intensively managed arable land to an area of construction therefore be seen within the context of the with associated hard standing, access roads and potential for some pollution to the soils panelled areas. Shrubs: 0.9m at Year 1 and 5m at Year 15. locally. Properties affected: Corringham Grange Following mitigation, at Year 15, The existing wo The substation area will have limited adverse effects on the topography within Farm, The Cottage, properties in Yawthorpe will be augmented by increased vegetation cove the immediate area, the Site being relatively level. There will be some soil to a lesser degree (mitigated by scattered both visual and ecological links across the lands movement to accommodate the hard standing, access roads and structures tree belt and enhanced hedgerow adjoining woodland blocks. Grassland mixes wi required. The closest watercourse is the Yawthorpe Beck which runs to the intervening). established and will create valuable habitats wit northwest and eastern boundaries of the Site and is some 620m distant at its structure greatly improved through cessation of closest point. Viewpoints potentially affected by the cultivation. substation include: The roads affected by the increased traffic associated with the substations are 49 SW, 50 Yawthorpe, 48 Corringham, LCC-Following mitigation, the Site is able accommode the A631 to the south of the Site accessed by East Lane heading out of C-P NW, 46 SW Corringham Mill, LCC-C-Q NE. without undue adverse effects and there will be Corringham. Pilham Lane to the west will link the Cottam 2 Site to the Cottam beneficial effects in the increased level of vegeta 3a and 3b Sites to the north whilst the road to the south of Aisby is likely to have locally, the linking and enhancement of existing Activities during site preparation / enabling a very limited level of increased traffic. There will be traffic movement between features and the biodiversity benefits that this v works, construction, and commissioning with creating a stronger, more resilient framework a the Site/Sites at Cottam 1 and the Sites at Cottam 2 and 3a and 3b as well as to effects such as construction traffic, noise and character area. and from elsewhere. The Sites will be linked by Cable Route Corridors discussed vibration from construction activities, dust generation, site runoff, mud on roads, and elsewhere in this assessment. By Year 15, the Site at Cottam 2 will present a 'w the visual intrusion of plant and machinery landscape in line with the character area aims, on site. At the early stages of the The settlements of Corringham to the southwest, Normaby by Stow to the vegetation having been allowed to grow out and construction stage, ground and lower-level southwest, Aisby to the northwest and Yawthorpe to the east will be affected, to hedgerows and scrub having fully established a activities would predominantly be screened differing degrees by the erection of the substation. There are limited industrial, mature. by existing vegetation. commercial and leisure facilities locally and these will not be unduly affected due to their distance and intervening vegetation/built form. The increased The overall scene will be relatively well vegetate During the latter part of the construction traffic is unlikely to have any adverse effect on these receptors. scattered and irregularly spaced trees, following stage, views would become available of the lines of both historic field boundaries and the r elevated activities above the hedgerows, but From Corringham, views looking east at East Lane/Corringham Beck junction are as well as local watercourses. these would be limited in number of obscured by intervening vegetation, particularly that around Corringham views/potential receptors and relatively Grange Farm. Further north and immediately west of the Site, views are also The structures of the substation will be predom short term. screened to a height of 5m by adjacent and inte obscured with power lines forming part of the existing view. hedgerows with hedgerow trees having reached Other works would be undertaken in 7.5m helping to soften views from across the wi connection with the construction including The substation sits directly west of Yawthorpe some 1.2km distant. landscape. fencing, gates, boundary treatment and other means of enclosure and works for the The closest PRoW (Corr/22/1) lies to the west of Corringham and views from this Following mitigation, the Site is able accommode provision of security and monitoring route are obscured by the existing built form or intervening vegetation. change without undue adverse effects on the la measures such as CCTV and the laying down

	Decommissioning
ss seeding e (Year 15) to	A similar process to that of construction stage, but with the
::	Scheme being no longer operational. This is an
assumed to	assessment of the Site in winter but assumes retention of existing vegetation and builds upon the
t Year 1, 7.5m	proposed primary and secondary mitigation that had been established as the future
ear 15.	baseline. Effects are those arising from activities for the duration of
Year 15.	the decommissioning to include site traffic, noise and vibration from decommissioning activities, dust generation and site runoff.
oodland locally	C
er creating	Following decommissioning, the
scape to the vill have	land is likely to be returned to arable production. The Site will
ith soil	however benefit from the
of arable	significantly enhanced tree and hedgerow planting that has been carried out and has matured to
date change e considerable tation cover g natural will bring, across the local	create a much stronger and robust landscape, retaining and enhancing the overall character and providing considerable biodiversity benefits over the years. Bird mitigation fields are likely to be retained and the potential may exist to retain grass
well treed' the existing id new trees, and begun to	margins to maintain some varied land use and a high level of biodiversity in the local area.
ed, with g the existing road network	
ninantly ervening d a height of vider	
date this and use,	



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	of internal tracks. There would also be landscape and biodiversity mitigation works around the substation, including planting and the improvement of existing hedgerows to all boundaries of the Site/Sites creating a much greater level of vegetation locally, creating many associated beneficial effects. These short-lived construction activities would not adversely affect the local woodlands, existing vegetation or designated areas. There would be a change to the arable land use with a small area of arable land being covered by the built form. The field boundaries and the associated tree cover would remain intact and help with visual layering across the landscape and the integration of the new substation. There would be an increase in the level of traffic locally. Overall, the local woodland and other vegetated cover, both within the Site and of the wider area, is able to accommodate the changes that arise through the construction of the Site without undue adverse effects. The integrity of all existing landscape features will be retained. Overall, the main effects are those relating to an increased level of traffic and disruption locally during construction, the loss of a small area of agricultural land and potential for ground pollution which will need to be carefully managed. There will be some adverse effects on the settlements locally, in particular Corringham. Effects on other landscape receptors are considered Minor.	There are two Areas of Great Landscape Value within the study area but not in close association with this Site. In terms of mitigation for the two AGLV's associated with this Site, due to their distance and varied relationship with the Site, it is the overall scheme of mitigation that will reinforce the landscape character where this has been lost or eroded in the last century to intensive arable farming. There are no Listed buildings within the Site of Cottam 2, but a number within the village of Corringham to the southwest/west. Although their setting is not directly affected by development, mitigation around the western boundary of the Site will help to ensure that these properties are not impacted. Corringham Windmill sits to the south of the Site which forms its backdrop from views from the existing parts views towards the Site, and in particular the substation from the south out the development and is integrity is retained. Mitigation Within the Cottam 2 Site, the following secondary mitigation will be implemented at the operation stage (Year 1) to enhance the regional landscape character: A scattered tree belt along Yawthorpe Beck with a 15m wide grassland buffer	heritage assets, local and national designations, th PROW network and natural resources. There will b adverse effects in terms of the communication link which will become busier and limited adverse effect settlements locally with most views softened by p and existing vegetation by Year 15 to create a moc adverse effect with regard to these receptors. A n viewpoints will be affected and where views of the are available, this will have a moderately adverse effect the receptors due to the limited height of this stru can be mitigated to a great degree. There will be considerable beneficial effects in the increased lev vegetation cover locally, the linking and enhancem existing natural features and the biodiversity bene this will bring, creating a stronger, more resilient fn across the local character area of the 4a Unwoode

, the local	
ill be some	
links locally	
effects on the	
/ proposed	
noderate	
A number of	
the substation	
se effect on	
tructure which	
be	
level of	
ement of	
enefits that	
nt framework	
oded Vales.	



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		 There are limited views from the road to the north adjacent to the settlement of Aisby, where the substation will sit beyond the built form of the both the Cottage and Corringham Grange Farm buildings as well as some existing vegetation. Although new vegetation will be immature, existing hedgerows will have begun to grow out at Year 1 and the varied grassland areas will have become established, Overall, this will help to link habitats and strengthen the overall character locally and maintain a sense of place. Important opportunities to bolster the local vegetation cover, buffering and connecting existing fragmented vegetation, aims to create a more resilient and biodiverse landscape. Overall, at Year 1, the limited road and PRoW network around the substation, together with some strong existing vegetation will limit views to the substation from many areas. There are limited Landscape effects providing an overall Moderate Adverse Effect at Year 1. 		
5km Study A	rea:			
	Very Low	Low	Low	Very Low
Magnitude				
Level of Effect	Adverse & Short Term	Adverse & Long Term	Adverse & Long Term	Neutral & Short Term
Significance of Effect	Negligible Not Significant	Negligible Not Significant	Negligible Not Significant	Negligible Not Significant
Substation S	ite Cottam 2: Land Use		·	
Magnitude	High	High	Medium	Low
Level of Effect	Adverse & Short Term	Adverse & Long Term	Adverse & Long Term	Neutral & Short Term
Significance of Effect	Moderate-Major Significant	Moderate-Major Significant	Moderate Significant	Minor Not Significant
Substation S	ite Cottam 2: Topography and Wate	rcourses		•
Magnitude	High	High	Medium	Low
Level of Effect	Adverse & Short Term	Adverse & Long Term	Adverse & Long Term	Neutral & Short Term
Significance of Effect	Moderate-Major Significant	Moderate-Major Significant	Moderate Significant	Minor Not Significant



