

5. Access

5.1 Introduction

- 5.1.1 This section sets out the vehicular and public access provisions for the Scheme, within the Solar and Energy Storage Park and the Grid Connection Corridor. It also sets out an overview of proposed traffic associated with the construction phase of the Scheme.
- 5.1.2 The Transport Assessment presented in Appendix 13-D of the ES **[EN010131/APP/3.3]** assesses the traffic impacts of the Scheme on the local area both singularly and cumulatively with other developments in the area, including the West Burton, Cottam and Tillbridge proposed solar DCO projects. The **Framework Construction Traffic Management Plan (CTMP)** presented in Appendix 13-E of the ES **[EN010131/APP/3.3]** presents measures to manage construction traffic. The Framework CTMP also includes appendices presenting initial access designs and swept path drawings demonstrating that the proposed accesses are feasible. Please refer to these documents for further information.
- 5.1.3 The broad access locations have been informed by the need to provide access to each section of the Order limits, particularly for each section of the Grid Connection Corridor where areas may have limited accessibility due to linear constraints such as the River Trent. Once these broad locations had been identified, the selection of the access points was informed by:
- Assessments of the existing highway including design and traffic numbers;
 - Initial access designs focused on identifying locations that provide safe accesses for the vehicles required
 - Aim to reduce impacts on properties and other sensitive receptors such as designated heritage assets and the landscape;
 - The design to reduce vegetation removal where possible;
 - The presence of physical restrictions to access locations such as electricity pylons; and
 - Views expressed by Local Highway Authorities, other key stakeholders and the community during consultation.

5.2 Site Accessibility

- 5.2.1 The site is located in a rural location approximately 4km from Gainsborough. Gainsborough Lea Road Station is located approximately 4.5km to the north of the site with services running to Sheffield, Lincoln, Peterborough and Doncaster. However, there are limited locations served and services are not very frequent. There are also bus stops located on the A156 and B1421 with services to Gainsborough and Lincoln, but again, relatively limited services. There are no dedicated cycle facilities but some more rural roads close to the site could be used by workers to cycle to the site. Due to the rural location of the Solar and Energy Storage Park, there is limited footway provision in the surrounding area.

- 5.2.2 Given the location of the site and services available, it is anticipated that the majority of construction workers will access the site by road. Nevertheless, sustainable travel will be promoted for usage by construction staff travelling to/ from the Solar and Energy Storage Park with further details set out within the Framework CTMP in **ES Volume 3: Appendix 13-E [EN010131/APP/3.3]**. Shuttle services would be provided for construction workers from nearby settlements such as Gainsborough and Lincoln to the site to reduce the traffic generated and provide access for workers without their own transport. Temporary car parks will also be provided within the proposed compound areas, with 100 spaces at the main compound and 18 spaces at each of the smaller compounds, meeting peak parking demand. Construction workers will then be transported around site via minibus, or similar.
- 5.2.3 A vehicle routing plan showing the routing strategy for HGVs to the Solar and Energy Storage Park is presented in **ES Volume 2: Figure 13-3 [EN010131/APP/3.2]**.
- 5.2.4 During operation there will be few trips associated with the Scheme.

5.3 Traffic Generation

- 5.3.1 Traffic will generally be associated with the construction phase, with operational traffic being minimal.

Construction Period

- 5.3.2 The Scheme is likely to be constructed over a 24-36 month period. During peak construction periods there would likely be:
- 154 daily vehicles associated with staff/ shuttle services (308 daily movements);
 - Up to 60 HGV deliveries (120 movements) per day; and
 - Up to 30 Light Goods Vehicles (LGV) (60 movements) per day.
- 5.3.3 A small number of large Abnormal Indivisible Load Vehicles will be required to deliver large components to the site during construction, including a single 65.8m vehicle to deliver the transformer on the main site and several 24.6m vehicles to transport cable drums to the Grid Connection Corridor. Assessments have been completed to confirm that there are suitable routes for these vehicles to the site; the vehicles will be required to follow the abnormal load routing strategy as shown in **ES Volume 2: Figure 13-6 [EN010131/APP/3.2]**. The Order limits include additional areas at junctions in case any work is required to temporarily remove street furniture or make any repairs following deliveries.

- 5.3.4 The Framework CTMP contains mitigation to avoid and/or reduce impacts relating to construction traffic including the delivery of materials and transport of staff during the construction phase. A self-contained wheel wash will be installed near the site exits onsite to be used by vehicles prior to exiting the construction site onto the public highway. For loads unable to use the fixed wheel wash, localised wheel washing would be set up to cater for these individually and as required to prevent detrimental effect to the highway.

Operational Period

- 5.3.5 During the operational phase a minimal level of activity is expected across the Solar and Energy Storage Park, primarily related to vegetation management, equipment maintenance and servicing, monitoring and renewal of any components. There are anticipated to be approximately 14 permanent staff per day and an average of one visitor per day. This equates to a maximum of 15 two-way trips per day. Along the Grid Connection Corridor activity would be limited to infrequent routine inspections and reactive maintenance.

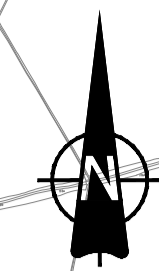
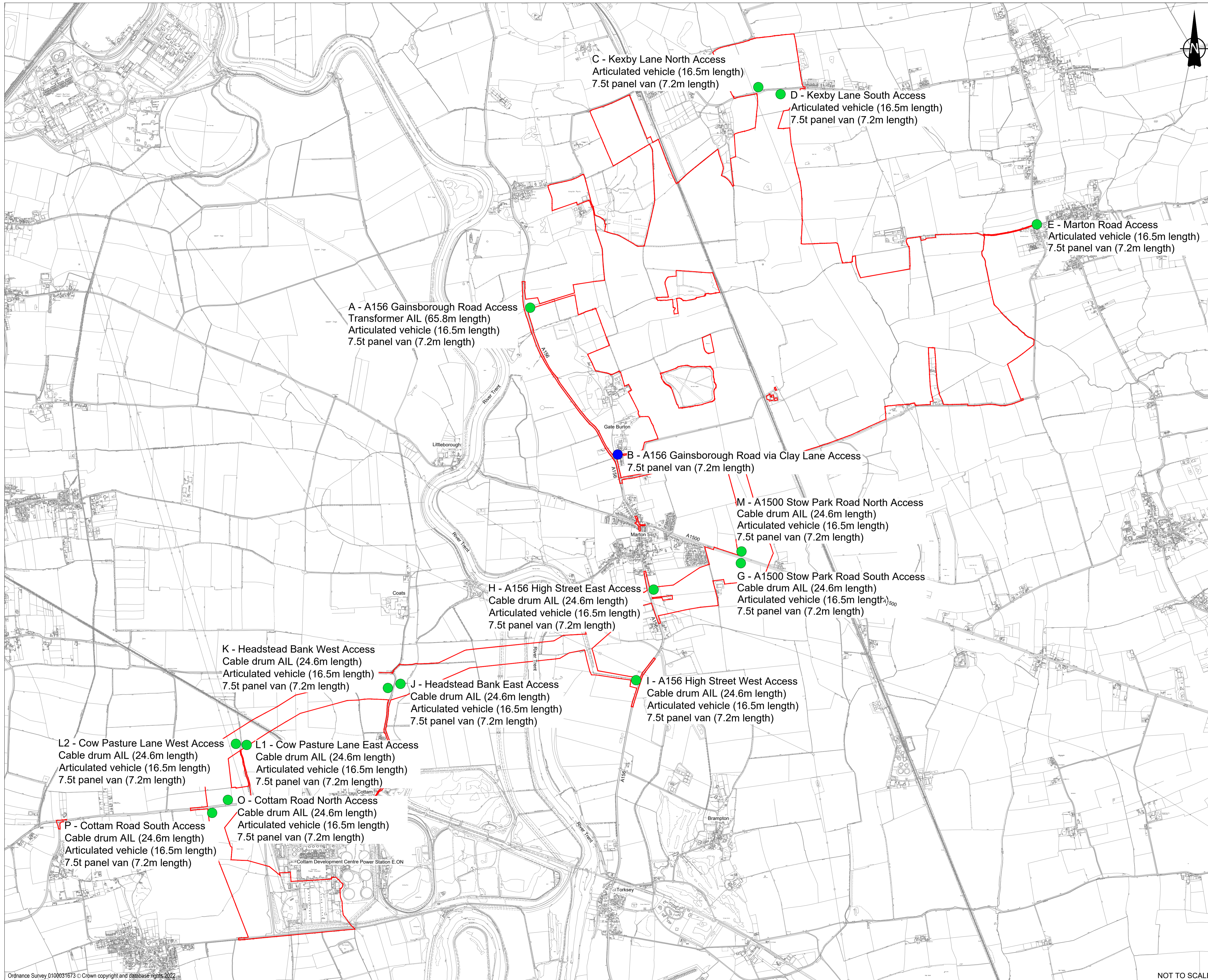
5.4 Access Location and Design

- 5.4.1 Figure 5-1 in this PDAS shows the Scheme Order limits alongside the proposed accesses proposed for construction and operation. Further detail on all accesses is provided below.

Solar and Energy Storage Park

- 5.4.2 Construction HGVs will travel to/ from the Solar and Energy Storage Park via the A156, to minimise passing through local villages. They will then utilise the B1241 Kexby Lane to reach the northern and eastern portions of the Solar and Energy Storage Park via the Kexby Lane accesses and the Marton Road access if necessary. The routing strategy reflects the most suitable routes available to avoid limitations/ restrictions associated with alternative local routes adjacent to the site such as Marton Road to the south of the construction access.
- 5.4.3 Five accesses are proposed to the Solar and Energy Storage Park, as shown in Figure 5-1, this includes:
- Access A: A156 Gainsborough Road North
 - Access B: Gainsborough Road via Clay Lane
 - Access C: Kexby Lane North
 - Access D: Kexby Lane South
 - Access E: Marton Road
- 5.4.4 When the Application was submitted in January 2023 there was an additional access proposed named 'Access F', proposed on Marton Road to the south of the Solar and Energy Storage Park. This was proposed as a minor access for the operational period only. At Deadline 2 the Applicant removed this access to reduce the conflict between the access and advance planting planned in the area. This also reduced the environmental impacts associated with vegetation removal in this area.

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 Filename: P:\TRANSPORT CONSULTANCY PROJECTS\JOB FOLDERS_60664324 - GATE BURTON ENERGY PARK\900 - CAD_GIS\60664324-HGN-DR-CH-0000 ACCESS LOCATION PLAN_P02.DWG
 Project Management Initials: Designer: CB Checked: MRW Approved: MRW ISO A1 594mm x 841mm



PROJECT

Gate Burton Energy Park
Development Consent Order

CLIENT

Low Carbon

CONSULTANT

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GENERAL NOTES

Drawing has been prepared for illustrative purposes only

KEY

- REDLINE BOUNDARY
- CONSTRUCTION & OPERATIONAL ACCESS
- OPERATIONAL ACCESS (ONLY)

SHEET PLAN

ISSUE/REVISION

I/R	DATE	DESCRIPTION
P02	01-08-23	Second Issue
P01	09-01-23	First Issue

PROJECT NUMBER

60664324

SHEET TITLE

ACCESS LOCATION AND
PURPOSE PLAN

Figure 5-1

SHEET NUMBER

60664324-HGN-DR-CH-0000

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Access A: A156 Gainsborough Road North, Primary Construction and Operational Access

- 5.4.5 This would be the primary construction access to the site as it provides direct access from an A road at a point with good visibility. Vegetation clearance is proposed to the north and south to provide the necessary visibility splays.
- 5.4.6 The A156 High Street/ Gainsborough Road to the west of the site is a single carriageway road connecting with the A57 to the west of Saxilby in the south and the A631/A159 Gainsborough to the north. The road is subject to the national speed limit (60mph) and does not contain pedestrian footways or street lighting provision within the northern part of the study area, which is in keeping with its rural character. In the vicinity of Marton, to the south of the Solar and Energy Storage Park, the A156 High Street is restricted to a 30mph speed limit and some pedestrian footways and street lighting provision is provided.
- 5.4.7 It is intended that 70% of construction staff and 62% of goods vehicles will use this access during construction. This is also the access that will be used by the large Abnormal Indivisible Load vehicle carrying the transformer. The main construction compound will be located 520m from the proposed A156 Gainsborough Road access, adjacent to the primary access road which will run from the proposed access and eastwards towards the array of PVs.
- 5.4.8 During operation this access will be retained primarily as an access for large vehicles, particularly if components need replacing and as the main emergency services access. Smaller vehicles are more likely to use Access B during operation.