In-Combination Effects [Cumulative Sites]	Cumulative Effects [Cumulative Developments]
In Summary The In-combination effects upon LCA – 4a of the Cottam 2 Substation and Cumulative Sites is Moderate at year 1 of operation and Minor at year 15 with mitigation. This is due to the limited impact upon the LCA as a result of the nature of the Scheme, the segregated nature of the Sites; together with the existing landscape character associated with the fabric of the landscape of the Sites and Study Area. Embedded and Secondary Mitigation proposed would screen the panels and therefore the effects upon landscape character are reduced in combination with the Substation.	
<i>Eabric of the Landscape</i> There would not be the removal of or changes in individual elements or features of the landscape within the character area.	<i>Fabric of the Landscape</i> There would not be the removal of or changes in individual ele area.
There would be the introduction of new elements and features comprising the solar panel areas and the substation area within the character area.	There would be the introduction of new elements and feature area within the character area.
<u>Aesthetic Aspects of the Landscape</u> Refer to Figure 8.15.1.2 [C6.4.8.15.1.2] which shows that with the Cottam 2 Site, cumulative visibility with the Cottam 1 Site/Sites and the Cottam 3a and 3b Sites would not be experienced across the entirety of the 2km study area. This is due to the distance, the intervening woodlands, hedgerows, and tree cover between the Site/Sites. The intervening settlements and built form would also curtail cumulative visibility.	Aesthetic Aspects of the Landscape Refer to Figure 8.15.2.2 [C6.4.8.15.2.2] which shows that with the developments would not be experienced across the majority of intervening woodlands, hedgerows, and tree cover between the would also curtail cumulative visibility.
 There are local patches of intervisibility between the Cottam 2 Site and with the 3a and Cottam 3b Sites extending from the: South boundary of the Cottam 2 Site, starting at the eastern edge of Corringham and reaching as 	There are local patches of cumulative visibility which may be for Tillbridge Solar. This cumulative visibility is set out in further de Figure 8.15.2.8 Cottam 1, 2,3a and 3b Tillbridge Solar Cumulat
 South boundary of the Cottain 2 Site, starting at the eastern edge of Cornighan and reaching as far as Yawthorpe Beck and Yawthorpe West boundary of the Cottam 2 Site, extending as far as Pilham Lane East boundary of the Cottam 2 Site, extending as far Yawthorpe and Yawthorpe Fox Covert Northwest boundary of the Cottam 2 Site, extending as far as the Cottam 3a and 3b Sites. 	Overall Landscape Character of the Unwooded Vales Overall, the character of the Unwooded Vales is shaped by the strong sense of rural tranquility. In contrast, the low levels of v landscape comprising an arable land use within a scattered pa
Potential cumulative visibility between the Cottam 2 Site and with the Cottam 3a and Cottam 3b Sites would not be experienced however, due to the intervening settlements of Corringham, Yawthorpe, Aisby, Dunstall and Pilham. The flat landform and intervening vegetation cover would also close down any intervisibility across the landscape between these areas.	to west and a more strategic road network north to south. Th ability to accommodate change without undue adverse effects
There is a local patch of intervisibility between the Cottam 2 Site and with the Cottam 3b Site, comprising the: • Northern-most tip of the Cottam 2 Site extending across the medieval village of Dunstall as far as	
 Norther Hinds tup of the Cottain 2 site extending across the medieval village of Duristan as far as the medieval village of Southorpe; and Southeast of the River Eau, extending as far as Huckerby Farm and Huckerby Bungalows. 	
Potential cumulative visibility between the Cottam 2 Site and the Cottam 3b Site would not be experienced however, due to the intervening vegetation lining Aisby Beck and Yawthorpe Beck. The flat landform and intervening vegetation cover would also close down and inter-visibility across the landscape between these Sites/Site.	
 There are local patches of intervisibility between All Sites comprising the: North of the Bonsdale Farm at Pilham, extending across the landscape to the north of the medieval village of Dunstall as far as the medieval village of Southorpe West of the settlement of Corringham, extending from Staplegate House as far Windy Ridge on Pilham Lane 	

tions) and Cumulative Developments is Minor at e to the limited impact upon the LCA as a result acter associated with the fabric of the landscape osed would screen the panels and therefore the Substation.

r features of the landscape within the character

sing the solar panel areas and the substation

am 2 Site, cumulative visibility with the cumulative m study area. This is due to the distance, the tes. The intervening settlements and built form

kely significant effects, between the Cottam 2 and nin the following figures:

lopments Augmented ZTV [C6.4.8.15.2.8]

agricultural presence, with wide areas retaining a cover create a relatively open and expansive settlement, linked by a series of minor roads east ant characteristics of the landscape have some nor patches of cumulative visibility for the Cottam the Unwooded Vales Character Area.



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	East of Yawthorpe, extending as far as Hemswell.	
	Potential cumulative visibility between All Sites would not be experienced due to the intervening settlements of Corringham, Yawthorpe, Aisby, Dunstall and Pilham. The flat landform and intervening vegetation cover would also close down and inter-visibility across the landscape between these areas.	
	Users of linear routes, especially footpaths or other rights of way, or transport routes, may potentially experience the aesthetic aspects of the cumulative sites revealed in succession as a series of sequential views. For further details refer to the following detailed visual receptor sheets: Appendix 8.3.2.2 Individual Viewpoint Receptor Sheets [C6.3.8.3.2.2] Appendix 8.3.2.4 Individual Viewpoint Receptor Sheets [C6.3.8.3.2.4]	
	Appendix 8.3.3.2 Individual Residential Receptor Sheets [C6.3.8.3.3.2] Appendix 8.3.3.3 Individual Residential Receptor Sheets [C6.3.8.3.3.3]	
	Appendix 8.3.4.2 Individual Transport Receptor Sheets [C6.3.8.3.4.2] Appendix 8.3.4.3 Individual Transport Receptor Sheets [C6.3.8.3.4.3]	
	Appendix 8.3.5.2 Individual PRoW Receptor Sheets [C6.3.8.3.5.2] Appendix 8.3.5.3 Individual PRoW Receptor Sheets [C6.3.8.3.4.3]	
	<u>Overall Landscape Character of the Unwooded Vales</u> Overall, the character of the Unwooded Vales is shaped by the strong agricultural presence, with wide areas retaining a strong sense of rural tranquility. In contrast, the low levels of woodland cover create a relatively open and expansive landscape comprising an arable land use within a scattered pattern of settlement, linked by a series of minor roads east to west and a more strategic road network north to south. These relevant characteristics of the landscape have some ability to accommodate change without undue adverse effects. These local patches of cumulative visibility for the Cottam 2 Site would not alter the overall character of the landscape within the Unwooded Vales Character Area 4a.	
Magnitude	Construction: Medium Operation (Year 1): Medium Operation (Year 1): with only Embedded Mitigation: Medium Operation (Year 15): Low Decommissioning: Low	Construction: Low Operation (Year 1): Low Operation (Year 1): with only Embedded Mitigation: Low Operation (Year 15): Very Low Decommissioning: Very Low
Type of Effect	Construction: Adverse & Short Term Operation (Year 1): Adverse & Long Term Operation (Year 1): with only Embedded Mitigation: Adverse & Long Term Operation (Year 15): Neutral & Long Term Decommissioning: Neutral & Short Term	Construction: Adverse & Short Term Operation (Year 1): Adverse & Long Term Operation (Year 1): with only Embedded Mitigation: Adverse & Long T Operation (Year 15): Neutral & Long Term Decommissioning: Neutral & Short Term
Significance of Effect	Construction: Moderate Significant Operation (Year 1): Moderate Significant Operation (Year 1): with only Embedded Mitigation: Moderate Significant Operation (Year 15): Minor Not Significant Decommissioning: Minor Not Significant	Construction: Minor Not Significant Operation (Year 1): Minor Not Significant Operation (Year 1): with only Embedded Mitigation: Minor Operation (Year 15): Negligible Not Significant Decommissioning: Negligible Not Significant

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Landscape Receptor – Regional Scale Landscape Character – 4a: Unwooded Vales (Cottam 3a – Substation Site)

Receptor Baseline:

Within the Cottam 3a Site, at a regional scale, landscape character is assessed within the East Midlands Regional Landscape Character Assessment as forming part of RLCT Profile: 4a Unwooded Vales, which is shown on Figure 8.5 [C6.4.8.5]. Unwooded Vales is located within the 2km Study Area, but only extending across its eastern most part, then sharing the western most part with RLCT Profile 4b: Wooded Vales. The landscape character type then occupies an eastern part of the 5km Study Area where it shares a boundary with Kirton in Lindsey. The western part of the 5km Study Area then comprises of a mixture of RLCT 2b: Planned and Drained Fens and Carrlands, RLCT 4a: Unwooded Vales and RLCT 4b: Wooded Vales, The Unwooded Vales is generally characterised by mixed agriculture set within an enclosed landscape of low, well-maintained hedgerows.

There are also areas defined as 'Built Up Area' that extend from Gainsborough towards Blyton following the main transport routes. The settlements of Blyton, Laughton, Scotton and Scotter are located on the boundary with RLCT Profile 4b: Wooded Vales.

Key Features:

This is the land area that sits to the north of Kirton Road B1205 with a disused airfield located in its central part. To the east of the 2km Study Area the settlement of Northorpe occupies an area of locally higher ground at 20m AOD. The Cottam 3a Site therefore spans two different landscape character types with the majority located within Unwooded Vales whilst the western most corner of the Site/Sites (close to Blyton) is within the 'Built Up Area' which is associated with the main highway corridor of the A159 (Laughton Road). Unwooded Vales comprises of an extensive, low lying rural landscape underlain by Triassic and Jurassic mudstones and clays and widespread superficial deposits. This landscape character type offers expansive long distance and panoramic views from higher ground at the margin of the Unwooded Vales which gives a sense of visual containment. The land within this landscape character type has complex drainage patterns of watercourses that flow within shallow undulations often flanked by pasture and riparian habitats. Limited woodland cover is a key characteristic of the Unwooded Vales, and this therefore relies on shelterbelts and hedgerow trees to gain a greater visual significance and habitat value. The landscape within this landscape character type is sparsely settled with small villages and dispersed farms linked by quiet rural lanes.

Character Context:

The Cottam 3a Site is mainly located within RLCT 4a: Unwooded Vales landscape character type, where the land area is found to the north of Kirton Road B1205 (and mainline railway) and to the north of the settlement of Pilham and northeast of the settlement of Blyton where it forms the boundary with the adjoining RLCT 4b: Wooded Vales. To the east of the Cottam 3a Site, the settlement of Northorpe forms part of a wider collection of other scattered farmsteads across this landscape character type. The ridgeline (further to the east) then gives strong containment where the settlements of Kirton in Lindsey, Gravingham, Blyborough and Willhoughton mark the boundary with the B1398.

RLCT 4a: Unwooded Vales landscape character type is host to the Cottam 3a Sites within the 2km study area and the 5km study area.

RLCT 4a is considered to form part of the immediate landscape context for the Cottam 3a Site.



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Receptor susceptibility to change	Value of Receptor	Sensitivity	Embedded Mitigation
In terms of forces for change, the Unwooded Vales aims to protect existing rural landscape features, in particular the restoration of hedgerows since the most widespread change has been in agricultural intensification and the change from pastoral to arable cropping that has resulted in the loss of hedges, and consequently, an increase in field size. The loss of pasture is particularly evident around settlements, where grazing animals and smaller field sizes contribute to the setting and structure of several villages. Many of the rural villages have not seen widespread expansion but development pressures continue with the demand for housing, commerce and industry creating visual intrusion and extending the urban fringe. For development associated with the rural villages, specific mechanisms include Village Design Statements, and tree planting around settlement fringes to help integrate new development into the landscape. Overall, the susceptibility of the Unwooded Vales is conditioned by managing growth, ensuring development is appropriate in terms of type, scale, and location. The flat, open landscape is also a key consideration and whilst the aim is to plan new tree planting around key settlements, woodland does not form a significant component of this landscape, and in considering its open and expansive character, extensive new woodland planting would be generally inappropriate. The landscape receptor is moderately susceptible to the proposed development, and a moderate ability to accommodate the specific proposed change, because the relevant characteristics of the landscape have some ability to accommodate it without undue adverse effects, taking account of the existing character and quality of the landscape, and/or achievement of relevant planning policies and strategies.	 Scenic: The Unwooded Vales appeal to the visual senses where the roads and watercourses combine to give a subtle grain to the landscape. The interruptions at the bridge crossings, such as Northorpe Beck, provide local points of interest and the opportunity to capture views across the landscape to the higher landform fringing the Unwooded Vales at Kirton in Lindsey. <i>Cultural:</i> The landscape shows evidence of historic settlement with farms and nucleated villages and small hamlets such as Northorpe. The landscape surrounding these settlements retain some rural and tranquil character with farms, but minor lanes and roads are interrupted by the presence of the former airfield. There are Roman roads that pass across the wider area such as Ermine Street indicating that these low-lying areas provided convenient routes through the hills and wetlands. <u>Natural:</u> The extensive expanses of semi-natural habitat, rivers, and streams are an important landscape feature such as Northorpe Beck and its associated tributaries. Overall, in such a managed airfield biased and large-scale agricultural environment, networks of hedgerows and hedgerow trees gain significance in offering a refuge for birds and insects. <u>Recreation and Enjoyment:</u> The Unwooded Vales are valued for recreation which often focuses on the locations where panoramic views are possible from elevated locations from rising land at the edges of the Vales. Whilst the landform of the Unwooded Vales is typically low and subdued, rising landform often provides locations where glimpse of neighboring elevated are often sufficient to provides locations where glimpse of neighboring levated are often sufficient to provides locations where glimpse of neighboring levated are often sufficient to provides locations where glimpse of neighboring levated are often southeast. <u>Local Distinctiveness and Sense of Place:</u> The landscape has a 'strong sense of place' with major landform features flanking the lower Jying ar	 <u>Character:</u> The roads and watercourses combine to give a subtle grain to the landscape. The interruptions at the bridge crossings, such as Blyton Beck, provide local points of interest and the opportunity to capture views across the landscape. <u>Quality:</u> The landscape shows evidence of historic settlement with farms and nucleated villages and small hamlets such as the Medieval village of Southorpe. The landscape surrounding these settlements retain some rural and tranquil character with farms, but minor lanes and roads are interrupted by the presence the former airfield in parts. <u>Value:</u> Areas have a positive landscape character but include some areas of degradation where agricultural intensification has eroded landscape character, particularly around the edges of settlements. <u>Capacity:</u> The landscape benefits from high levels of visual containment due to the local landform, hedgerows, and shelter belts and this helps tolerance for landscape change. 	Embedded Mitigation would be taken into account at the construction, operation (Year 1 and Year 15) and decommissioning stages of the Scheme. This Embedded Mitigation is also referred to as primary mitigation and would include the following measures A 2m buffer around the proposed development will be provided between construction areas and boundary fencing. A max. 2.4m high steel palisade fence will surround all substation equipment. Additional deer fencing is to be considered outside of this boundary – to be 2.5m high. Existing hedges are to be allowed to grow out and will be managed to a height of 5m. Hedgerow trees will be encouraged to grow out with the addition of new hedgerow trees as appropriate, randomly spaced along the length of existing hedges. Lighting will be limited to downlights within substations and battery banks only and used when maintenance is required. The landscape effects with only the Embedded Mitigation taken into account equate to those effects set out for the operation stage (Year 1) and this includes secondary mitigation which will have been carried out but will have had limited physical or landscape character impact at this Embedded Mitigation stage.
Medium (5km Study Area)	Medium (5km Study Area)	Medium	
Medium (Substation Site)	Medium (Substation Site)	Medium	



Landscape Receptor – Regional Scale Landscape Character – 4a: Unwooded Vales (Cottam 3a – Substation Site) Construction **Operation (Year 1) Operation (Year 15)** The 132kv substation is set within the southern A very small section of the Cottam 3a Site lies within Secondary mitigation such as planting, and grass seeding would be tal extents of Site 3a within field K7 and is located the Wooded Vales (4b), being field K1. This LCA is not account at operation stage (Year 15) to include the following changes some 360m north of the Kirton Road. It affected by the substation development. landscape: measures 64m x 51m maximum including buffers, access roads and boundary fencing at The remainder of the Site lies within the Unwooded Growth of existing and proposed vegetation is assumed to be: 2.6m high. The height of the structure sits at Vales LCA 4a. The substation is to be relatively well 6.435m at its tallest for the high-level busbars contained within the Site and the size and location will Woodland/trees and shelterbelts: 2.5m max at Year 1, 7.5m max at Ye and low-level busbars sitting at 3.995m. The mean that it will not unduly adversely affect the overall substation is likely to take 12 months to integrity of the Character Area. New hedgerows: 0.6m at Year 1 and 3.5m at Year 15. construct. The access route will be via the B1205 Kirton Road east of Blyton village. Designations lie predominantly to the west/southwest Existing hedgerows: 0.9m at Year 1 and 5m at Year 15. of both the Cottam 3a and 3b Sites with Ancient Woodland, Local Nature Reserves and Local Wildlife Shrubs: 0.9m at Year 1 and 5m at Year 15. Integrated conversion units are laid out across Sites within the study area but having no physical or the Sites to include transformers, inverters and visual impact/influence on the Site(s) other than Following mitigation, at Year 15, The existing woodland locally will be switch gear. These are to be a maximum of 15m x 5m x 3.5m high and will therefore be seen distant views where these may exist. Opportunities for increased vegetation cover creating both visual and ecological links ac reinforcement of the character area within both the landscape to the adjoining woodland blocks. Grassland mixes will have within the context of the panelled areas. Cottam 3a and 3b Sites are available. and will create valuable habitats with soil structure greatly improved t cessation of arable cultivation. Properties potentially affected: Blyton Park Both Sites lie on the outer limits of the SSSI's impact Race Track, The Fields, Fields Cottage and Fields risk zones of Scotton Becks Fields and Scotton Following mitigation, the Site is able accommodate change without un Farm, Grange Farm, Top Farm entrance Common. There will be no adverse effect in relation to effects and there will be beneficial effects across the Site generally in the SSSI. level of vegetation cover locally, the linking and enhancement of existi Viewpoints potentially affected by the features and the biodiversity benefits that this will bring, creating a str substation include: There are no Listed buildings within the Site of Cottam resilient framework across the local character area. 59,60,61 3a or 3b but a small number within the village of By Year 15, the Site at Cottam 3a will present a 'well treed' landscape i Blyton, to the west, Pilham to the Southwest and Activities during site preparation / enabling Northorpe to the northeast, as well as The Railway character area aims, the existing vegetation having been allowed to gr works, construction, and commissioning with new trees, hedgerows and scrub having fully established and begun to Station adjacent to the Cottam 3b Site, and although effects such as construction traffic, noise and their setting is not directly affected by development, overall scene will be relatively well vegetated, with scattered and irreg vibration from construction activities, dust trees, following the existing lines of both historic field boundaries and general mitigation around the boundary of the Sites generation, site runoff, mud on roads, and the network as well as local watercourses. will help to ensure that these properties are not visual intrusion of plant and machinery on site. impacted. There are no direct views of the substation At the early stages of the construction stage, The structures of the substation will be predominantly screened to a l from these properties. ground and lower-level activities would adjacent and intervening hedgerows with hedgerow trees having reac predominantly be screened by existing 7.5m helping to soften views from across the wider landscape. The land use will change from intensively managed vegetation. arable land to an area of construction with associated hard standing, access roads. Following mitigation, the Site is able accommodate this change without During the latter part of the construction stage, adverse effects on the land use, heritage assets, local and national des views would become available of the elevated local PRoW network and natural resources. There will be some advers The substation area will have limited adverse effects activities above the hedgerows, but these would terms of the communication links locally which will become busier and on the topography within the immediate area, the Site be limited in number of views/potential adverse effects on the settlements locally with most views softened by being relatively level. There will be some soil receptors, being predominantly users of the existing vegetation by Year 15 to create a moderate adverse effect wit movement to accommodate the hard standing, access Kirton Road and Blyton Park Race Track and these receptors. A number of viewpoints will be affected and where vi roads and structures required. The closest relatively short term. substation are available, this will have a moderately adverse effect on watercourses are located some 550m to the northeast with over watercourses some 400m to the south due to the limited height of this structure which can be mitigated to a Other works would be undertaken in Existing detracting features also have a bearing on the overall effects beyond the Kirton Road. connection with the construction including substation will be seen within the context of these other features. The fencing, gates, boundary treatment and other considerable beneficial effects in the increased level of vegetation cov Across the Site, linear ditches and dykes which are means of enclosure and works for the provision linking and enhancement of existing natural features and the biodiver currently abutted by vegetation will be enhanced to of security and monitoring measures such as that this will bring, creating a stronger, more resilient framework acros further delineate the field boundaries and minor CCTV and the laying down of internal tracks.