Access B: Gainsborough Road via Clay Lane, Operational Access

- 5.4.9 This is an existing access intended to be used during the operational period. The maximum vehicle size using the access would be 7.5t Panel Van. This access was not considered suitable to cater for the vehicle numbers and sizes associated with construction, hence the use of Access A. However, during operation the access is well placed because it is an existing access that connects directly to the railway underpass on Clay Lane, enabling vehicles to use the access and travel directly to both the east and west sides of the site. No modifications or visibility splays are considered necessary for the access to be used for this purpose.

Access C: Kexby Lane North, Secondary Construction and Operational Access

- 5.4.10 This would provide a secondary construction access service a few parcels of land to the north of Kexby Lane. It is anticipated that approximately 9% of construction staff and 9% of goods vehicles will use this access. Some vegetation clearance is required for visibility splays. This access would also be retained during the operational stage of the Scheme.

Access D: Kexby Lane South, Secondary Construction and Operational Period

- 5.4.11 This would provide another secondary construction access to serve the area to the east of the railway line. It is anticipated that it would cater for 12% of

construction staff traffic and 20% of goods vehicles during construction. Some vegetation clearance is required for visibility splays. It would also be retained for the operational period.

Access E: Marton Road, Secondary Construction and Operational Access

- 5.4.12 Marton Road would present the third secondary access serving a few parcels to the southeast. It will cater for approximately 9% of construction staff traffic and 9% of goods vehicles. No modifications or visibility splays are required for the proposed use. It would also be retained for the operational period.

Grid Connection Corridor

- 5.4.13 The Grid Connection Corridor within Lincolnshire will run between the Solar and Energy Storage Park to the northeast and the River Trent to the southwest. The route will cross the A1500 Stow Park Road (to the east of Marton), before crossing the A156 High Road (to the south of Marton) and heading west towards the eastern bank of the River Trent.

- 5.4.14 The Grid Connection Corridor within Nottinghamshire will run between the River Trent to the northeast and Cottam Power Station to the southwest. The route will cross agricultural land as well as Headstead Bank, the disused railway track to the northwest of Cottam, Cow Pasture Lane and Cottam Road at the southern-most extent of the Site. Headstead Bank and Cow Pasture Lane are both narrow, minor, very low trafficked single-track rural roads with no dedicated pedestrian facilities/ street lighting etc.

- 5.4.15 The proposed accesses for the Grid Connection Corridor are as follows:

- Access M: A1500 Stow Park Road North
- Access G: A1500 Stow Park Road South
- Access H: A156 High Street East
- Access I: A156 High Street West
- Access J: Headstead Bank East
- Access K: Headstead Bank West
- Access L1: Cow Pasture Lane East
- Access L2: Cow Pasture Lane West
- Access O: Cottam Road North
- Access P: Cottam Road South

- 5.4.16 All accesses for the Grid Connection Corridor are theoretically for both the construction and operational period, although use of each access after construction is likely to be infrequent. During construction each access will be used for construction of the part of the grid connection closest to the access, so use of all accesses would be temporary and focused on particular periods during the construction process. A haul road would be constructed within the Order limits providing more flexibility over the access to each area. All accesses have been designed to ensure they can cater for the worst-case scenario 24.6m Cable Drum Abnormal Indivisible Load vehicles, 16.5m articulated vehicle and vans to provide flexibility in construction.

Access M: A1500 Stow Park Road North

- 5.4.17 This access would be used to access the area of the grid connection to the north of Stow Park Road. The A1500 Stow Park Road/ Marton Road/ Till Bridge Lane runs east-west, to the south of the Solar and Energy Storage Park between and including its junctions with the A156 to the west and the B1241 to the east. In the vicinity of Marton to the west and Sturton by Stow to the east, the road is subject to a 30mph speed limit; in the more rural sections it is subject to the national speed limit in keeping with its rural character. Minor vegetation clearance is likely to be required for visibility splays.

Access G: A1500 Stow Park Road South

- 5.4.18 This access would be located opposite Access M and used to access the area of the grid connection to the south of Stow Park Road. This access would be used to access the area to the south west of the A1500. Minor vegetation clearance is likely to be required for visibility splays.

Access H: A156 High Street East

- 5.4.19 Access H is located directly to the south of Marton, approximately 150m from the nearest property to the north. This access would be used to access the land to the east of the A156. Minor vegetation clearance is likely to be required for visibility splays.

Access I: A156 High Street West

- 5.4.20 Access I is located south of Access H or the western side of the A156, providing access to the area between the A156 and the River Trent. Minor vegetation clearance is likely to be required for visibility splays.

Access J: Headstead Bank East

- 5.4.21 Access J is on the eastern side of Headstead Bank and would be used to access the area of the cable corridor between Headstead Bank and the River Trent. Minor vegetation clearance is likely to be required for visibility splays.

Access K: Headstead Bank West

- 5.4.22 Access K is located to the west of Headstead Bank providing access to the area of the Grid Connection Corridor to the west of the road. Minor vegetation clearance is likely to be required for visibility splays.

Access L1: Cow Pasture Lane East

- 5.4.23 Access L1 is located on the eastern side of Cow Pasture Lane providing access to the Grid Connection Corridor to the east. Cow Pasture Lane is a narrow, minor, very low trafficked single-track roads with no pedestrian facilities/ street lighting etc. However, Cow Pasture Lane will only be used to reach Access L1 in the early part of the construction programme, and then only by vehicles up to 7.2m in length. The internal haul road that follows the grid connection route within the Order limits will be constructed in the early part of the programme and once this is in place, vehicles would travel to Access L1 from Cottam Road along the Corridor. At Access L1, there will be a vehicle crossover (rather than a priority junction) for vehicles to travel across Cow Pasture Lane to Access L2. This will avoid the need for HGVs to travel along Cow Pasture Lane and therefore no improvements at the junction with

Cottam Road are expected to be required. There may be the requirement to resurface Cow Pasture Lane at the crossover point.

Access L2: Cow Pasture Lane West

- 5.4.24 Access L2 is located on the west of Cow Pasture Lane opposite Access L1, providing access to the area to the west of Cow Pasture Lane. As with access L1, for the majority of the construction period this access will only be used to cross Cow Pasture Lane to and from Access L1.

Access O: Cottam Road North

- 5.4.25 Access O will provide access, via the new haul road, to the Grid Connection Corridor between Cottam Road and the railway line heading north from Cottam Power Station. Cottam Road is located between its junction with Rampton Road/ Green Lane to the west and the village of Cottam to the east. Cottam Road is a straight single carriageway road, with a single lane in each direction and is subject to the national speed limit. Sections of footway exist on Cottam Road around the existing Cottam Power Station access and to the east of the power station running towards Cottam village. Minor vegetation clearance is likely to be required for visibility splays.

Access P: Cottam Road South

- 5.4.26 Access P is on the south of Cottam Road and will provide access to the area of Grid Connection Corridor between Cottam Road and the connection point at the Cottam National Grid Substation at Cottam Power Station. Minor vegetation clearance is likely to be required for visibility splays. This access was relocated to the west to align with the accesses proposed by the Cottam and Tillbridge solar projects in August 2023 to reduce cumulative vegetation removal required for accesses. Figure 5.1 shows the revised access location.

5.5 Accesses within the Site

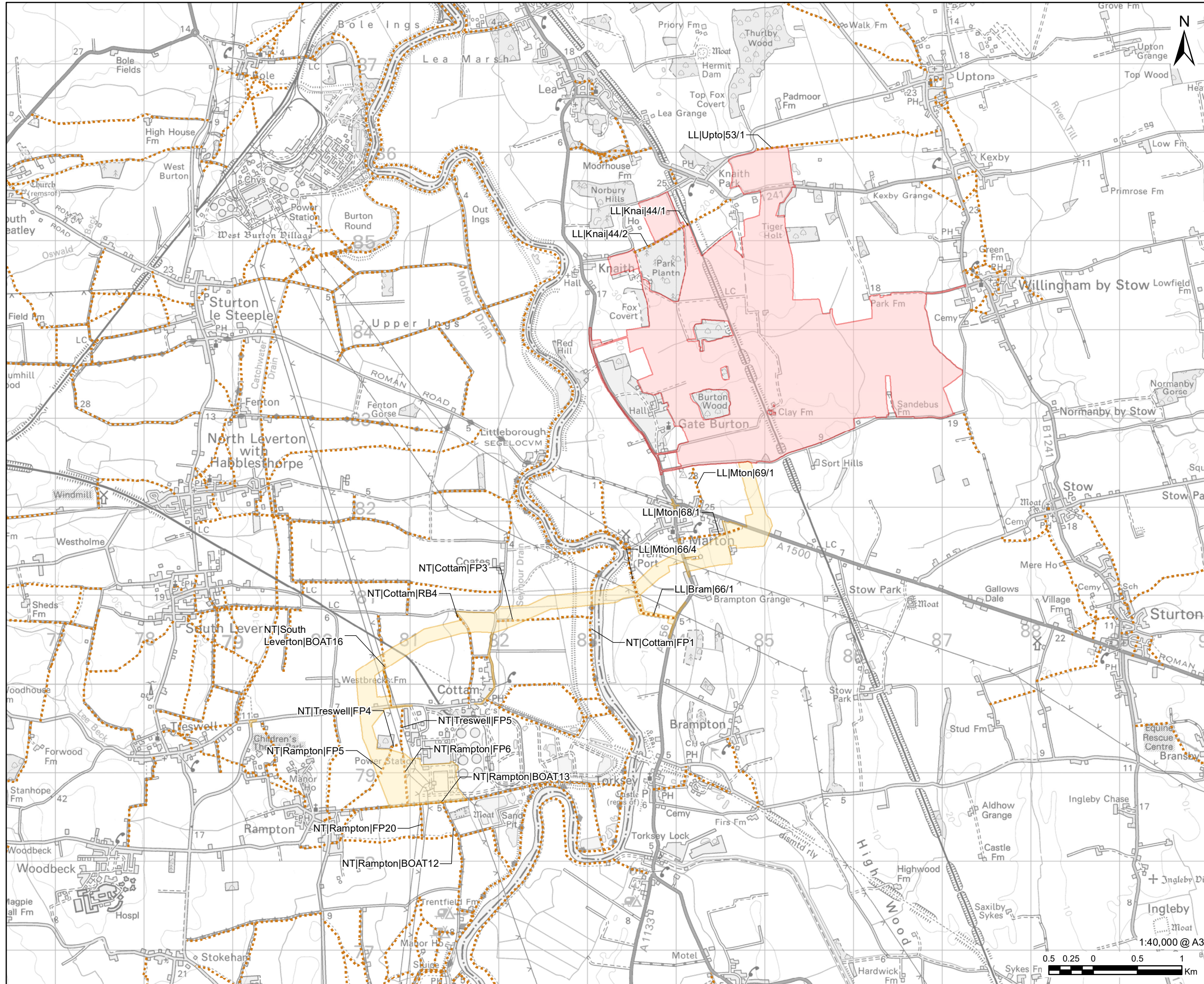
- 5.5.1 Access tracks will be established within the Solar and Energy Storage Park for vehicles to travel around the site during construction and operation.
- 5.5.2 During the construction phase, access from the A156 to the main construction compound (see layout presented in Figure 4-7) and onwards to the Substation and BESS, will comprise an asphalt surfaced road designed to deliver heavy loads such as the transformers and to allow provision of emergency access during operation. The arrangement (i.e. whether the road will be a single lane with passing places or a lane in both directions) of the road is subject to further design. For the purposes of assessment, a maximum 8m width asphalt surface is assumed for the construction and operational phase which provides flexibility for both arrangements.
- 5.5.3 The alignment of this access has been carefully considered to reduce the impact of vehicles using it. During statutory consultation an internal access was proposed to access the north of the BESS, with the minor road maintained to provide a more significant access to the south of the BESS. However, improvements required to the southern access to accommodate the large AIL vehicle would have required vegetation clearance along the route, including tree removal and potential impacts on trees within or close to the Ancient

Woodland. This route also went through the heritage buffer area so using this as the main access to the BESS would increase the traffic through this area and associated temporary impacts. Historic England raised concerns about the impact of any development or activities within the buffer area and potential impacts on assets around Gate Burton. Therefore, the decision was made for the access to the on-site Substation and BESS to be the route to the north western corner of the BESS. This access is therefore some distance from the heritage buffer area and minimises vegetation loss.

- 5.5.4 In addition to the larger access described above from Access A, smaller access tracks will be established within the Solar and Energy Storage Park for both construction and operation. These would typically be 3.5m to 6m wide compacted stone tracks with 1:2 gradient slopes on either side. The access tracks would be constructed using permeable material, with this requirement secured in the **Outline Design Principles [EN010131/APP/3.2]**. The locations and alignments of the internal access tracks within the Solar and Energy Park are likely to change depending on the final layout design and the construction methodology.
- 5.5.5 To respond to comments from Lincolnshire Fire Service, internal accesses would be provided all around the BESS to provide access in the event of a fire. A second access would also be provided to the BESS during the operational period for emergency vehicles to ensure safe access can be provided in the event that a fire occurred and the wind meant that access from the west is affected by smoke. The details of where this second access would be located, would be determined in consultation with Lincolnshire Fire Service during detailed design during development of the final site layout should the DCO be made.