A similar process to that of construction stage, but with the Scheme being no longer operational. This is an assessment of the Site in winter out assumes retention of existing vegetation and builds upon the proposed primary and secondary mitigation that had been established as the future baseline. Effects are those arising from activities for the duration of the decommissioning to include site traffic, noise and vibration from decommissioning activities, dust generation and site runoff.
construction stage, but with the Scheme being no longer operational. This is an assessment of the Site in winter out assumes retention of existing vegetation and builds upon the proposed primary and secondary mitigation that had been established as the future baseline. Effects are those arising from activities for the duration of the decommissioning to include site traffic, noise and vibration from decommissioning activities, dust generation and site runoff.
upon the proposed primary and secondary mitigation that had been established as the future baseline. Effects are those arising from activities for the duration of the decommissioning to include site traffic, noise and vibration from decommissioning activities, dust generation and site runoff.
decommissioning to include site traffic, noise and vibration from decommissioning activities, dust generation and site runoff.
-
and is likely to be returned to arable production. The Site will nowever benefit from the significantly enhanced tree and nedgerow planting that has been carried out and has
matured to create a much stronger and robust landscape, retaining and enhancing the overall character and providing considerable biodiversity benefits over the years. Bird mitigation fields are likely to be
retained and the potential may exist to retain grass margins to maintain some varied land use and a high level of biodiversity
n the local area.



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 There would also be landscape and biodiversity mitigation works around the substation, including planting and the improvement of existing hedgerows to all boundaries of the Site/Sites creating a much greater level of vegetation locally, creating many associated beneficial effects. These short-lived construction activities would not adversely affect the local woodlands, exising vegetation or designated areas. There would be a change to the arable land use with a small area of arable land being covered by the built form. The field boundaries and the associated tree cover would remain intact and help with visual layering across the landscape and the integration of the new substation. There would be an increase in the level of traffic locally. Overall, the landscape receptors, both within the Site and of the wider area, are able to accommodate the changes that arise through the construction of the Site without undue adverse effects. The integrity of all existing landscape features will be retained. Overall, the main effects are those relating to an increased level of traffic and disruption locally during construction and the loss of a small area of agricultural land There will be very minor adverse effects on the settlements locally with views being very limited. Effects on other landscape receptors are considered Minor. 	watercourses as well as adding to the green corridors and biodiversity value. The proposed development will have little effect on local industry and commerce although the introduction of the solar farm will provide some additional traffic to the roads and lanes locally. Mitigation will be in the form of tree, hedge, and shelterbelt planting as well as shrub and grassland areas which will both mitigate views of the additional traffic and provide benefits in terms of reducing noise and carbon impacts. The settlements locally (particularly those of Pilham and Blyton) will be protected through the proposed mitigation in and around the Site(s), with strong boundary vegetation screening views into the Site and enhancing the settlement settings where these abut the proposed development. The overall increase in vegetative cover and the reduction of over intensively farmed arable land will have benefits locally both in visual terms and with regard to a considerable increase in the biodiversity around settlements and isolated dwellings in the area. There will be very minor enhancements to leisure pursuits within the locality with a small number of PRoW being enhanced through tree and hedge planting adjacent to the Sites. The PRoW running through the Cottam 3b Site will be much improved from the open, exposed route to a more secluded walk. There are limited PRoW that have any close association with the substation either visually or physically. PRoW Corr/22/1 lies to the west of the Cottam 2 Site and lies to the southwest of the Cottam 3b Site. Within the Cottam 3b Site, Pilh/20/1 (footpath) runs east/west across the centre of the Site. The PRoW is currently very open in parts and provides a somewhat windswept route from Pilham Lane across to Bonsall Farm. There will however be very limited, if any views, north towards the proposed substation and these PRoW are not unduly affected by the development. In terms of mitigation for the two AGLV's associated with this Site, due to their distance and varied relationship with the	character area of the 4a Unwooded Vales. Overall, at Year 15, the effect of development of the substation will be reduced to Minor Moderate Adver- through mitigation.

effect of the	
Adverse effects	



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	Within the Cottam 3a Site, the following secondary mitigation will be implemented at the operation stage (Year 1) to enhance the regional landscape character:	
	Enhanced hedgerows along the northern boundary of the Kirton Road (southern boundary of the Site) will help to screen views of the substation to the north. A block of additional successional scrub is also proposed along this boundary, thickening the overall cover at low level. Hedgerow trees within this boundary will soften views of the upper parts of the substation structure.	
	To the west, views of the substation will be mitigated by additional new hedgerows around the eastern and western extents of industrial buildings on the old airfield along Kirton Road. The southern extents of this area are already well screened with evergreen vegetation, precluding views from further west along the Kirton Road and from Blyton village to the west.	
	A new hedgerow is proposed directly north of the substation with additional new hedgerows to the west of the access road and to the east of the substation adjacent to the motorsports circuit. Further new hedgerows are proposed across the Site to the north further screening views. A strong block of vegetation exists directly east of the substation with some additional vegetation on the boundary to the north.	
	A strong block of successional scrub to the western boundary of the Site of Cottam 3a will augment the existing vegetation here and provide good screening from the west and the settlement area.	
	A band of scrub is proposed to the western boundary of the bird mitigation area at the entrance to Blyton Park Race Track and this will help to soften views of the substation from the southeast and along the Kirton Road.	
	Although new vegetation will be immature, existing hedgerows will have begun to grow out at Year 1 and the varied grassland areas will have become established, starting to create valuable habitats.	
	Overall, this will help to link habitats and strengthen the overall character locally and maintain a sense of place. Important opportunities to bolster the local vegetation cover, buffering and connecting existing fragmented vegetation, aims to create a more resilient and biodiverse landscape.	
	Overall, at Year 1, the limited road and PRoW network around the substation, together with some strong existing vegetation will limit views to the substation	





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		from many areas other than the Kirton Road which is a relatively fast and straight road. This area already has the strong detracting feature of the Racetrack with its associated noise, traffic and structures and the substation will be seen within the context of these features locally. There are limited adverse Landscape effects providing an overall Moderate Adverse Effect at Year 1.		
5km Study A	rea:			
Magnitude	Very Low	Low	Low	Very Low
Level of Effect	Adverse & Short Term	Adverse & Long Term	Adverse & Long Term	Neutral & Short Term
Significance of Effect	Negligible Not Significant	Minor Not Significant	Minor Not Significant	Negligible Not Significant
Substation Si	ite Cottam 3a: Land Use		·	·
Magnitude	High	High	Medium	Low
Level of Effect	Adverse & Short Term	Adverse & Long Term	Adverse & Long Term	Neutral & Short Term
Significance of Effect	Moderate-Major Significant	Moderate-Major Significant	Moderate Significant	Minor Not Significant
Substation Si	ite Cottom 3a: Topography and W	latercourses		
Magnitude	High	High	Medium	Low
Level of Effect	Adverse & Short Term	Adverse & Long Term	Adverse & Long Term	Neutral & Short Term
Significance of Effect	Moderate-Major Significant	Moderate-Major Significant	Moderate Significant	Minor Not Significant



In-Combination Effects [Cumulative Sites]	Cumulative Effects [Cumulative Developmen
<u>In Summary</u> The In-combination effects upon LCA – 4a of the Cottam 3a Substation and Cumulative Sites is Moderate at year 1 of operation and Minor at year 15 with mitigation. This is due to the limited impact upon the LCA as a result of the nature of the Scheme, the segregated nature of the Sites; together with the existing landscape character associated with the fabric of the landscape of the Sites and Study Area. Embedded and Secondary Mitigation proposed would screen the panels and therefore the effects upon landscape character are reduced in combination with the Substation.	<u>In Summary</u> The Cumulative Effects upon LCA – 4a of the Scheme (inclu year 1 of operation and Negligible at year 15 with mitigation of the nature of the Scheme, together with the existing land of the Sites and Study Area. Embedded and Secondary Mitig effects upon landscape character are reduced in combinati
<i><u>Fabric of the Landscape</u></i> There would not be the removal of or changes in individual elements or features of the landscape within the character area.	<i>Fabric of the Landscape</i> There would not be the removal of or changes in individual area. There would be the introduction of new elements and featu
There would be the introduction of new elements and features comprising the solar panel areas and the substation area.	area.
<u>Aesthetic Aspects of the Landscape</u> Refer to Figure 8.15.1.3 [C6.4.8.15.1.3] which shows that with the Cottam 3a Site, cumulative visibility with the Cottam 1 Site/Sites, Cottam 2 Site and Cottam 3b Site would not be experienced across the majority of the 2km study area. This is due to the distance, the intervening woodlands, hedgerows, and tree cover between the Site/Sites. The intervening settlements and built form would also curtail cumulative visibility between these Site/Sites.	Aesthetic Aspects of the Landscape Refer to Figure 8.15.1.3 [C6.4.8.15.1.3] which shows that we cumulative developments would not be experienced across distance, the intervening woodlands, hedgerows, and tree of built form would also curtail cumulative visibility between the There are local patches of cumulative visibility which may be Site and Tillbridge Solar. This cumulative visibility is set out
 There are local patches of intervisibility between Cottam 3a and 3b Site/Sites, extending from the: Northeast boundary of the Cottam 3a Site/Sites, defined to the west by the Green Respect Burial Park and Park House Farm, and reaching as far as Northorpe in the east East boundary of Cottam 3a Site/Sites, and stopping short of Cold Harbour Farm; and North boundary of the Cottam 3b Site/Sites, extending for a short distance as far as Grange Farm and Top Farm. 	Site and Tillbridge Solar. This cumulative visibility is set out Figure 8.15.2.8 Cottam 1, 2, 3a and 3b Tillbridge Solar Cum <u>Overall Landscape Character of the Unwooded Vales</u> Overall, the character of the Unwooded Vales is shaped by a strong sense of rural tranquility. In contrast, the low levels of landscape comprising an arable land use within a scattered
Potential cumulative visibility between the Cottam 3a and 3b Site/Sites would not be experienced however, due to the intervening vegetation bordering the mainline railway and the isolated settlement comprising Grange Farm and Top Farm. The flat landform and intervening woodland blocks, hedgerows and tree cover would also close down any inter-visibility across the landscape between these cumulative sites.	to west and a more strategic road network north to south. ability to accommodate change without undue adverse effe alter the overall character of the landscape within the Unwo
 There are local patches of intervisibility between the Cottam 3a, 3b and Cottam 2 Sites, extending from the: South boundary of the Cottam 3b Site, bordered by Pilham to the west and the medieval settlement of Dunstall to the east, and reaching as far as Springthorpe in the south South boundary of the Cottam 3a Site, bordered by the eastern edge of Blyton to the west, reaching Grange Farm and stopping short of the mainline railway; and North boundary of the Cottam 3a Site, following the alignment of the A159 (Laughton Road) and stopping short to the west of the Green Respect Burial Park. 	
Potential cumulative visibility between the Cottam 3a, 3b and the Cottam 2 Sites would not be experienced however, due to the intervening settlements of Corringham, Yawthorpe, Aisby, Dunstall and Pilham. The flat landform and intervening vegetation cover would also close down any inter-visibility across the landscape between these cumulative sites.	
There is a local patch of intervisibility between All Sites, located to the:	

tions) and Cumulative Developments is Minor at e to the limited impact upon the LCA as a result acter associated with the fabric of the landscape osed would screen the panels and therefore the Substation.

r features of the landscape within the character

sing the solar panel areas and the substation

am 3a and 3b Sites, cumulative visibility with the ty of the 5km study area. This is due to the en the Site/Sites. The intervening settlements and tes.

kely significant effects, between the Cottam 3a etail within the following figures:

lopments Augmented ZTV [C6.4.8.15.2.8]

gricultural presence, with wide areas retaining a cover create a relatively open and expansive settlement, linked by a series of minor roads east ant characteristics of the landscape have some mulative visibility for the Cottam 3a Site would not Character Area 4a.



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	• East of the Cottam 3b Site and north of the Bonsdale Farm at Pilham, extending across the landscape to the north of the medieval village of Dunstall as far as the medieval village of Southorpe.	
	Potential cumulative visibility between All Sites would not be experienced however, due to the intervening settlements of Corringham, Yawthorpe, Aisby, Dunstall and Pilham. The flat landform and intervening vegetation cover would also close down and inter-visibility across the landscape between these cumulative sites.	
	Users of linear routes, especially footpaths or other rights of way, or transport routes, may potentially experience the aesthetic aspects of the cumulative sites revealed in succession as a series of sequential views. For further details refer to the following detailed visual receptor sheets:	
	Appendix 8.3.2.2 Individual Viewpoint Receptor Sheets [C6.3.8.3.2.2] Appendix 8.3.2.3 Individual Viewpoint Receptor Sheets [C6.3.8.3.2.3] Appendix 8.3.2.4 Individual Viewpoint Receptor Sheets [C6.3.8.3.2.4]	
	Appendix 8.3.3.2 Individual Residential Receptor Sheets [C6.3.8.3.3.2] Appendix 8.3.3.3 Individual Residential Receptor Sheets [C6.3.8.3.3.3]	
	Appendix 8.3.4.2 Individual Transport Receptor Sheets [C6.3.8.3.4.2] Appendix 8.3.4.3 Individual Transport Receptor Sheets [C6.3.8.3.4.3]	
	Appendix 8.3.5.2 Individual PRoW Receptor Sheets [C6.3.8.3.5.2] Appendix 8.3.5.3 Individual PRoW Receptor Sheets [C6.3.8.3.4.3]	
	<u>Overall Landscape Character of the Unwooded Vales</u> Overall, the character of the Unwooded Vales is shaped by the strong agricultural presence, with wide areas retaining a strong sense of rural tranquility. In contrast, the low levels of woodland cover create a relatively open and expansive landscape comprising an arable land use within a scattered pattern of settlement, linked by a series of minor roads east to west and a more strategic road network north to south. These relevant characteristics of the landscape have some ability to accommodate change without undue adverse effects. The cumulative visibility for the Cottam 3a Site would not alter the overall character of the landscape within the Unwooded Vales Character Area 4a.	
Magnitude	Construction: Medium Operation (Year 1): Medium Operation (Year 1): with only Embedded Mitigation: Medium Operation (Year 15): Low Decommissioning: Low	Construction: Low Operation (Year 1): Low Operation (Year 1): with only Embedded Mitigation: Low Operation (Year 15): Very Low Decommissioning: Very Low
Type of Effect	Construction: Adverse & Short Term Operation (Year 1): Adverse & Long Term Operation (Year 1): with only Embedded Mitigation: Adverse & Long Term Operation (Year 15): Neutral & Long Term Decommissioning: Neutral & Short Term	Construction: Adverse & Short Term Operation (Year 1): Adverse & Long Term Operation (Year 1): with only Embedded Mitigation: Adverse & Long Te Operation (Year 15): Neutral & Long Term Decommissioning: Neutral & Short Term
Significance of Effect	Construction: Moderate Significant Operation (Year 1): Moderate Significant Operation (Year 1): with only Embedded Mitigation: Moderate Significant Operation (Year 15): Minor Not Significant Decommissioning: Minor Not Significant	Construction: Minor Not Significant Operation (Year 1): Minor Not Significant Operation (Year 1): with only Embedded Mitigation: Minor Operation (Year 15): Negligible Not Significant Decommissioning: Negligible Not Significant

Term



Landscape Receptor – Regional Scale Landscape Character – 4a: Unwooded Vales (Cottam 3b – Substation Site)

Receptor Baseline:

Within the Cottam 3b Site, at a regional scale, landscape character is assessed within the East Midlands Regional Landscape Character Assessment as forming part of RLCT Profile: 4a Unwooded Vales, which is shown on Figure 8.5 [C6.4.8.5]. Unwooded Vales extends into the eastern section of the 2km Study Area and shares a boundary with the 'Built Up Area' that extend eastwards from Gainsborough towards Blyton following the main transport route of the A159 (Thonock Road). The Unwooded Vales also extends into the 5km Study Area and shares a boundary with RLCT Profile 6a: Limestone Scarps and Dipslopes. The settlements of Gravingham, Blyborough, Willhoughton and Hemswell are located close to the 5km Study Area boundary with RLCT Profile 4a: Unwooded Vales and RLCT 6a: Limestone Scarps and Dipslopes.