5.6 Public Rights of Way

- 5.6.1 Public Rights of Way (PRoW) are shown with numbering in ES Volume 2: Figure 13-5 **[EN010131/APP/3.2]**, replicated in Figure 5-2 of this PDAS. They are also shown in the Streets, Rights of Way and Access Plans **[EN010131/APP/5.3]**. There would be no PRoW closures as a result of the Scheme and all PRoW receptors within the Order limits will be physically separated from construction routes and works except at crossing points.
- 5.6.2 There is one PRoW that crosses the Solar and Energy Storage Park, PRoW LL|Knai|44/2. This footpath runs for approximately 450m in a west-east direction, along the northern extents of the Solar and Energy Storage Park (in its northwest corner) from Knaith Hill/ Station Road to the railway line to the east. The PRoW also runs through the Solar and Energy Storage Park for a short distance. As shown in Figure 4-7 of this PDAS, a buffer of at least 5m has been incorporated into the layout where the PRoW crosses the Order limits to provide separation between the PRoW and the fenceline for the solar development. The length of PRoW within the Order limits is very short and the PRoW would be retained.
- 5.6.3 Three further PRoW lie in close proximity to the Order limits



PROJECT
Gate Burton Energy Park

CLIENT

Gate Burton
ENERGY PARK

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LEGEND

- Solar and Energy Storage Park
- Grid Connection Corridor
- Public Right of Way

NOTES

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ISSUE PURPOSE
Environmental Statement

PROJECT NUMBER
60664324

FIGURE TITLE
Walking and Cycling Network

FIGURE NUMBER
Figure 5-2

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- **PRoW LL|Upto|53/1** – a footpath which runs for 1,250m within the vicinity of the northern extent of the Solar and Energy Storage Park, running in an east to west direction between PRoW Kexb/53/1 and Upton Road;
- **PRoW LL|Knai|44/1** – a footpath which runs for approximately 330m within the vicinity of the northern extent of the Solar and Energy Storage Park, running in an east-west direction between the railway line in the west and the B1241 to the east;
- **PRoW LL|Mton|69/1** – a footpath which runs for approximately 350m and meets the south-western boundary of the Solar and Energy Storage Park to the south of Willingham Road, running in a north-south direction between the Solar and Energy Storage Park in the north and A1500 Stow Park Road in the south.

5.6.4 The Grid Connection Corridor is a long linear route with fourteen PRoW that could potentially be affected temporarily during construction and decommissioning of the Scheme. There would be no permanent closures or diversions of PRoW as a result of the Scheme and no impacts are anticipated to routes within the Grid Connection Corridor during the operational period.

5.6.5 A **PRoW Management Plan [EN010131/APP/7.8]** has been provided with the Application and sets out how the Applicant aims to mitigate construction and decommissioning impacts on PRoW. Access will be maintained to and along PRoW where possible; with temporary PRoW diversion routes provided where necessary to avoid PRoW closures or potential conflicts with the Scheme (e.g. for the Grid Connection Corridor). The diversion routes will be agreed with the local authorities prior to construction. Sufficient protection or separation would be provided between PRoW and construction routes where necessary. Areas where the proposed construction route would cross any existing PRoW would be managed (where these are unable to be diverted) by maximising visibility and implementing traffic management. Traffic management would include signage and manned controls at crossings with a default priority that construction traffic will give way to other users.

Grid Connection Corridor

5.6.6 The Grid Connection Corridor has also evolved over time to respond to environmental constraints and stakeholder feedback. This includes narrowing the Order limits in areas with sensitive constraints such as suspected or confirmed archaeological remains to provide more certainty that environmental impacts can be avoided or mitigated. It also included careful consideration of the construction accesses for the Grid Connection Corridor to ensure accesses could be selected that are safe, low impact and provide efficient access to the Order limits.

6. Legislative and Policy Context

6.1 Introduction

6.1.1 This section outlines the legislative framework and the planning policy context for the Scheme. Section 6.3 sets out the relationship of the Scheme with the PA 2008. Sections 6.4-6.8 introduce the national and local planning policy and other documents that the Applicant expects to be important and relevant to the decision and that are considered in this PDAS. Section 6.9 introduces other national policy documents which the SoS may consider to be important and relevant to their decision.

6.2 Overview of the Consent Sought: Main Development and Associated Development

6.2.1 The consent sought is a DCO. Section 115 of the PA 2008 states that a DCO can include consent for ‘associated development’, which is development that is not a NSIP in its own right but is functionally related to the NSIP. This may be development that supports the construction, operation or decommissioning of the NSIP; which helps to address the impacts of the NSIP; or is of a type normally brought forward with the NSIP.

Requirements for Associated Development

6.2.2 Planning Act 2008: Guidance on associated development applications for major infrastructure projects (“GADA”) (Ref 6-2) provides guidance on Associated Development for NSIPs. Paragraph 3 of GADA states “*Associated development is defined in the Planning Act as development which is associated with the principal development...*”

6.2.3 GADA sets out principles that should apply for development to be considered as associated development. These principles are summarised as:

- a) Associated development requires a direct relationship between associated development and the principal development. Associated development should therefore either:
 - o Support the construction or operation of the principal development, or
 - o Help address its impacts.
- b) Associated development should not be an aim in itself but should be subordinate to the principal development.
- c) Development should not be treated as associated development if it is only necessary as a source of additional revenue for the applicant, in order to cross-subsidise the cost of the principal development. This does not mean that the applicant cannot cross-subsidise.
- d) Associated development should be proportionate to the nature and scale of the principal development. However, associated infrastructure development that is on a larger scale than is necessary to serve the principal development shall not be excluded if that associated infrastructure provides capacity that is likely to be required

for another proposed major infrastructure project. In such a case, each application will have to be assessed on its own merits, including for example whether a future application is proposed to be made by the same or related developer as the current application, the degree of physical proximity of the proposed application to the current application, and the time period in which a future application is proposed to be submitted.

- e) Associated development is expected in most cases to be brought forward alongside the relevant type of principal development or of a kind that is usually necessary to support a particular type of project.

Gate Burton and Associated Development

6.2.4 Schedule 1 of the **Draft DCO [EN10131/APP/6.1]** sets out the formal description of the works for which consent is sought. Work No. 1 includes the ground mounted solar photovoltaic generating station, including solar panels fitted to mounting structures and balance of solar system plant.

6.2.5 Works No. 2 to 9 describe the associated development for which consent is sought, including:

- Work No. 2: battery energy storage system (BESS) compound;
- Work No. 3: onsite Substation and associated works
- Work No. 4 high voltage electrical cables, access and construction compounds; including works at the Cottam National Grid Substation.
- Work No. 5: ancillary works associated with electrical cables within the site, boundary treatments, security measures, landscaping and biodiversity measures, improvement and maintenance of private tracks, access, paths and related signage, earthworks, temporary footpath diversions, drainage works, construction compounds and works to divert existing overhead lines.
- Work No. 6: construction compounds
- Work No. 7: office, warehouse and plant storage buildings
- Works No. 8: works to facilitate access to the solar plant and areas of habitat management
- Works No. 9 Habitat management.

6.2.6 Works No. 3, 4, 7 and 8 are all required to provide internal electrical connections between elements of the Scheme and connect to the National Grid; facilitate access to the Scheme during construction and operation and/or to provide on-site storage and equipment. Work No.5 is required to provide security for the Scheme, enable Scheme construction and avoid or mitigate environmental impacts. Work No. 6 is required to provide the larger construction compounds associated with Scheme construction. Work No. 6 shows the areas included for access purposes, including limited works to highways and vegetation clearance to achieve visibility splays. All these works are clearly required to support the construction and operation of the solar farm (and address its impacts), are subordinate to the main development, are not significant sources of additional revenue, are proportionate to the scale of the development

- 6.2.7 Work 9 is required to provide biodiversity and landscaping to mitigate the environmental impacts of the Scheme and deliver the biodiversity benefits, including biodiversity net gain. It is required to help address the impacts of Work No. 1 and meet all other criteria.
- 6.2.8 Work 2 (BESS), including its import connection, is also associated development. Given that the relationship between the BESS and the solar PV array is more complex a comprehensive explanation of why the BESS is associated development is provided below with reference to the principles set out in GADA. The Applicant notes that the Little Crow Solar Park Order 2022 authorises BESS as associated development.

A. A direct relationship between associated development and the principal development

- 6.2.9 There is a direct relationship between the principal development (Work 1) and the BESS because the BESS supports the operation of the solar generation development by ensuring that energy which is generated but not immediately required is not wasted, but instead is stored to be released when it is needed.
- 6.2.10 Further, the BESS helps to address the impacts of the solar generation, namely its intermittency and dependence on environmental, rather than grid demand, factors. Each of these points is addressed further below.
- 6.2.11 One of the acknowledged weaknesses with solar generation is that generating stations cannot control either when the sun shines, or when the power produced is needed. There will often be a temporal disconnect between supply and demand. In the UK this is a particularly pronounced problem because the UK occupies a relatively short span of longitude. Energy generation from solar farms will thus generally occur consistently across the UK, peaking at the same times and falling at the same times. These periods will often not coincide with the peak demand for electricity in the grid.
- 6.2.12 In order to progress the UK's decarbonisation, make the best and most efficient use of the energy generated by solar farms (including Gate Burton), keep costs as low as possible for consumers, and ensure a reliable electricity system, it is therefore important that there is a measure which can store energy generated by the solar PV panels for later use to support the operation of the solar farm.
- 6.2.13 One effect of increasing the amount of utility scale solar generation in the grid, such as the installation of Gate Burton, is that the amount of energy generation which is dependent on environmental factors will increase. A BESS can help manage this by either injecting power into the grid when demand exceeds supply or drawing power from the grid when supply exceeds demand.
- 6.2.14 The grid connection point at Cottam Power Station is shared between the principal solar development and the associated BESS. Therefore, the operation of the BESS is dependent on the operation of the solar development. At times when electricity generation from the solar panels is high, the solar development will be using a significant proportion of the available grid export capacity. The level at which the BESS can export power at such times will therefore be small and the BESS will therefore largely be

available only to import power from the solar development if that power is not immediately needed.

- 6.2.15 Conversely at times when solar generation is low, the level at which the BESS can export or import power will be high. At such times this is likely to be the import of external power rather than the import of power generated by the solar development. At times of low solar generation, therefore, the BESS will be able to export any energy it has previously stored or provide ancillary services to the grid.
- 6.2.16 Therefore the operation of the BESS is dependent on the operation of the solar generation capacity with which it is associated.

B. The BESS is subordinate to the principal solar development

- 6.2.17 The aim of the project is to generate electricity from renewable sources. The BESS does not do that, instead facilitating the more efficient use of the power generated by the solar panels. The import connection to the BESS also provides ancillary services which are necessary to deal with the impacts on the grid of the main development. The BESS would not be constructed without the solar farm, and therefore is evidently subordinate to it.

C. The BESS (and its import connection) is not necessary as a source of additional revenue for the applicant

- 6.2.18 Chapter 10 of the **Statement of Need [EN10131/APP/2.1]** demonstrates that solar is economically efficient in Great Britain. Solar is already the cheapest form of generation in the UK and over 1GW of unsubsidised solar has been deployed since the end of the feed in tariff regime. Solar is economically rational on a standalone basis and the BESS is not required for cross-subsidisation of the solar facility.

D. The proposed BESS is proportionate to the nature and scale of the principal development

- 6.2.19 The capacity of the solar development is likely to be approximately 531 MW and the BESS capacity is similarly approximately 500 MWh. This means that the BESS shares the same import/ export power capacity as the solar farm.
- 6.2.20 The BESS sizing means it has the capacity to store the peak electricity output from the solar farm for an hour. In reality the solar farm will rarely be generating its peak output so it will be able to store the electricity generated for a number of hours. This is considered a proportionate size of BESS to be associated with the proposed principal solar development.
- 6.2.21 As outlined above, introducing a BESS component is proportionate in nature to the principal development, as it (a) helps make more efficient use of the energy generated by the solar panels and (b) the import connection specifically provides necessary ancillary services which the solar panels displace.

E. The associated development will be brought forward alongside the principal development

- 6.2.22 The Applicant proposes to construct the BESS facility in parallel with the principal development such that operation of both aspects can commence together once construction is complete.

Additional Consents

- 6.2.23 A DCO, if granted, has the effect of providing consent for development, in addition to a range of other consents and authorisations, where specified, as well as removing the need for some consents (such as planning permission). The consents and powers sought are standard for solar farm DCO applications such as compulsory acquisition powers. Details of the consents and authorisations included in the DCO are explained in the **Explanatory Memorandum** to the draft DCO [EN010131/APP/6.2].
- 6.2.24 The draft DCO also includes a deemed Marine Licence, which could be required for the grid connection works where they interact with the River Trent (which is tidal in the area which overlaps with the Order limits). The Marine Management Organisation have been consulted on the Scheme, including during statutory consultation and subsequently on the intention to include a Marine Licence in the application.
- 6.2.25 The **Consents and Agreement Position Statement [EN10131/APP/6.3]**, also provides a list of consents to be sought outside the DCO process for information.