Key Features:

This is the land area that sits to the south of the mainline railway and to the east of Pilham Lane. To the northeast of the 2km Study Area the settlement of Northorpe occupies an area of locally higher ground at 20m AOD. The Cottam 3b Site therefore spans two different landscape character types with the majority located within Unwooded Vales whilst the western most corner of the Site/Sites (close to Blyton) is within the 'Built Up Area' which is associated with the main highway corridor of the A159 (Thonock Road). Unwooded Vales comprises an extensive, low lying rural landscape underlain by Triassic and Jurassic mudstones and clays and widespread superficial deposits. This landscape character type offers expansive long distance and panoramic views from higher ground at the margin of the Unwooded Vales which gives a sense of visual containment. The land within this landscape character type has complex drainage patterns of watercourses that flow within shallow undulations often flanked by pasture and riparian habitats. Limited woodland cover is a key characteristic of the Unwooded Vales and this therefore relies on shelterbelts and hedgerow trees to gain a greater visual significance and habitat value. The landscape within this landscape character type is sparsely settled with small villages and dispersed farms linked by quiet rural lanes.

Character Context:

The Cottam 3b Site is mainly located within RLCT 4a: Unwooded Vales landscape character type, where the land area is found to the south of Kirton Road B1205 (and mainline railway) and to the northeast of the settlement of Pilham and east of the settlement of Blyton where it forms the boundary with the adjoining RLCT 4b: Wooded Vales. To the east of the Cottam 3b Site, the settlement comprises a wider collection of scattered farmsteads. The ridgeline (further to the east) then gives strong containment where the settlements of Grayingham, Blyborough and Willhoughton mark the boundary with the B1398.

RLCT 4a: Unwooded Vales landscape character type is host to the Cottam 3b Site within the 2km study area and the 5km study area.

RLCT 4a is considered to form part of the immediate landscape context for the Cottam 3b Site.



SOLAR PROJECT			
Receptor susceptibility to change	Value of Receptor	Sensitivity	Embedded Mitigation
In terms of forces for change, the Unwooded	Scenic: The Unwooded Vales appeal to the visual senses where the roads and watercourses	<u><i>Character:</i></u> The roads and	Embedded Mitigation would be taken into
Vales aims to protect existing rural landscape	combine to give a subtle grain to the landscape. The interruptions at the bridge crossings, such	watercourses combine to give a	account at the construction, operation
features, in particular the restoration of	as Blyton Beck, provide local points of interest and the opportunity to capture views across the	subtle grain to the landscape.	(Year 1 and Year 15) and decommissioning
hedgerows since the most widespread change	landscape to the higher landform fringing the Unwooded Vales at Kirton in Lindsey.	The interruptions at the bridge	stages of the Scheme. This Embedded
has been in agricultural intensification and		crossings, such as Blyton Beck,	Mitigation is also referred to as primary
the change from pastoral to arable cropping	<i><u>Cultural</u></i> : The landscape shows evidence of historic settlement with farms and nucleated villages	provide local points of interest	mitigation and would include the following
that has resulted in the loss of hedges, and	and small hamlets such as the Medieval village of Southorpe. The landscape surrounding these	and the opportunity to capture	measures:
consequently, an increase in filed size. The	settlements retain some rural and tranquil character with farms, but minor lanes and roads are	views across the landscape.	
loss of pasture is particularly evident around	interrupted by the presence the former airfield in parts. There are Roman roads that pass across		
settlements, where grazing animals and	the wider area such as Ermine Street indicating that these low-lying areas provided convenient	<u><i>Quality:</i></u> The landscape shows	
smaller field sizes contribute to the setting	routes through the hills and wetlands.	evidence of historic settlement	A 2m buffer around the proposed
and structure of several villages. Many of the		with farms and nucleated	development will be provided between
rural villages have not seen widespread	Natural: There are extensive expanses of semi-natural habitat and rivers, and streams are an	villages and small hamlets such	construction areas and boundary fencing.
expansion but development pressures	important landscape feature such Blyton Beck and its associated tributaries. Overall, in such a	as the Medieval village of	
continue with the demand for housing,	managed airfield biased and large-scale agricultural environment, networks of hedgerows and	Southorpe. The landscape	A max 2.4m high steel palisade fence will
commerce and industry is creating visual	hedgerow trees gain significance in offering a refuge for birds and insects.	surrounding these settlements	surround all substation equipment.
intrusion and extending the urban fringe.		retain some rural and tranquil	
	<u>Recreation and Enjoyment:</u> The Unwooded Vales are valued for recreation which often focuses on	character with farms, but minor	Additional deer fencing is to be considered
Overall, the susceptibility of the Unwooded	the locations where panoramic views are possible from elevated locations from rising land at the	lanes and roads are interrupted	outside of this boundary – to be 2.5m high.
Vales is conditioned by managing growth,	edges of the Vales. Whilst the landform of the Unwooded Vales is typically low and subdued,	by the presence the former	
ensuring development is appropriate in terms	rising landform often provides locations where glimpse of neighboring elevations are often	airfield in parts.	Existing hedges are to be allowed to grow
of type, scale, and location. The flat, open	sufficient to provide a 'sense of place' and add to the recreation and enjoyment of the area.		out and will be managed to a height of 5m.
landscape is also a key consideration and	Typically, these locations occur around Blyton to the west and Willoughton to the southeast.	<u>Value:</u> Areas have a positive	Hedgerow trees will be encouraged to
whilst the aim is to plan new tree planting		landscape character but include	grow out with the addition of new
around key settlements, woodland does not	Local Distinctiveness and Sense of Place: The landscape has a 'strong sense of place' with major	some areas of degradation	hedgerow trees as appropriate, randomly
form a significant component of this	landform features flanking the lower lying areas creating broad scale visual containment along	where agricultural	spaced along the length of existing hedges.
landscape, and in considering its open and	the ridgeline to the east at Willhoughton, Blyborough and Grayingham. Wide panoramic views	intensification has eroded	
expansive character, extensive new woodland	are also possible from the low hills and ridges that form watersheds between watercourses. This	landscape character, particularly	Lighting will be limited to downlights within
planting would be generally inappropriate.	contrasts with the lower lying areas where intact hedgerows and belts of riverside trees truncate	around the edges of	substations and battery banks only and
	views.	settlements.	used when maintenance is required.
The landscape receptor is moderately	Use the and Malle sizes. The Use of a division and vision a second limited active due of DD a Miles diverses the		
susceptible to the proposed development,	<u>Health and Wellbeing:</u> The Unwooded Vales provide a very limited network of PRoW leading to the	<u>Capacity:</u> The landscape benefits	The landscape effects with only the
and a moderate ability to accommodate the	dependence on the more routes that crisscross the area in all directions, linked by a series of	from high levels of visual	Embedded Mitigation taken into account
specific proposed change, because the	narrow tracks that lead to isolated farmsteads, and which often create 'no-through roads' in the	containment due to the local	equate to those effects set out for the
relevant characteristics of the landscape have	landscape.	landform, hedgerows, and	operation stage (Year 1) and this includes
some ability to accommodate it without	Important Spatial Function: The landscape benefits from high levels of visual containment despite	shelter belts and this helps	secondary mitigation which will have been
undue adverse effects, taking account of the	the low levels of woodland cover. Instead, the local landform, hedgerows and shelter belts	tolerance for landscape change.	carried out but will have had limited
existing character and quality of the	create visual containment and give the Vales Landscape an intimate character.		physical or landscape character impact at
landscape, and/or achievement of relevant	a cate visual containment and sive the vales Euroscope an intimate character.		this Embedded Mitigation stage.
planning policies and strategies.	Overall, the value of the Unwooded Vales is shaped by the strong agricultural character and		
	presence of the mainline railway, with wide areas retaining a strong sense of openness.		
	Woodland cover does also not form a significant component in this relatively expansive		
	landscape. In recent decades, the demand for housing, commerce and industry is creating visual		
	intrusion and extending development pressures into the countryside.		
Medium (5km Study Area)	Medium (5km Study Area)	Medium	
Medium (Substation Site)	Medium (Substation Site)	Medium	



Regional Scale Landscape Character – 4a: Unwooded Vales (Cottam 3b – Substation Site)

Construction	Operation (Year 1)	Operation (Year 15)	Decommissioning
The 132ky substation is set within the southern	Within the Cottam 3b Site, the following secondary	Secondary mitigation such as planting, and grass seeding would be taken into	A similar process to that of
	mitigation will be implemented at the operation stage	account at operation stage (Year 15) to include the following changes to the	construction stage, but with
-	(Year 1) to enhance the regional landscape character:	landscape:	Scheme being no longer
closest. It measures 64m x 51m maximum		la nascape.	operational. This is an asses
	The Site lies within the Unwooded Vales LCA 4a. The	Growth of existing and proposed vegetation is assumed to be:	of the Site in winter but assu
•	substation is to be relatively well contained within the		retention of existing vegetat
	Site and the size and location will mean that it will not	Woodland/trees and shelterbelts: 2.5m max at Year 1, 7.5m max at Year 15.	builds upon the proposed p
	unduly adversely affect the overall integrity of the		and secondary mitigation th
at 3.995m. The substation is likely to take 12	Character Area.	New hedgerows: 0.6m at Year 1 and 3.5m at Year 15.	been established as the futu
-	Character Area.	New neugerows. 0.011 at real 1 and 5.511 at real 15.	
months to construct.	Designations lie productions that the west (southwest of	Evisting had service 0.0m at Very 1 and Em at Very 15	baseline. Effects are those a
	Designations lie predominantly to the west/southwest of	Existing hedgerows: 0.9m at Year 1 and 5m at Year 15.	from activities for the durati
Integrated conversion units are laid out across	both the Cottam 3a and 3b Sites with Ancient Woodland,		the decommissioning to incl
the Sites to include transformers, inverters and	Local Nature Reserves and Local Wildlife Sites within the	Shrubs: 0.9m at Year 1 and 5m at Year 15.	site traffic, noise and vibrati
	study area but having no physical or visual		from decommissioning activ
x 5m x 3.5m high and will therefore be seen	impact/influence on the Site(s) other than distant views	Following mitigation, at Year 15, The existing woodland locally will be	dust generation and site rur
within the context of the panelled areas.	where these may exist. Opportunities for reinforcement	augmented by increased vegetation cover creating both visual and ecological	Shelterbelts will have been
	of the character area within both the Cottam 3a and 3b	links across the landscape to the adjoining woodland blocks. Grassland mixes	provided to increase the leve
Properties potentially affected: Glebe Farm	Sites are available.	will have established and will create valuable habitats with soil structure greatly	tree cover and link vegetation
looking East, Bonsdale Farm looking west		improved through cessation of arable cultivation.	locally.
Potentially properties in Aisby looking North	Both Sites lie on the outer limits of the SSSI's impact risk		
long distance, lots of intervening vegetation.	zones of Scotton Becks Fields and Scotton Common.	Following mitigation, the Site is able accommodate change without undue	Following decommissioning
	There will be no adverse effect in relation to the SSSI.	adverse effects and there will be beneficial effects across the Site generally in	land is likely to be returned
Viewpoints potentially affected by the		the increased level of vegetation cover locally, the linking and enhancement of	arable production. The Site
substation include: 55, 56, 58	There are no Listed buildings within the Site of Cottam	existing natural features and the biodiversity benefits that this will bring,	however benefit from the
	3a or 3b but a small number within the village of Blyton,	creating a stronger, more resilient framework across the local character area.	significantly enhanced tree a
Activities during site preparation / enabling	to the west, Pilham to the Southwest and Northorpe to		hedgerow planting that has
works, construction, and commissioning with	the northeast, as well as The Railway Station adjacent to	By Year 15, the Site at Cottam 3b will present a 'well treed' landscape in line with	carried out and has mature
enects such as construction trainc, noise and	the Cottam 3b Site, and although their setting is not	the character area aims, the existing vegetation having been allowed to grow	create a much stronger and
VIDIALION NOM CONSTRUCTION ACTIVITIES, CUST	directly affected by development, general mitigation	out and new trees, hedgerows and scrub having fully established and begun to	landscape, retaining and en
generation, site runon, mud on roads, and the	around the boundary of the Sites will help to ensure	mature. The overall scene will be relatively well vegetated, with scattered and	the overall character and pr
visual intrusion of plant and machinery of site.	that these properties are not impacted. There are no	irregularly spaced trees, following the existing lines of both historic field	considerable biodiversity be
At the early stages of the construction stage,	direct views of the substation from these properties. In	boundaries and the road network.	over the years. Bird mitigation
ground and lower-level activities would	particular, the Railway Station has limited view due to		fields are likely to be retaine
predominantly be screened by existing	good levels of intervening vegetation.	The structures of the substation will be predominantly screened to a height of	the potential may exist to re
vegetation.	Bood levels of mile vening vegetation.	5m by adjacent and intervening hedgerows with hedgerow trees having reached	grass margins to maintain s
	The land use will change from intensively managed	a height of 7.5m helping to soften views from across the wider landscape.	varied land use and a high le
During the latter part of the construction stage,	arable land to an area of construction with associated	a neight of 7.5m helping to solten views from across the wider landscape.	biodiversity in the local area
views would become available of the elevated	hard standing, access roads and potential for some	Following mitigation, the Site is able accommodate this change without undue	
activities above the neugerows, but these would	pollution to the soils locally.	adverse effects on the land use, heritage assets, local and national designations	
be influed in number of views/potential		and natural resources. There will be some adverse effects in terms of the	
receptors, being predominantly users of the	The substation area will have limited adverse affects are		
PROW Phil/20/1 and road lisers and residents	The substation area will have limited adverse effects on	communication links locally which will become busier and limited adverse	
	the topography within the immediate area, the Site	effects on the settlements locally with most views softened by proposed and	
across from the railway line	being relatively level. There will be some soil movement	existing vegetation by Year 15. The PRoW within the Site will be adversely	
	to accommodate the hard standing, access roads and	affected but by Year 15, the existing vegetation will have grown out to 5m and	
	structures required. There is one small pond within the	trees will have reached 7.5m softening any views of the substation from this	
with the construction including fencing gates	Site closest watercourses are located to the south	route. Overall the impacts create a moderate adverse effect with regard to	
boundary treatment and other means of	beyond Pilham Lane.	these receptors. A number of viewpoints will be affected and where views of the	
enclosure and works for the provision of		substation are available, this will have a moderately adverse effect on the	
security and monitoring measures such as CCTV	The proposed development will have little effect on local	receptors due to the limited height of this structure which can be mitigated to a	
secondy and morned and so sach as cert	industry and commerce although the introduction of the	great degree. Existing detracting features also have a bearing on the overall	
and the laying down of internal datas. There	solar farm will provide some additional traffic to the	effects and the substation will be seen within the context of these other	
mitigation works around the substation,	roads and lanes locally. Mitigation will be in the form of	features. There will be beneficial effects in the increased level of vegetation	



am			[Reference
	 including planting and the improvement of existing hedgerows to all boundaries of the Site/Sites creating a much greater level of vegetation locally, creating many associated beneficial effects. These short-lived construction activities would not adversely affect the local woodlands, existing vegetation or designated areas. There would be a change to the arable land use with a small area of arable land being covered by the built form. The field boundaries and the associated tree cover would remain intact and help with visual layering across the landscape and the integration of the new substation. There would be an increase in the level of traffic locally. Overall, the landscape receptors, both within the Site and of the wider area, are able to accommodate the changes that arise through the construction of the Site without undue adverse effects. The integrity of all existing landscape features will be retained. Overall, the main effects are those relating to an increased level of traffic and disruption locally during construction, the loss of a small area of agricultural land and potential for ground pollution which will need to be carefully managed. There will be very minor adverse effects on the settlements locally with views being very limited. Effects on other landscape receptors are considered Minor. 	tree, hedge, and shelterbelt planting as well as shrub and grassland areas which will both mitigate views of the additional traffic and provide benefits in terms of reducing noise and carbon impacts. The settlements locally (particularly those of Pilham, Aisby and Blyton) will be protected through the proposed mitigation in and around the Site, with strong boundary vegetation screening views into the Site and enhancing the settlement settings where these abut the proposed development. The overall increase in vegetative cover and the reduction of over intensively farmed arable land will have benefits locally both in visual terms and with regard to a considerable increase in the biodiversity around settlements and isolated dwellings in the area. There will be very minor enhancements to leisure pursuits within the locality with a small number of PRoW being enhanced through tree and hedge planting adjacent to the Sites. There are limited PRoW that have any close association with the substation either visually or physically. Within the Cottam 3b Site, Pilh/20/1 (footpath) runs east/west across the centre of the Site. The PRoW is currently very open in parts and provides a somewhat windswept route from Pilham Lane across to Bonsdale Farm. Views from this PRoW will be adversely affected in close and mid range views but reduced due to existing vegetation to the south of this route. In terms of mitigation for the two AGLVs associated with this Site, due to their distance and varied relationship with the Site, it is the overall scheme of mitigation that will reinforce the landscape character where this has been lost or eroded in the last century to intensive arable farming. Within the Cottam 3b Site, the following secondary mitigation will be allowed to grow out and hedgerow trees will be addered help break up views of the substation and provide additional tree cover locally. A new hedgerow to the north of this PRoW will further screen the substation from views from the north. The existing hedgerow directly west of the s	[Reference]
		the addition of hedgerow trees. Hedgerows to the south of the Site will also be enhanced creating a layered effect when viewed across	

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Significance of Effect	Negligible Not Significant	Minor Not Significant	Minor Not Significant
Level of Effect	Adverse & Short Term	Adverse & Long Term	Adverse & Long Term
Magnitude	Very Low	Low	Low
5km Study Aı	rea:	structures and the substation will be seen within the context of these features locally. There are limited adverse Landscape effects with regard to other features providing an overall Moderate Adverse Effect at Year 1.	
		Overall, at Year 1, some strong existing vegetation will limit views to the substation from many areas other than the Pilham Lane to the south and the unnamed road (Bonsall Lane) to the east. The railway is a detracting feature locally with its associated noise and	
		Overall, this will help to link habitats and strengthen the overall character locally and maintain a sense of place. Important opportunities to bolster the local vegetation cover, buffering and connecting existing fragmented vegetation, aims to create a more resilient and biodiverse landscape.	
		Although new vegetation will be immature, existing hedgerows will have begun to grow out at Year 1 and the varied grassland areas will have become established, starting to create valuable habitats.	
		A new hedgerow on the eastern boundary (southern section of the Site south of the PRoW) of the Site will help to mitigate views from Bonsdale Farm whilst existing hedges will be enhanced along the northern section of the eastern boundary adjacent to the road, softening views from further northeast.	
		A new hedgerow is proposed to the western boundary of the Site (northern section) which will help mitigate any potential views from The Railway Station and views from the west along Station Road. Further new and enhanced hedgerows running north south across the Site will further soften views from the northwest.	
		A block of successional scrub is proposed to the south of the railway line which will help to form a buffer and soften views south from the train.	
		the landscape, particularly screening views from the south and along Pilham Lane/Green Lane, which although well vegetated along its route, does have gaps creating views north.	