6.3 Planning Act 2008

- 6.3.1 The Scheme is defined as an NSIP under Sections 14(1)(a) and 15(2) of the PA 2008 as an onshore generating station in England that does not generate electricity from wind, exceeding 50MW generating capacity.
- 6.3.2 The PA 2008 states that the SoS is responsible for determining the application for development consent, with the power to appoint a single person or a panel from the Planning Inspectorate to manage and examine the application (referred to as the 'Examining Authority'). In its role, the Examining Authority will examine the application for the Scheme and make a recommendation to the SoS who will then decide whether to grant a DCO.
- 6.3.3 Part 6 of the PA 2008 is to be applied when determining applications for DCOs. Sections 103 to 107 provide the framework for decision-making, setting out what must be considered when the SoS is determining a DCO application. Section 104 applies when a NPS has effect for a specified NSIP, whereas Section 105 applies when no NPS has effect.

Determining an Application Under Section 105

- 6.3.4 At the time of writing (January 2023), Section 105 applies as solar projects are not specifically considered by an existing NPS. Existing NPSs do not consider solar developments because when the Energy NPSs were designated in 2011 solar developments were not generally considered at a scale of over 50 MW. This has changed rapidly over time, with solar now being commercially viable at a large scale.
- 6.3.5 Where an application is determined under Section 105, the SoS must have regard to:
- Any local impact report;
 - Any matters prescribed in relation to development of the description to which the application relates; and
 - Any other matters the Secretary of State considers to be important and relevant.
- 6.3.6 The Government's Nationally Significant Infrastructure Projects (NSIP) reforms: action plan, published 23 February 2023, sets out that the suite of updated energy NPSs (including updated versions of NPS EN-1, NPS EN-3 and NPS EN-5) will be designated in Q2 of 2023. Designation has not occurred prior to the Scheme being accepted for examination and therefore section 104(2) of the Planning Act 2008 will not apply to the Scheme. However, the following three draft documents are still considered important and relevant to the decision making on this application:
- Revised (Draft) EN-1: Overarching NPS For Energy (Draft NPS EN-1) (Ref 1-5) (March 2023);
 - Revised (Draft) EN-3: Renewable Energy Infrastructure (Draft NPS EN-3) (Ref 1-6) (March 2023); and
 - Revised (Draft) EN-5: Electricity Networks Infrastructure (Draft NPS EN-5) (Ref 1-7) (March 2023).
- 6.3.7 When granting consent for previous solar DCO schemes such as the Little Crow Solar Park Order 2022 and Longfield Solar Farm 2023, the Secretary of State confirmed that the Draft NPSs are important and relevant in decision-making under Section 105.

Determining an Application under Section 104

- 6.3.8 Draft EN-3 now contains a chapter dedicated to solar energy technology. Therefore, when the Draft NPSs are designated, DCO applications for solar developments will be determined under Section 104 on the PA 2008, subject to any transitional provisions. Given the transitional arrangements set out in Draft EN-1⁵, and the fact that the Draft NPSs have not been designated prior to the Scheme being accepted for examination, the Application will not be determined under Section 104. However, for completeness this process is explored here.

⁵ Transitional provisions are set out in Section 1.6 of Draft NPS EN-1 and states that the 2011 NPSs should continue to have effect for applications for development consent accepted for examination before the drafts are designated, although the revised documents are capable of being important and relevant matters.

- 6.3.9 Under Section 104(3) the SoS would need to determine the application in accordance with any relevant NPS, except where deciding the application in line with the NPS would:
- Lead to the United Kingdom being in breach of any of its international obligations;
 - Lead to the SoS being in breach of any duty imposed on the SoS by or under any enactment;
 - Be unlawful by virtue of any enactment;
 - Mean that the adverse impacts would outweigh its benefits; or
 - Any condition prescribed for deciding an application otherwise than in accordance with an NPS is met.
- 6.3.10 Development of the Scheme would not lead to the UK being in breach of international obligations or duties imposed on the SoS; it would not be unlawful by virtue of any enactment and none of the conditions prescribed apply.
- 6.3.11 The relevant prescribed matters are Regulation 3 on listed buildings and Regulation 7 of Biological Diversity.
- 6.3.12 Regulation 3 states that:
- 6.3.13 *“3.—(1) When deciding an application which affects a listed building or its setting, the decision-maker(1) must have regard to the desirability of preserving the listed building or its setting or any features of special architectural or historic interest which it possesses.*
- 6.3.14 *(2) When deciding an application relating to a conservation area, the decision-maker must have regard to the desirability of preserving or enhancing the character or appearance of that area.*
- 6.3.15 *(3) When deciding an application for development consent which affects or is likely to affect a scheduled monument or its setting, the decision-maker must have regard to the desirability of preserving the scheduled monument or its setting.”*
- 6.3.16 Section 7.5 of this PDAS explores how the Scheme affects heritage assets. The Scheme will not have any direct impacts on listed buildings, conservation areas or scheduled monuments as none are located within the Order limits. Further, no significant impacts are predicted on the setting or any designated assets during construction, operation or decommissioning of the Scheme. Therefore, there is no reason why consent should not be granted when considering Regulation 3.
- 6.3.17 Regulation 7 states that:
- 6.3.18 *“When deciding an application for development consent the Panel or Council must have regard to the United Nations Environmental Programme Convention on Biological Diversity of 1992(1) and where the application is for development in Scotland the decision-maker must also have regard to any strategy designated under section 2(1) of the Nature Conservation (Scotland) Act 2004(2).”*

- 6.3.19 Section 7.6 of this PDAS explores the impacts of the Scheme on biodiversity. It demonstrates that there are no significant effects on biodiversity identified and there would be significant biodiversity benefits associated with the Scheme. Therefore, there is no reason why consent should not be granted when considering Regulation 7.
- 6.3.20 Finally, Section 104 of the PA 2008 requires that the Scheme be determined in line with NPSs unless the adverse impacts outweigh the benefits of the Scheme. As explored throughout this PDAS, the significant benefits of the Scheme and relatively limited adverse impacts mean that the benefits clearly and demonstrably outweigh the impacts.
- 6.3.21 Therefore, should the Scheme be determined under Section 104, the SoS should have regard to such NPSs as none of the provisions in 104(3) apply to the Scheme.
- 6.3.22 When determining applications under Section 104, Section 104(2) states that the SoS must have regard to:
- Any relevant NPS;
 - The appropriate marine policy documents (if any);
 - Any local impact report;
 - Any matters prescribed in relation to the development and
 - Any other matters which the SoS thinks are both important and relevant.

6.4 Energy National Policy Statements

- 6.4.1 The following NPSs are adopted, and considered to be matters that will be important and relevant to the Secretary of State's decision on whether to grant a DCO:
- NPS EN-1: Overarching National Policy Statement for Energy;
 - NPS EN-3: National Policy Statement for Renewable Energy Infrastructure; and
 - NPS EN-5: National Policy Statement for Electricity Networks Infrastructure
- 6.4.2 The Energy NPSs were designated on 19 July 2011. They set out matters, principles and impacts that should form the basis of the SoS's decision on DCO applications for Energy NSIPs.

6.5 Draft Energy National Policy Statements

- 6.5.1 The Government is currently reviewing and updating the Energy NPSs. It is doing this to reflect its policies and strategic approach for the energy system that is set out in the Energy White Paper (December 2020), and to ensure that the planning policy framework enables the delivery of the infrastructure required for the country's transition to net zero carbon emissions. The Government's Nationally Significant Infrastructure Projects (NSIP) reforms: action plan, published 23 February 2023, sets out that the suite of updated

energy NPSs (including updated versions of NPS EN-1, NPS EN-3 and NPS EN-5) will be designated in Q2 of 2023

- 6.5.2 The Applicant considers that Draft NPS EN-1, Draft NPS EN-3 and Draft NPS EN-5 should be given substantial weight in the planning balance and when applying the consideration of matters which are important and relevant pursuant to section 105 of the PA 2008, for three main reasons as set out below.
- 6.5.3 Firstly, they set out prospective policy for Energy NSIPs that reflects the Government's current intentions towards energy strategy and energy policies. They would provide the planning policies that are needed to facilitate the delivery of the energy infrastructure that is required for the Government's objectives for the energy system to be met. As discussed in Section 7.8, the requirements for renewable energy and emission reductions have become greater, more urgent and the policy support for them clearer since adopted on the Energy NPSs in 2011, with the Draft NPSs being more reflective of current policy than those that are adopted.
- 6.5.4 Secondly, Draft NPS EN-3 sets out a policy context that is directly relevant to solar NSIPs such as the Scheme. Once designated, this means that Draft NPS EN-3 and Draft NPS EN-1 will be the only statutory planning policy documents that are directly relevant to the Scheme (or any solar NSIP). The current NPSs do not include policies specifically relating to solar development, and the NPPF and Local Development Plan Documents concern themselves with developments that are of local or regional (and not national) significance.
- 6.5.5 Thirdly, it is considered likely that the Draft Energy NPSs will have been designated before the DCO application is decided, and potentially will be designated during the examination of the Application. The transitional arrangements set out by paragraph 1.6.2 of Draft NPS EN-1 explain that for any application accepted for examination before designation of the Draft NPSs, the current NPSs, which were enacted in 2011, should have effect. However, paragraph 1.6.3 of Draft NPS EN-1 sets out that: *'any emerging draft NPSs (or those designated but not having effect) are potentially capable of being important and relevant considerations in the decision making process. The extent to which they are relevant is a matter for the relevant SoS to consider within the framework of the Planning Act and with regard to the specific circumstances of each development consent order application.'*
- 6.5.6 The Applicant expects that the specific circumstances of this Application are such that Draft NPS EN-1, Draft NPS EN-3 and Draft NPS EN-5 will be important and relevant matters and will be given significant weight in the ExA's recommendation and the SoS's decision. The Applicant also considers that the weight attached to them is likely to increase through pre-examination/examination should they be designated. Supplementary statements to this PDAS may be needed once the Draft NPS are designated.
- 6.5.7 An overview of how the Scheme accords with the policies in the relevant current and Draft NPSs can be found in Appendix A.

6.6 Marine Policy Statement

- 6.6.1 The Marine Policy Statement (MPS) is the framework for preparing Marine Plans and taking decisions affecting the marine environment. It contributes to the achievement of sustainable development in the United Kingdom marine area. It has been prepared and adopted for the purposes of section 44 of the Marine and Coastal Access Act 2009. The Marine and Coastal Access Act 2009 requires all public authorities taking authorisation or enforcement decisions that affect or might affect the UK marine area to do so in accordance with the MPS unless relevant considerations indicate otherwise. The relevant sections of the MPS include section 3.3 energy production and infrastructure development, which states that:
- 6.6.2 *“When decision makers are examining and determining applications for energy infrastructure and marine plan authorities are developing Marine Plans they should take into account:*
- 6.6.3 *- The national level of need for energy infrastructure, as set out in the Overarching National Policy Statement for Energy (EN-1) which applies in England and Wales...”.*
- 6.6.4 It states that marine plan authorities will need to liaise, as appropriate, with terrestrial planning authorities to ensure the development of any necessary on-shore infrastructure. This includes sub-stations, to support offshore electricity generation and connection to the national grid.
- 6.6.5 The MPS also states that the marine planning process should be flexible in responding to emerging evidence about the impacts of new technologies in relation to renewables.
- 6.6.6 The Scheme will cross the River Trent along the Grid Connection Corridor, which will involve cabling being laid underneath the riverbed. The River Trent is tidal in this area and a Marine Licence is required for the development. This Marine Licence is included in the draft DCO and therefore the MPS is a relevant policy document for the small section of grid connection under the River Trent.

6.7 National Planning Policy Framework

- 6.7.1 The NPPF sets out the Government’s national planning policies for England and how these are to be applied. It is a material consideration in planning decisions under the Town and Country Planning Act 1990 (Ref 1-31). Paragraph 5 of the NPPF makes it clear that the document does not contain specific policies for NSIPs and that applications in relation to NSIPs are to be determined in accordance with the decision-making framework set out in the PA 2008 and relevant NPSs, as well as any other matters that are considered both important and relevant.
- 6.7.2 However, Paragraph 5 goes on to confirm that the NPPF may be a matter that is relevant for the purposes of assessing DCO applications. The Scheme therefore has regard to the relevant policies of the NPPF as part of the overall framework of national policy. The Applicant is of the view that the policies can be important and relevant, but that the weight applied to the policies in decision making is likely to be reduced by the fact that they were not written to inform decision making on this scale of development or type of application.

6.8 Local Planning Policy

- 6.8.1 Policies in Local Plans may be considered important and relevant matters in decision making as whilst they were written to guide decision making on Town and Country Planning Act, they provide local context and policies that are not provided in national documents. Local policies also influence the content of local impact reports (which the relevant local authorities will produce pursuant to Section 56A of the PA 2008 following submission of the Application). The SoS must have regard to Local Impact Reports in its decision making in accordance with Section 105(2) of the PA 2008.
- 6.8.2 The Scheme lies within the administrative areas of Bassetlaw District Council and West Lindsey District Council, and at county level within Nottinghamshire County Council and Lincolnshire County Council.
- 6.8.3 The following Development Plan documents were reviewed and could be relevant and important in decision making on the Application:
- Central Lincolnshire Local Plan (CLLP) (April 2023) (covering West Lindsey) (Ref 1-20);
 - Lincolnshire Minerals and Waste Local Plan including the Core Strategy & Development Management Policies Plan adopted in June 2016 and the Site Locations Plan adopted in December 2017 (Ref 1-21);
 - Treswell and Cottam Neighbourhood Plan, made February 2019 (Ref 1-22);
 - Rampton and Woodbeck Neighbourhood Plan, made May 2021 (Ref 1-23);
 - Lea Neighbourhood Development Plan, made January 2018 (Ref 1-24);
 - Sturton by Stow and Stow Neighbourhood Development Plan, made July 2022 (Ref 1-25);
 - Bassetlaw District Council Core Strategy (BCS) and Development Management Policies DPD, adopted 22 December 2011 (Ref 1-26);
 - Bassetlaw District Council Draft Local Plan (Draft BLP) 2020-2038 (Ref 1-27);
 - Nottinghamshire Minerals Local Plan, adopted March 2021 (Ref 1-28);
 - Nottinghamshire Waste Local Plan, adopted 2002 (Ref 1-29); and
 - Nottinghamshire Waste Core Strategy, adopted 2013 (Ref 1-30).
- 6.8.4 As explored further in Section 7.11 the majority of the Order limits, including all land in the Solar and Energy Storage Park is outside Mineral Safeguarding Areas (MSA). A small section of Grid Connection Corridor is within a MSA, but the associated sterilisation of land would be limited. The majority of the development is also reversible. Whilst there are still some mineral and waste considerations associated with the Scheme, the importance and relevance of the minerals and waste documents in italics above is reduced by this context.
- 6.8.5 The Lincolnshire Minerals and Waste Local Plan has undergone an in-depth review assessing whether the policies remain relevant and effective. The review concluded that the whole plan would benefit from being updated and

resolved to update the plan on 19 February 2021. The new plan will replace both parts of the adopted plan which covers the period to the end of 2031. The plan is currently at an early stage of preparation. A consultation on the issues and options (Ref 1-21) for updating the plan took place from 28 June 2022 to 12 August 2022. The plan is not anticipated to be adopted before Winter 2024/2025. Given the focus of the policies on minerals and waste and the early stage of development, initial documents are considered to carry no weight at this stage.

- 6.8.6 The Treswell and Cottam Neighbourhood Plan is also undergoing a review, as parts of the plan were considered out of-date and therefore had less weight in decision making. The neighbourhood plan is at an early stage in its preparation and therefore carries limited weight at this stage.
- 6.8.7 Nottinghamshire County Council and Nottingham City Council are working together to prepare a new Waste Local Plan which will replace the previous Adopted Waste Local Plan (2002) (Ref 1-28) and the Waste Core Strategy (2013) (Ref 1-29). A Draft Plan has been written, informed by the results of the previous consultation and further evidence of future need for recycling and waste sites. The Plan was published for public and stakeholder comment between the 7 February and the 4 April 2022. The plan is expected to go for independent examination in September 2022/January 2023, with the view to being adopted in July 2023. The plan is at a relatively advanced stage, therefore carries weight, although the limited number of minerals and waste considerations associated with the site reduces the relevance of the majority of the policies.
- 6.8.8 BDC recently consulted on a new Local Plan 2020-2037 (Publication version) in late 2021 and early 2022. A number of changes were proposed, and an Addendum was then consulted on between January and February 2022. A second Addendum was then consulted on between May and June 2022. BDC then submitted the Local Plan 2020-2038: Publication Version, Addendum and Second Addendum to the Secretary of State on 18 July 2022 for independent examination. Examination Hearings were carried out between November 2022 and January 2023. The Council anticipate the adoption of the Local Plan in Spring 2023. Upon adoption the Local Plan would replace the current Core Strategy and given their advanced stage, the emerging plan is considered to have some weight as an important and relevant matter.
- 6.8.9 The CLLP was adopted on 13 April 2023 by the Central Lincolnshire Joint Strategic Planning Committee and it replaces the Central Lincolnshire Local Plan adopted in 2017. The CLLP includes policies for the growth and regeneration of Central Lincolnshire over the next 20 years. The Plan contains policies that could be important and relevant in decision making on the Application and therefore the Applicant has considered the extent to which the Scheme complies with these policies.

6.9 Other Policy and Legislation

- 6.9.1 The below summarises other policy and legislation that the Applicant thinks could be important and relevant to decision making on the Application.

Climate Change Act 2008 and 2050 Target Amendment Order 2019

- 6.9.2 The Climate Change Act 2008 set up a framework for the UK to achieve its long-term goals of reducing greenhouse gas emissions and ensuring steps are taken to adapt to the impacts of climate change. The Act incorporated a legally binding target for the UK to reduce greenhouse gas emissions by 80% by 2050 compared to 1990 levels.
- 6.9.3 The Climate Change Act 2008 (2050 Target Amendment) Order 2019 (Ref 6-1) was passed in 2019 and set a new target requiring the UK to bring all greenhouse gas emissions to net zero by 2050, increasing the target from an 80% reduction to a 100% reduction.

A Green Future: Our 25 Year Plan to Improve the Environment (January 2018)

- 6.9.4 The 25 Year Environment Plan published in 2018 sets out the government's plan to improve the environment within a generation.
- 6.9.5 It aims to achieve 10 goals which include: achieve clean air; achieve clean and plentiful water; achieve thriving plants and wildlife; reduce risk of harm from environmental hazards like flooding and drought; use resources from nature more sustainably and efficiently; enhance beauty, heritage and engagement with the natural environment; mitigate and adapt to climate change; minimise waste; manage exposure to chemicals; and enhance biosecurity.
- 6.9.6 Six key areas of policy are set out in the plan and include:
- Using and managing land sustainability (including embedding an environmental net gain principle for developing and measuring capital and including reducing flood risk).
 - Recovering nature and enhancing the beauty of landscape (including developing a Nature Recovery Network and reviewing National Parks and AONB's).
 - Connecting people (including children) with the environment to improve health and wellbeing (including encouraging children to be close to nature, both in and out of school and greening out cities).
 - Increasing resource efficiency and reducing pollution and waste (including achieving zero avoidable plastics waste by end of 2042).
 - Securing clean, producing and biologically diverse seas and oceans (including a post Brexit new sustainable fisheries policy).
 - Protecting and improving the global environment (including providing 'international leadership and leading by example' and 'leaving a lighter footprint on the global environment').
- 6.9.7 This plan therefore highlights the government's support for the reduction in the UK's carbon footprint; protection and enhancement of the natural environment; and ensuring land is managed with environmental gains, all of which are relevant to the Scheme.

Net Zero: Opportunities for the Power Sector, National Infrastructure Commission (March 2020)

- 6.9.8 Following the commitment to net zero by 2050, the National Infrastructure Commission, official advisor to the Government on infrastructure, published a paper on the opportunities for the power sector. The NIC recommended that the generation mix of up to around 90% renewables is required to meet the target and that across all scenarios significant solar, onshore wind and offshore wind would need to be installed. The report estimates that between 129-237 GW of renewable capacity would need to be in operation by 2050, including 56-121 GW of solar. This compares to 18-27 GW of onshore wind and 54 – 86 GW of offshore wind showing an ambition for a very significant increase in generation from solar PV panels.
- 6.9.9 BEIS regularly publishes statistics on solar photovoltaics deployment in the UK (Ref 6-3), with the latest data from November 2022 being published on 22 December 2022. This data shows that currently the UK has installed solar capacity of 14.28GW. Therefore, the total deployment of solar photovoltaics needs to increase by approximately 4 to 8.5 times in the next 27 years to meet the identified requirement.

National Infrastructure Strategy (November 2020)

- 6.9.10 The National Infrastructure Strategy (NIS) published in November 2020 sets out plans to transform the UK's infrastructure. The strategy is the government's response to recommendations made by the National Infrastructure Commission (NIC), which was set up to provide impartial, expert advice to the government on long-term infrastructure priorities. In July 2018, the NIC published a National Infrastructure Assessment (Ref 6-4) which provided the foundation for many of the measures included within the NIS.
- 6.9.11 One of the aims of the NIS is to achieve net zero carbon emissions by 2050. The government acknowledges in the NIS that to deliver net zero the share of generation from renewables needs to dramatically increase. It identifies that this can be achieved by the provision of greater generation capacity from onshore wind and solar. As recommended by the NIC, the NIS sets out plans to include solar PV in the auction rounds for Contracts for Difference which is the government's main mechanism for supporting low-carbon electricity generation. This incentivises investment in renewable energy by providing developers of projects with high upfront costs and long lifetimes with direct protection from volatile wholesale prices, and they protect consumers from paying increased support costs when electricity prices are high.
- 6.9.12 The NIS therefore demonstrates the government's commitment, including financial commitment, to supporting solar generation now.

Energy White Paper: Powering our Net Zero Future (December 2020)

- 6.9.13 The Energy White Paper published in December 2020 is one of the more recent government policies setting out how the UK will reach net zero emissions by 2050.

- 6.9.14 The Paper explains that it is likely that overall demand for electricity could double by 2050 due to the electrification of other sectors such as transport and increased use of clean energy replacing gas heating. Meeting this demand by 2050 would require *“a four-fold increase in clean electricity generation with the decarbonisation of electricity increasingly underpinning the delivery of our net zero target”*.
- 6.9.15 It identifies the government’s aim to deliver a fully decarbonised, reliable and low-cost power system by 2050 and that market conditions will determine the best solutions for very low emissions and reliable supply, at a low cost to consumers.
- 6.9.16 The Paper explains that the government is not targeting a particular generation mix however commits the government to maintaining the market conditions which stimulate the cost reductions that have been seen in the renewables energy market over the preceding five years (2015-2020). It does, however, state that it is possible to determine key characteristics of the future generation mix at this stage identifying that a *“low-cost, net zero consistent system is likely to be composed predominantly of wind and solar”*. It highlights that this will need to be complemented by technologies that provide power, or reduce demand, to manage intermittency. Currently this includes *“nuclear, gas with carbon capture and storage and flexibility provided by batteries, demand side response, interconnectors and short-term dispatchable generation providing peaking capacity, which can be flexed as required”*.
- 6.9.17 This Paper therefore highlights the government’s commitment to solar to achieve net zero targets and the need to provide this urgently. It also recognises the role of battery storage, amongst other technologies, in managing intermittency in electricity production resulting from an energy mix comprising predominantly of renewables.

Net Zero Strategy: Build Back Greener (October 2021)

- 6.9.18 The Net Zero Strategy, published by the Government in October 2021, builds on the commitments in the Energy White Paper (2020) to set out the long-term strategy, policy and proposals to keep the UK on track for future carbon budgets. The Strategy includes a vision for a decarbonised economy by 2050 including recognising that in June 2021, the Government set in law the sixth carbon budget (Ref 6-6) limiting the volume of greenhouse gases emitted from 2033 to 2037 by approximately 78% by 2035 compared to 1990 levels. To achieve this target the Strategy goes further than the 2020 Energy White Paper by stating on page 78 that:
- 6.9.19 *‘By 2035, all our electricity will need to come from low carbon sources, subject to security of supply, moving to a fully decarbonised power system whilst meeting a 40-60% increase in demand’*.
- 6.9.20 This shows that there continues to be an urgent, significant need for renewable energy, with that need only becoming greater and more urgent with each published document.