OT ETTECT Substation Site Cottam 3b: Land Use

Very Low
Neutral & Short Term
 Negligible Not Significant



	High	High	Medium	Low
Magnitude				
Level of	Adverse & Short Term	Adverse & Long Term	Adverse & Long Term	Neutral & Short Term
Effect				
Significance	Moderate-Major Significant	Moderate-Major Significant	Moderate Significant	Minor Not Significant
of Effect				
Substation S	ite Cottam 3b: Topography and Waterco	ourses		
	High	High	Medium	Low
Magnitude				
Level of	Adverse & Short Term	Adverse & Long Term	Adverse & Long Term	Neutral & Short Term
Effect				
Significance	Moderate-Major Significant	Moderate-Major Significant	Moderate Significant	Minor Not Significant
of Effect				



In-Combination Effects [Cumulative Sites]	Cumulative Effects [Cumulative Developmen
<u>In Summary</u> The In-combination effects upon LCA – 4a of the Cottam 3b Substation and Cumulative Sites is Moderate at year 1 of operation and Minor at year 15 with mitigation. This is due to the limited impact upon the LCA as a result of the nature of the Scheme, the segregated nature of the Sites; together with the existing landscape character associated with the fabric of the landscape of the Sites and Study Area. Embedded and Secondary Mitigation proposed would screen the panels and therefore the effects upon landscape character are reduced in combination with the Substation. <u>Fabric of the Landscape</u> There would not be the removal of or changes in individual elements or features of the landscape within the character area. There would be the introduction of new elements and features comprising the solar panel areas and the substation area.	In Summary The Cumulative Effects upon LCA – 4a of the Scheme (incluyear 1 of operation and Negligible at year 15 with mitigation of the nature of the Scheme, together with the existing lan of the Sites and Study Area. Embedded and Secondary Miteffects upon landscape character are reduced in combinate <i>Eabric of the Landscape</i> There would not be the removal of or changes in individua area. There would be the introduction of new elements and feat area.
 Aesthetic Aspects of the Landscape Refer to Figure 8.15.1.3 [C6.4.8.15.1.3] which shows that with the Cottam 3b Site, cumulative visibility with the Cottam 1 Site/Sites, Cottam 2 Site and Cottam 3b Site would not be experienced across the majority of the 2km study area. This is due to the distance, the intervening woodlands, hedgerows, and tree cover between the Site/Sites. The intervening settlements and built form would also curtail cumulative visibility between these Site/Sites. There are local patches of intervisibility between Cottam 3a and 3b Site/Sites, extending from the: Northeast boundary of the Cottam 3a Site, defined to the west by the Green Respect Burial Park and Park House Farm, and reaching as far as Northorpe in the east East boundary of Cottam 3a Site, and stopping short of Cold Harbour Farm; and North boundary of the Cottam 3b Site, extending for a short distance as far as Grange Farm and Top Farm. Potential cumulative visibility between the Cottam 3a and 3b Site/Sites would not be experienced however, due to the intervening vegetation bordering the mainline railway and the isolated settlement comprising Grange Farm and Top Farm. The flat landform and intervening woodland blocks, hedgerows and tree cover would also close down any inter-visibility across the landscape between these cumulative sites. 	Aesthetic Aspects of the Landscape Refer to Figure 8.15.1.3 [C6.4.8.15.1.3] which shows that we cumulative developments would not be experienced across distance, the intervening woodlands, hedgerows, and tree built form would also curtail cumulative visibility between the There are local patches of cumulative visibility which may be Site and Tillbridge Solar. This cumulative visibility is set out Figure 8.15.2.8 Cottam 1, 2, 3a and 3b Tillbridge Solar Cum Overall Landscape Character of the Unwooded Vales Overall, the character of the Unwooded Vales is shaped by strong sense of rural tranquility. In contrast, the low levels landscape comprising an arable land use within a scattered to west and a more strategic road network north to south. ability to accommodate change without undue adverse effi not alter the overall character of the landscape within the lands
 There are local patches of intervisibility between the Cottam 3a, 3b and Cottam 2 Sites, extending from the: South boundary of the Cottam 3b Site, bordered by Pilham to the west and the medieval settlement of Dunstall to the east, and reaching as far as Springthorpe in the south South boundary of the Cottam 3a Site, bordered by the eastern edge of Blyton to the west, reaching Grange Farm and stopping short of the mainline railway; and North boundary of the Cottam 3a Site, following the alignment of the A159 (Laughton Road) and stopping short to the west of the Green Respect Burial Park. Potential cumulative visibility between the Cottam 3a, 3b and the Cottam 2 Sites would not be experienced however, due to the intervening settlements of Corringham, Yawthorpe, Aisby, Dunstall and Pilham. The flat landform and intervening vegetation cover would also close down any inter-visibility across the landscape between these cumulative sites.	

ations) and Cumulative Developments is Minor at e to the limited impact upon the LCA as a result acter associated with the fabric of the landscape osed would screen the panels and therefore the Substation.

r features of the landscape within the character

sing the solar panel areas and the substation

am 3a and 3b Sites, cumulative visibility with the ty of the 5km study area. This is due to the een the Site/Sites. The intervening settlements and tes.

kely significant effects, between the Cottam 3a letail within the following figures:

elopments Augmented ZTV [C6.4.8.15.2.8]

agricultural presence, with wide areas retaining a cover create a relatively open and expansive settlement, linked by a series of minor roads east ant characteristics of the landscape have some mulative visibility for the Cottam 3b Site would /ales Character Area 4a.



	• East of the Cottam 3b Site and north of the Bonsdale Farm at Pilham, extending across the landscape to the north of the medieval village of Dunstall as far as the medieval village of Southorpe.	
	Potential cumulative visibility between All Sites would not be experienced however, due to the intervening settlements of Corringham, Yawthorpe, Aisby, Dunstall and Pilham. The flat landform and intervening vegetation cover would also close down and inter-visibility across the landscape between these cumulative sites.	
	Users of linear routes, especially footpaths or other rights of way, or transport routes, may potentially experience the aesthetic aspects of the cumulative sites revealed in succession as a series of sequential views. For further details refer to the following detailed visual receptor sheets:	
	Appendix 8.3.2.2 Individual Viewpoint Receptor Sheets [C6.3.8.3.2.2] Appendix 8.3.2.3 Individual Viewpoint Receptor Sheets [C6.3.8.3.2.3] Appendix 8.3.2.4 Individual Viewpoint Receptor Sheets [C6.3.8.3.2.4]	
	Appendix 8.3.3.2 Individual Residential Receptor Sheets [C6.3.8.3.3.2] Appendix 8.3.3.3 Individual Residential Receptor Sheets [C6.3.8.3.3.3]	
	Appendix 8.3.4.2 Individual Transport Receptor Sheets [C6.3.8.3.4.2] Appendix 8.3.4.3 Individual Transport Receptor Sheets [C6.3.8.3.4.3]	
	Appendix 8.3.5.2 Individual PRoW Receptor Sheets [C6.3.8.3.5.2] Appendix 8.3.5.3 Individual PRoW Receptor Sheets [C6.3.8.3.4.3]	
	<u>Overall Landscape Character of the Unwooded Vales</u> Overall, the character of the Unwooded Vales is shaped by the strong agricultural presence, with wide areas retaining a strong sense of rural tranquility. In contrast, the low levels of woodland cover create a relatively open and expansive landscape comprising an arable land use within a scattered pattern of settlement, linked by a series of minor roads east to west and a more strategic road network north to south. These relevant characteristics of the landscape have some ability to accommodate change without undue adverse effects. The cumulative visibility for the Cottam 3b Site would not alter the overall character of the landscape within the Unwooded Vales Character Area 4a.	
Magnitude	Construction: Medium Operation (Year 1): Medium Operation (Year 1): with only Embedded Mitigation: Medium Operation (Year 15): Low Decommissioning: Low	Construction: Low Operation (Year 1): Low Operation (Year 1): with only Embedded Mitigation: Low Operation (Year 15): Very Low Decommissioning: Very Low
Type of Effect	Construction: Adverse & Short Term Operation (Year 1): Adverse & Long Term Operation (Year 1): with only Embedded Mitigation: Adverse & Long Term Operation (Year 15): Neutral & Long Term Decommissioning: Neutral & Short Term	Construction: Adverse & Short Term Operation (Year 1): Adverse & Long Term Operation (Year 1): with only Embedded Mitigation: Adverse & Long T Operation (Year 15): Neutral & Long Term Decommissioning: Neutral & Short Term
Significance of Effect	Construction: Moderate Significant Operation (Year 1): Moderate Significant Operation (Year 1): with only Embedded Mitigation: Moderate Significant Operation (Year 15): Minor Not Significant Decommissioning: Minor Not Significant	Construction: Minor Not Significant Operation (Year 1): Minor Not Significant Operation (Year 1): with only Embedded Mitigation: Minor Operation (Year 15): Negligible Not Significant Decommissioning: Negligible Not Significant

g Term