The Environment Act 2021 (November 2021)

- 6.9.21 The Environment Act 2021 was first introduced to Parliament in October 2019 and achieved Royal Assent in November 2021. The Act is a key mechanism for driving forward the UK's ambition on biodiversity and delivering its commitments under the Convention on Biological Diversity.
- 6.9.22 The Environment Act operates as the UK's new framework of environmental protection. Given that the UK has left the EU, new laws that relate to nature protection, water quality, clean air, as well as additional environmental protections that originally came from Brussels, needed to be established. The Environment Act allows the UK to enshrine some environmental protection into law. It offers new powers to set new binding targets, including for air quality, water, biodiversity, and waste reduction.
- 6.9.23 The Act is a vehicle for a number of Department for Environment, Food and Rural Affairs' (Defra) different environmental policies and sets out the legal framework for significant reforms to local authority waste and recycling services, as well as creating new statutory duties for local authorities on nature recovery. Taken together, the Act establishes a new relationship between central and local government on environmental improvement.
- 6.9.24 The government commissioned the Dasgupta Review on the Economics of Biodiversity (Ref 6-5). This paper, published in February 2021 by Cambridge University led by Professor Sir Partha Dasgupta, identifies the fundamental need to overhaul how society measures economic success if it is to stem the rapid decline of biodiversity that threatens civilisation itself. In response to this review, and showing its commitment to biodiversity net gain, the government has proposed amendments to the Environment Bill including the requirement for a new, historic legally binding target on species abundance in England for 2030, aiming to halt the decline of nature; and the legal requirement for NSIPs to deliver 10% biodiversity net gain. It is expected that a requirement for NSIPs to deliver 10% biodiversity net gain will be law by the time that this Application is examined.

British Energy Security Strategy (April 2022)

- 6.9.25 In April 2022 the Government published the British Energy Security Strategy recognising the need for secure, clean and affordable energy for the long term. On solar energy the British Energy Security Strategy states that:
- 6.9.26 *'With the sun providing enough daily energy to power the world 10,000 times over, solar power is a globally abundant resource. There is currently 14GW of solar capacity in the UK split between large scale projects to smaller scale rooftop solar. The cost of solar has fallen by around 85% over the past decade and can be installed in just one day on a domestic roof. We expect a five-fold increase in deployment by 2035.*
- 6.9.27 *For ground-mounted solar, we will consult on amending planning rules to strengthen policy in favour of development on non-protected land, while ensuring communities continue to have a say and environmental protections remain in place.*

6.9.28 *We will continue supporting the effective use of land by encouraging large scale projects to locate on previously developed, or lower value land, where possible, and ensure projects are designed to avoid, mitigate, and where necessary, compensate for the impacts of using greenfield sites.*

6.9.29 *We will also support solar that is co-located with other functions (for example, agriculture, onshore wind generation, or storage) to maximise the efficiency of land use. We have also included solar in the latest Contracts for Difference auction round and will include it in future rounds.'*

Powering Up Britain (March 2023)

6.9.30 In March 2023 the Department for Energy Security and Net Zero published Powering Up Britain. Powering Up Britain includes a suite of documents including:

- Powering Up Britain
- Powering Up Britain: Energy Security Plan
- Powering Up Britain: New Zero Growth Plan
- Accompany charts and annexes

6.9.31 The summary document, Powering Up Britain states the following on solar development (our emphasis):

6.9.32 *'Solar has huge potential to help us decarbonise the power sector. **We have ambitions for a fivefold increase in solar by 2035, up to 70GW**, enough to power around 20 million homes. We need to **maximise deployment of both ground and rooftop solar** to achieve our overall target. **Ground-mount solar is one of the cheapest forms of electricity generation and is readily deployable at scale**. Government seeks large scale solar deployment across the UK, looking for development mainly on brownfield, industrial and **low/medium grade agricultural land**. The Government will therefore not be making changes to categories of agricultural land in ways that might constrain solar deployment.'*

6.9.33 The Powering Up Britain: Energy Security Plan provides further detail on the actions the Government intends to take to support energy security. Amongst other commitments, this includes commitments to:

- Publish a solar roadmap in 2024 setting out a clear step by step deployment trajectory to achieve up to 70GW of solar by 2035;
- Create a more conducive planning environment, including a fast-track consenting timeframe for certain Nationally Significant Infrastructure Projects that meet defined quality standards, reducing the maximum formal examination period to twelve months; and
- Develop the Net Zero Skills and Workforce Action Plan to be published in 2024, which will address emerging workforce challenges, including for solar and onshore wind.

6.9.34 On solar and farming the Energy Security Plan states:

6.9.35 *'Solar and farming can be complementary, supporting each other financially, environmentally and through shared use of land. We consider that meeting energy security and climate change goals is urgent and of critical importance*

to the country, and that these goals can be achieved together with maintaining food security for the UK. We encourage deployment of solar technology that delivers environmental benefits, with consideration for ongoing food production or environmental improvement. The Government will therefore not be making changes to categories of agricultural land in ways that might constrain solar deployment.'

6.9.36 On the impacts of solar, the Energy Security Plan states that:

6.9.37 *'The Government considers that there is a strong need for increased solar deployment, as reflected in the latest draft of the Energy National Policy Statements. We recognise that as with any new development, solar projects may impact on communities and the environment. The planning system allows all views to be taken into account when decision makers balance local impacts with national need.'*

7. Planning Appraisal

7.1 Introduction

- 7.1.1 This section sets out an appraisal of the Scheme's compliance with the main policy requirements following a review of the policy documents identified in Section 6. Emphasis has been placed on the designated and draft Energy NPSs as these provide the most relevant policy context for decision making on energy DCOs, although reference has been made to other important and relevant matters where relevant. Appendix A provides detailed analysis of compliance with NPS policies and Appendix B provides detailed analysis of compliance with relevant local policies.
- 7.1.2 Section 7.2 to 7.15 take account of effects from the construction, operation and decommissioning phases of the Scheme. They also take account of the fact that the Scheme will be decommissioned at the end of its operational life, with this operational life anticipated to be 60 years.

7.2 Need for the Project: Renewable Energy and Emissions

National Strategies and Targets

- 7.2.1 The need for renewable energy is clearly set out in national and local policy, as well as being required to meet legally binding emission reduction targets. The Scheme is required in particular to meet the following targets:
- The need for a 100% reduction in greenhouse gas emissions by 2050 (Climate Change Act 2008 Target Amendment Order)
 - To achieve a generation mix comprising 90% of renewables including a 4 to 8.5 increase in solar generation to a total of 56-121 GW of solar operating by 2050 (Net Zero: Opportunities for the Power Sector, 2020)
 - To achieve a fully low carbon electricity generation by 2035 and a 40-60% increase in demand (Net Zero Strategy, 2021)
 - Achieving a four-fold increase in clean electricity generation by 2050 to meet the demand for electricity (Energy White Paper, 2020)
 - A five-fold increase in solar deployment by 2035 (British Energy Security Strategy, 2022; Powering Up Britain 2023)

National Policy Statements

- 7.2.2 Given that the need for solar NSIPs is not explicitly stated in designated NPSs, a **Statement of Need [EN10131/APP/2.1]** has been submitted with the Application setting out in detail why the Scheme is required. However, the need is clear and proven with reference to adopted and draft policies and strategies discussed above and below.
- 7.2.3 Whilst both the designated and draft Energy NPSs recognise the urgent need for renewable energy and reduction of carbon emissions, the draft Energy

NPSs are more reflective of the current ‘need’ as set out in recent legal requirements, policy and strategy; as well as being more up to date in terms of technologies available to meet the identified need. Therefore, whilst the designated NPSs are designated rather than draft, the Applicant considers that equal or greater weight should be given to policies on the need for renewable energy in the draft Energy NPSs, given that they are more reflective of the current context and written specifically for decision-making on solar NSIPs.

- 7.2.4 Paragraphs 4.1.2 to 4.1.4 of Draft NPS EN-1 affirm the government’s commitment to achieving its net zero target and stresses the urgent need for large scale renewable energy infrastructure (which includes solar farms) in order to meet this need. It states that the urgency is such that the starting point for deciding a DCO application for an energy NSIP must be a presumption in favour of granting consent:
- 7.2.5 *“The Energy White Paper and British Energy Security Strategy emphasises the importance of the Government’s net zero commitment and efforts to fight climate change, as well as the need to maintain a secure and reliable energy system. The Levelling Up White Paper calls on the Government to ensure investment in the transition to Net Zero benefits less well-performing parts of the UK, reducing emissions, facilitating economic development and the creation of jobs.*
- 7.2.6 *Given the level and urgency of need for infrastructure of the types covered by the energy NPSs set out in Part 3 of this NPS, the SoS will start with a presumption in favour of granting consent to applications for energy NSIPs. That presumption applies unless any more specific and relevant policies set out in the relevant NPSs clearly indicate that consent should be refused.*
- 7.2.7 *The presumption is also subject to the provisions of the Planning Act 2008 referred to at paragraph 1.1.4 of this NPS”.*
- 7.2.8 Therefore, the Draft NPS EN-1 sets a clear presumption in favour of consent being granted unless more specific and relevant policies in relevant NPSs clearly indicate that consent should be refused and subject to provisions at paragraph 1.1.4 The provisions in Draft NPS EN-1 paragraph 1.1.4 are those listed in Section 104(3) of the PA 2008. As explored in Section 6.3 of this PDAS, the Applicant considers that none of these provisions apply to this Application. It is not considered that any more specific or relevant policies in the NPSs would indicate that the Scheme should not be consented. Therefore, there is a presumption in favour of the Scheme.
- 7.2.9 Paragraphs 3.2.5 – 3.2.7 of Draft NPS EN-1 also state that the established need for energy NSIPs should be given substantial weight in decisions:
- 7.2.10 *‘The Secretary of State should assess all applications for development consent for the types of infrastructure covered by this NPS on the basis that the government has demonstrated that there is a need for those types of infrastructure which is urgent, as described for each of them in this Part.*
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- 7.2.11 *In addition, the Secretary of State has determined that substantial weight should be given to this need when considering applications for development consent under the Planning Act 2008.*
- 7.2.12 *The Secretary of State is not required to consider separately the specific contribution of any individual project to satisfying the need established in this NPS’.*
- 7.2.13 Section 3.4.1 of NPS EN-1 does not consider solar developments, but similarly states that to meet (now superseded) renewable energy targets:
- 7.2.14 *“...it is necessary to bring forward new renewable electricity generating projects as soon as possible. The need for new renewable electricity generation projects is therefore urgent.”*
- 7.2.15 Paragraph 1.1.1 of NPS EN-3 similarly states:
- 7.2.16 *“Electricity generation from renewable sources of energy is an important element in the Government’s development of a low-carbon economy. There are ambitious renewable energy targets in place and a significant increase in generation from large-scale renewable energy infrastructure is necessary to meet the 15% renewable energy target.”*
- 7.2.17 Paragraph 2.3.3 of Draft NPS EN-1 sets out the Government’s three objectives of the energy system. These are to:
- Ensure security and reliability of energy supply;
 - Provide affordable energy to consumers; and
 - Cut greenhouse gas emissions, delivering carbon budgets and achieving net zero by 2050.
- 7.2.18 It also states that *“This will require a step change in the decarbonisation of our energy system”*, and paragraphs 2.3.4 to 2.3.5 of Draft NPS EN-1 go on to set out that a significant amount of energy infrastructure, including large scale, will need to be delivered and the volume and proportion of energy supplied from low carbon sources will need to be *“dramatically” increased*”.
- 7.2.19 Paragraph 2.3.6 of NPS EN-1 similarly sets out the need for transformational change:
- 7.2.20 *“we need to transform the energy system, tackling emissions while continuing to ensure secure and reliable supply, and affordable bills for households and businesses”.*
- 7.2.21 Paragraph 3.3.20 of Draft NPS EN-1 sets out that, along with wind, the government expects solar to form the majority of generation capacity in a net zero, secure and cost-efficient energy system:
- 7.2.22 *“Wind and solar are the lowest cost ways of generating electricity, helping reduce costs and providing a clean and secure source of electricity supply (as they are not reliant on fuel for generation). Our analysis shows that a secure, reliable, affordable, net zero consistent system in 2050 is likely to be composed predominantly of wind and solar”.*

- 7.2.23 Whilst Draft NPS EN-1 paragraph 3.3.12 acknowledges the role that smaller scale developments play in helping to achieve the government's objectives and commitments for the energy system, it explains that this alone will not be enough and that *"the government does not believe they will replace the need for new large-scale electricity infrastructure to meet our energy objectives"*. Paragraph 3.3.12 goes on to set out that large-scale centralised electricity generating facilities have numerous economic and other benefits, including the more efficient bulk transfer of power, which enables surplus generation capacity in one area to be used to cover shortfalls elsewhere.
- 7.2.24 NPS EN-1 paragraph 3.2.3 and Draft NPS EN-1 paragraph 3.1.2, acknowledge that: *"...as noted in Section 1.7, it will not be possible to develop the necessary amounts of such infrastructure without some significant residual adverse impacts."* This statement is present in most NPSs because it is rarely possible to deliver NSIPs without significant effects due to their scale.
- 7.2.25 In summary, NPS EN-1 sets out that the delivery of a large amount of renewable generation capacity is required for delivery of the government's energy objectives and commitments. Draft NPS EN-1 sets out that the delivery of a large amount of solar generation capacity in particular, is an essential element required for delivery of the Government's energy objectives and legally binding net zero commitments. In line with policy in Draft NPS EN-1 paragraphs 4.1.2–4.1.4 and 3.2.5-3.2.7, the basis for any decision on an application for an energy NSIP, including a solar farm NSIP, should be:
- a presumption in favour of granting development consent; with
 - substantial weight given to the established (and urgent) need for energy infrastructure.

NPPF

- 7.2.26 Paragraph 152 of the NPPF also supports the transition to a low carbon future and states that *"the planning system should support the transition to a low carbon future"* by supporting renewable and low carbon energy and associated infrastructure, in order to contribute to *"radical reductions in greenhouse gas emissions"*. Paragraph 158 of the NPPF expects the determination of planning applications to *"not require applicants to demonstrate the overall need for renewable or low carbon energy"* and *"approve the application if its impacts are (or can be made) acceptable"*. This statement does not state that there should be no significant environmental effects, but that those effects should be 'acceptable'. The NPPF requirement for impacts to be 'acceptable' should also be considered in the context of a scale of project whereby significant environmental effects are likely to be unavoidable as set out in NPS EN-1 and draft NPS EN-1.

Local Policies

Adopted Local Policy

- 7.2.27 At the local level, Policy S14 of the CLLP also states that proposals for ground based solar development will be supported unless there is a clear and demonstrable harm arising; the proposal uses BMV land and does not meet the local policies regarding BMV land; or the land is allocated for another

purpose on the Local Plan. Policy DM10 of the BCS also sets out support for proposals that seek to utilise renewable and low carbon energy to minimise CO₂ emissions. Both policies seek to ensure that any impacts from proposals for renewable and low carbon energy comply with certain criteria and objectives. The compliance of the Scheme with these criteria is considered in the relevant parts of Section 8 of this PDAS. They are considered in the context of the nationally significant benefits that the Scheme will bring, and the likely increased level of effect that is associated with, and acceptable for, a Scheme of this scale in comparison with a smaller scheme that would only deliver locally or regionally significant benefits.

7.2.28 Policy S14 of the CLLP states that:

7.2.29 *'Central Lincolnshire Joint Strategic Planning Committee is committed to supporting the transition to a net zero carbon future and will seek to maximise appropriately located renewable energy generated in Central Lincolnshire.*

7.2.30 *Proposals for renewable energy schemes, including ancillary development, will be supported where the direct, indirect, individual and cumulative impacts on the following considerations are, or will be made, acceptable. To determine whether it is acceptable, the following tests will have to be met:*

- *the impacts are acceptable having considered the scale, siting and design, and the consequent impacts on landscape character; visual amenity; biodiversity; geodiversity; flood risk; townscape; heritage assets, their settings and the historic landscape; and highway safety and rail safety; and*
- *the impacts are acceptable on aviation and defence navigation system/communications; and*
- *the impacts are acceptable on the amenity of sensitive neighbouring issues (including local residents) by virtue of matters such as noise, dust, odour, shadow flicker, air quality and traffic...*

7.2.31 *...Where significant adverse effects are concluded by the local planning authority following consideration of the above assessment(s), such effects will be weighed against the wider environmental, economic, social and community benefits provided by the proposal. In this regard, and as part of the planning balance, significant additional weight in favour of the proposal will arise for any proposal which is community-led for the benefit of that community...."*

7.2.32 Policy S14 also provides the following specific requirements to be considered for ground based solar based energy proposals:

7.2.33 *'Proposals for ground based photovoltaics and associated infrastructure, including commercial large scale proposals, will be under a presumption in favour unless:*

- *there is clear and demonstrable significant harm arising; or*
- *the proposal is (following a site specific soil assessment) to take place on Best and Most Versatile (BMV) agricultural land and does not meet the requirements of Policy S67; or*
- *the land is allocated for another purpose in this Local Plan or other statutory based document (such as a nature recovery strategy or a*

Local Transport Plan), and the proposal is not compatible with such other allocation.

- 7.2.34 *Proposals for ground based photovoltaics should be accompanied by evidence demonstrating how opportunities for delivering biodiversity net gain will be maximised in the scheme taking account of soil, natural features, existing habitats, and planting proposals accompanying the scheme to create new habitats linking into the nature recovery strategy.'*
- 7.2.35 Further, Policy S14 contains the following provisions for decommissioning renewal energy infrastructure:
- 7.2.36 *'Permitted proposals will be subject to a condition that will require the submission of an End of Life Removal Scheme within one year of the facility becoming non-operational, and the implementation of such a scheme within one year of the scheme being approved. Such a scheme should demonstrate how any biodiversity net gain that has arisen on the site will be protected or enhanced further, and how the materials to be removed would, to a practical degree, be re-used or recycled.'*
- 7.2.37 As set out in Table 7.1 below, when considering the factors specified in the policy, the benefits of the Scheme outweigh the impacts when assessed individually and cumulatively with other Schemes proposed. The section of the PDAS where more information can be obtained is also provided.

Table 7.1: Compliance of Scheme with CLLP S14

Requirement	Compliance	PDAS Section
Scale, siting and design	Principles of Good Design applied from an early stage. Design proposals shaped by stakeholder engagement and the context and features of the land within the Order limits and its surroundings.	7.3
Impacts on landscape character	Landscape impacts are localised and limited.	7.4
Visual amenity	Effects minimised as far as possible through careful design and layout of the Scheme. Significant effects limited for the size of development.	7.4 (visual); 7.10 (noise)
Biodiversity and geodiversity	No significant adverse effects on biodiversity or geodiversity. Significant benefits to biodiversity during Scheme operation.	7.6 (ecology) 7.11 (minerals)
Flood risk	FRA shows Solar and Energy Park passes sequential test. Grid Connection Corridor in area of high risk of fluvial flooding but underground cable will not be vulnerable to flooding or increase flooding elsewhere.	7.8
Townscape	Landscape impacts are localised and limited. There are no significant townscape impacts predicted.	7.4

Requirement	Compliance	PDAS Section
Heritage Assets, their settings and the historic landscape	No significant effects on designated or undesignated assets. Effects on archaeology mitigated through design and the Archaeological Mitigation Strategy.	7.5
Highway and rail safety	Access is by road only and has been carefully considered throughout to ensure safety. Traffic after construction limited to 15 vehicles per day. No significant adverse effect on traffic and transport including rail.	7.9
Aviation and defence navigation systems	No relevant considerations or impacts on MoD operations.	N/A
Amenity of sensitive neighbouring uses	Effects minimised as far as possible through careful design and layout of the Scheme. Significant effects limited for the size of development.	7.4 (visual); 7.9 (traffic) 7.10 (noise)
Agricultural Land	Permanent loss of 2 ha of BMV land, which is not significant. Majority of land affected within the Solar and Energy Storage Park (88%) is not BMV land. Use of affected BMV land is justified due to its location and the benefits of the Scheme. Use of most agricultural land is reversible after decommissioning and impacts on agricultural land within the Grid Connection Corridor are very limited after construction.	7.13
Other allocations for the land.	The Scheme does not conflict with any allocations within the CLLP or other statutory based documents.	N/A

7.2.38 The Applicant considers that the Scheme complies with CLLP Policy S14.

7.2.39 Policy DM10 of the BCS is of reduced relevance because only a small area of the grid connection falls into the Bassetlaw area. Nevertheless, policy DM10 states that:

7.2.40 *'Proposals for renewable and low carbon energy infrastructure will also need to demonstrate that they:*

- *are compatible with policies to safeguard the built and natural environment, including heritage assets and their setting, landscape character and features of recognised importance for biodiversity;*
- *will not lead to the loss of or damage to high-grade agricultural land (Grades 1 & 2);*
- *are compatible with tourism and recreational facilities;*
- *will not result in unacceptable impacts in terms of visual appearance; noise; shadow flicker; watercourse engineering and hydrological impacts; pollution; or traffic generation; and*
- *will not result in an unacceptable cumulative impact in relation to the factors above.*

- 7.2.41 *Large-scale renewable and low carbon energy proposals must provide full details of arrangements for decommissioning and reinstatement of the site if/when it ceases to operate.'*
- 7.2.42 It is noted that policy in the BCS refers to development on Grade 1 and 2 agricultural land, as opposed to BMV agricultural land which also includes Grade 3a. No Grade 1 or 2 land is affected by the Scheme. Overall, the element of the project in Bassetlaw complies with this policy.
- 7.2.43 Draft Policy ST15 of the Draft BLP states that:
- “development that generates, shares, transmits and/or stores zero carbon and/or low carbon renewable energy including community energy schemes will be supported and expected to demonstrate an operational and/or economic need for the development in that location, and the satisfactory resolution of all relevant site specific and cumulative impacts that the scheme could have on the area, taking into account operational and approved developments, as well as any proposed intensification to operational or approved proposals.”*
- 7.2.44 The policy also states that all renewable energy development will be expected to provide details of the expected power generation based upon yield to enable effective monitoring of the district's contribution to the national zero carbon targets. It also requires a decommissioning programme to demonstrate, the effective restoration of land and/or buildings to their original use (such as agriculture) and condition three years after cessation of operations.
- 7.2.45 **Chapter 6: Climate Change of the ES [EN010131/CPP/3.1]** presents a lifecycle greenhouse gas (GHG) impact assessment which considers the impact of GHG emissions arising over the lifetime of the Scheme on the climate. This concludes that over its 60-year operational lifetime, the Scheme will produce approximately 26.99 MWh of electricity, with an average operational carbon intensity value of 17.98 grams of carbon dioxide equivalent per kWh (gCO₂e/kWh). This demonstrates the Scheme's very low carbon attributes compared to other non-renewable forms of electricity generation, providing an overall major beneficial impact in relation to the UK meeting its carbon reduction targets and therefore represents a major beneficial effect on the climate. The significant amount of electricity generated and carbon emission reductions are clear benefits of the Scheme.

7.3 Good design

- 7.3.1 Section 4.5 of NPS EN-1 sets out the principles for good design that should be applied to all energy infrastructure. It states at paragraph 4.5.1 that good design should *“produce sustainable infrastructure sensitive to place, efficient in the use of natural resources and energy used in their construction and operation, matched by an appearance that demonstrates good aesthetic as far as possible”*.
- 7.3.2 Paragraph 4.5.1 does however acknowledge that *“the nature of much energy infrastructure development will often limit the extent to which it can contribute to the enhancement of the quality of the area”*. NPS EN-3 expects renewable

energy NSIPs to demonstrate “*good design in respect of landscape and visual amenity, and in the design of the project to mitigate impacts such as noise and effects on ecology*” (paragraph 2.4.2) and NPS EN-5 also identifies that proposals for electricity networks infrastructure should demonstrate good design in their approach to mitigating potential adverse impacts (paragraph 2.5.1).

- 7.3.3 Draft NPS EN-1 section 4.6 states that applicants should consider how ‘good design’ can be applied at the early stages of a project. It also recommends that applicants embed opportunities for nature inclusive design into their scheme and emphasises that wider impacts such as landscape and environmental impacts will be important factors in the design process.
- 7.3.4 Draft NPS EN-3 paragraphs 3.5.1, 3.5.2 and 3.10.50 set out that developers should consider the criteria for good design set out in section 4.6 of NPS EN-1, and that all energy infrastructure proposals should demonstrate good design, particularly in respect of landscape and visual amenity, mitigation of impacts such as noise and effects on ecology and heritage.
- 7.3.5 Paragraph 130 of the NPPF seeks to ensure that developments are designed to function well, and be sympathetic to the local character and history, “*while not preventing or discouraging appropriate innovation or change*” and suggests that local design policies and government guidance on design should be taken into consideration.
- 7.3.6 In terms of local policy, Policy S53 of the CLLP, Policy DM4 of the BCS and Policy ST35 of the Draft BLP set out general design criteria and objectives. These are applicable to locally and regionally significant developments and primarily address developments that create buildings and streets. Therefore, not all criteria can be easily applied to the Scheme, but criteria of these policies that could be relevant are set out in Table 7-2.

Table 7-2: Relevant Local Design Policies

Policy	Development Plan	Design Criteria
Policy S14	CLLP	<p>All development proposals will be assessed against and will be expected to meet the following relevant design and amenity criteria. All development proposals will:</p> <ul style="list-style-type: none"> • Be based on a sound understanding of the context, integrating into the surroundings and responding to local history, culture and heritage; • Relate well to the site, its local and wider context and existing characteristics including the retention of existing natural and historic features wherever possible and including appropriate landscape and boundary treatments to ensure that the development can be satisfactorily assimilated into the surrounding area; • Protect any important local views into, out of or through the site; • Incorporate and retain as far as possible existing natural features including hedgerows, trees, and waterbodies particularly where these features offer a valuable habitat to support biodiversity, aligned with policies in the Natural Environment chapter of the Local Plan;

Policy	Development Plan	Design Criteria
		<ul style="list-style-type: none"> Incorporate appropriate landscape and boundary treatments to ensure that the development can be satisfactorily assimilated into the surrounding area, maximising opportunities to deliver diverse ecosystems and biodiverse habitats, strengthening wildlife corridors and green infrastructure networks, and helping to achieve wider goals for biodiversity net gain, climate change mitigation and adaptation and water management;
Policy DM4	BCS	<p>All major development proposals will need to demonstrate that they:</p> <ul style="list-style-type: none"> complement and enhance the character of the built, historic and natural environment;
Policy ST35	Drat BLP	<p>All development must be of a high quality design that:</p> <ul style="list-style-type: none"> has a clear function, character and identity based upon a robust understanding of local context, constraints and distinctiveness, while reflecting the principles of relevant national and local design guidance, including Sport England's Active Design principles, the Bassetlaw Design Quality SPD and the Bassetlaw Design Code; where appropriate, positively preserves, enhances and integrates landscape and townscape features, and natural and heritage assets; respects the local context and complements the landform, layout, building orientation, scale, height, massing, type, materials, details and landscaping of the surrounding areas; incorporates and/or links to a well-defined green/blue infrastructure network of well managed and maintained public and open spaces; minimises energy consumption by maximising opportunities for passive solar energy and integrating renewable and low carbon technologies where practicable in accordance with Policy ST50 (Reducing Carbon Emissions, Climate Change Mitigation and Adaptation); mitigates flood risk and water run-off utilising the drainage hierarchy in accordance with Policy ST52 (Flood Risk and Drainage), and integrates water management appropriate to place;

7.3.7 As discussed in detail in Chapter 4 of this PDAS, the Scheme is the result of an iterative design development process which commenced at an early stage and addresses the key opportunities and challenges of the Scheme and the context and setting that it is located within. The design team has worked collaboratively to provide an integrated and responsive design, informed and shaped by stakeholder engagement. Through the design process, the Applicant has taken account of the context and features of the land within the Order limits and its surroundings in order to develop a good design that meets the requirements and objectives of the policies described above.

7.3.8 A number of the design aspects and features of the Scheme cannot be confirmed until the tendering process for design and construction has been completed. For example, enclosure or building sizes may vary depending on the contractor selected and their specific configuration and selection of plant. The EIA has therefore been undertaken adopting the principles of the

'Rochdale Envelope', as described in the Planning Inspectorate Advice Note 9 (Ref 4-1). This involves assessing the maximum (and where relevant, minimum) parameters for the Scheme where flexibility needs to be retained. The **Outline Design Principles [EN010131/APP/2.3]** will be secured by the DCO and provide certainty that the Scheme will be delivered whilst retaining the important design principles incorporated to avoid and mitigate environmental effects; whilst maximising benefits and enhancements resulting from the Scheme.

- 7.3.9 Chapter 4 of this PDAS explains how the Scheme would deliver good design, meeting the requirements of the NPS and Draft NPS, in the context of efficiently delivering large scale renewable energy infrastructure. The Scheme will provide a new network of environmental features including biodiversity enhancements, minimise environmental effects as far as possible on heritage and landscape, and incorporating access into the design. The Scheme design also complies with local design criteria as set out in Policy S53 of the CLLP, Policy DM4 of the BCS and Policy ST35 of the Draft BLP.

7.4 Landscape and Visual Amenity

- 7.4.1 A full assessment of the landscape and visual impacts of the Scheme, including measures incorporated to reduce impacts, is provided in **Chapter 10: Landscape and Visual Amenity of the ES [EN010131/APP/3.1]**.
- 7.4.2 The Scheme is not located within or in close proximity to any National Parks, or Areas of Outstanding Natural Beauty and is therefore compliant with policy aims to protect these areas (e.g. NPS EN-1 paragraph 5.9.9 and NPPF paragraph 176).
- 7.4.3 The Scheme is partially located within the AGLV, which is an area that is locally designated for its landscape value in the CLLP.
- 7.4.4 An assessment of the Scheme compliance with policies on landscape and visual impacts is provided below.

General Principles When Assessing and Giving Weight to Landscape and Visual Amenity Impacts

- 7.4.5 The landscape and visual impacts of the Scheme have been assessed in accordance with NPS EN-1 paragraphs 5.9.5 to 5.9.7, draft NPS EN-1 paragraphs 5.10.15 to 5.10.24 and draft NPS EN-3 paragraphs 3.10.84 to 3.10.92. The assessment includes reference to the relevant landscape character assessments and any significant effects. In making the assessment a range of factors have been considered, including visibility, views, visual amenity, light pollution, local amenity, tranquillity and nature conservation.
- 7.4.6 Paragraphs 5.9.8 of NPS EN-1 states that landscape effects "*depend on the existing character of the local landscape, its current quality, how highly it is valued and its capacity to accommodate change*" and "*these factors need to be considered in judging the impact of a project on landscape*". Paragraph 5.10.1 of Draft NPS EN-1 confirms that the landscape and visual effects of energy projects will vary on a case by case basis according to the type of

development, its location and the landscape setting. These factors are presented in **Section 10.7 of Chapter 10: Landscape and Visual Amenity of the ES [EN010131/APP/3.1]** which explains the landscape baseline. Therefore the Scheme complies with these paragraphs.

- 7.4.7 The NPSs and Draft NPSs provide guidance on decision making for proposals that may affect locally designated landscapes. NPS EN-1 paragraphs 5.9.14-5.9.16 state that [Applicant's emphasis]:

"5.10.16 Outside nationally designated areas, there are local landscapes that may be highly valued locally and protected by local designation. Where a local development document in England or a local development plan in Wales has policies based on landscape or waterscape character assessment, these should be paid particular attention. However, local landscape designations should not be used in themselves to refuse consent, as this may unduly restrict acceptable development. (This paragraph is identical in 5.10.11 of Draft NPS EN-1)

5.10.17 The scale of such projects means that they will often be visible within many miles of the site of the proposed infrastructure. The Secretary of State should judge whether any adverse impact on the landscape would be so damaging that it is not offset by the benefits (including need) of the project. (This paragraph is identical in 5.10.34 of Draft NPS EN-1, except 'such projects' is replaced with 'energy projects').

5.10.18 In reaching a judgment, the Secretary of State should consider whether any adverse impact is temporary, such as during construction, and/or whether any adverse impact on the landscape will be capable of being reversed in a timescale that the Secretary of State considers reasonable.' (This paragraph is identical in 5.10.35 of Draft NPS EN-1).

- 7.4.8 The NPS EN-1 and Draft NPS EN-1 therefore provide a consistent position, emphasising that whilst local landscape designations should be paid particular attention, as they have been here, local landscape designations should not be used in themselves to refuse consent. These paragraphs also suggest that some landscape and visual effects are unavoidable due to the scale and nature of NSIP projects, so the question for granting consent is not whether landscape and visual impacts exist, but whether they are 'so damaging' that they are not offset by the benefits of the project.

Landscape Design Principles

- 7.4.9 NPS EN-1 paragraph 5.9.17 and Draft NPS EN-1 paragraph 5.10.36 set out that the decision maker should:

7.4.10 *"...consider whether the project has been designed carefully, taking account of environmental effects on the landscape and siting, operational and other relevant constraints, to minimise harm to the landscape, including by appropriate mitigation."*

- 7.4.11 As set out in Section 10.6 of **Chapter 10: Landscape and Visual Amenity of the ES [EN010131/APP3.1]** and Chapter 4 of this PDAS landscape mitigation and design as informed every stage of the design process. Mitigation that has been embedded into the Scheme includes burying

the grid connection, siting of transformers and converter station, introducing buffer areas between sensitive receptors and infrastructure and screening and planting design. The additional mitigation measures include additional hedgerow, tree and shrub planting and improvement of existing hedgerows. The design principles will mitigate potential adverse effects and maximise the delivery of local landscape benefits. It is therefore considered that the Scheme has been designed carefully and taking account of landscape and visual constraints.

- 7.4.12 Draft NPS EN-3 Section 2.51 contains particular considerations when considering landscape, visual and residential amenity for solar projects. Sections 3.10.122-3.10.124 state that:
- 7.4.13 *‘Applicants should consider the potential to mitigate landscape and visual impacts through, for example, screening with native hedges, trees and woodlands.*
- 7.4.14 *Applicants should aim to minimise the use and height of security fencing. Where possible projects should utilise existing features, such as hedges or landscaping, to assist in site security or screen security fencing.*
- 7.4.15 *Applicants should minimise the use of security lighting. Any lighting should utilise a passive infra-red (PIR) technology and should be designed and installed in a manner which minimises impact.’*
- 7.4.16 The overall objective of the landscape design is to integrate the Scheme into its landscape setting and avoid or minimise adverse landscape and visual effects as far as practicable. The design has been developed in collaboration with the wider design team and other specialists to achieve a solution that achieves this objective whilst maximising opportunities to deliver net gains in biodiversity. Accordingly, the landscape design aims to achieve the following:
- To integrate the Scheme into the existing landscape pattern as far as possible by retaining and following existing features, including vegetation, where practicable;
 - To replace vegetation lost because of construction of the Scheme through areas of new planting;
 - To filter and screen more prominent components of the Scheme in views from visual receptors;
 - To apply appropriate offsets to residential properties to mitigate/reduce views of the Scheme in views from visual receptors; and
 - Minimise the use and height of security fencing.
- 7.4.17 In the development of the scheme design and Outline Landscape Masterplan (as illustrated on Figure 10-23 [EN010131/APP/3.2]), efforts have been made to minimise the use of security fencing and lighting by integrating these with natural barriers (existing landscape features) wherever possible. For example, Burton Wood acts as a natural barrier to views looking east from Gate Burton, with fencing excluded from the western side of Burton Wood. Existing hedgerows with trees or proposed/strengthened hedgerows to the north and south of Burton Wood screen the proposed security fence from Gate Burton. Tree and shrub belt planting is also proposed outside the fenceline in the

north-east corner of the Solar and Energy Storage Park, which combined with the panel offset reduces visual effects of the panels (and fenceline) on residential properties along Kexby Lane.

- 7.4.18 The Outline Design Principles [EN010131/APP/2.3] specify that lighting at the BESS, Substation and external buildings and parking will be PIR operated (passive infra-red) calibrated to vehicles and personnel. Lighting is generally limited across the Scheme.
- 7.4.19 Offsets from properties were included in the initial design following a review of the existing views experienced by residents in proximity to the Order limits. The form and extent of these offsets has been adjusted through design development and consultations with residents to respond to the existing character of views from residential properties. As evidenced and secured in the **Outline Design Principles [EN010131/APP/2.3]** and **Works Plans EN010131/APP/5.2** the Scheme design has been carefully sited where it will appear in views experienced by residents to avoid or minimise adverse effects.
- 7.4.20 The following sections present the outcome of the landscape and visual assessment and the Scheme's compliance with planning policy relating to the protection of landscape character and visual amenity. NPS EN-1 (paragraphs 5.9.8 and 5.9.18 to 5.9.20) and Draft NPS EN-1 (paragraphs 5.10.11 to 5.10.14) acknowledge the fact that development of new energy infrastructure, at the scale and speed required to meet the current and future need identified, is likely to have some negative effects on landscape and visual amenity which may not be able to be mitigated. Local planning policies need to be considered in light of this as they have not been developed to take account of the nationally significant level of benefit and the likely level of impact of large-scale infrastructure that are associated with NSIPs.

Landscape Effects During Construction

- 7.4.21 Effects on landscape character during construction of the Scheme are likely to be temporary and result from the following:
- Localised excavations and topsoil stripping/temporary storage;
 - The introduction of temporary compounds, lighting, stockpiles, machinery, haul rods, associated fencing and signage which will temporarily increase the extent of built development; and
 - General construction activity, traffic and operations and the movement of plant and machinery which will increase the level of activity across the Order limits.
- 7.4.22 **Chapter 10: Landscape and Visual of the ES [EN010131/APP/3.1]** identifies the baseline conditions for its assessment and assesses the effects on Landscape Character Areas (LCA) at a regional, county and district level. The Scheme would not result in significant impacts to Landscape Character Types (LCT) defined at a regional level, LCAs defined at the County level or LCAs defined at a district level during construction. At the District level the majority of the Order limits is located within the Trent Valley LCA. In particular, the whole of the Solar and Energy Storage Park will be located within Trent Valley LCA. The magnitude of effect during construction has been assessed

as low; combined with the medium sensitivity of the LCA, the level of effect will be minor adverse within the Trent Valley LCA during construction. The effect is reduced due to strengthened and established hedgerows, which would provide an improved landscape structure, along with new woodland belts. As discussed, the residual effect is not significant.

- 7.4.23 At a local level the Order limits are within the following Local Landscape Character Areas: LLCA 01, LLCA 02, LLCA 05, LLCA 06, LLCA 08, LLCA 09, LLCA 10, LLCA 11 and LLCA 12. Construction of the Scheme would result in significant effects to LLCA 02: Ancient Woodland Ridge, LLCA 06: Clay Farmlands and LLCA 10 Cottam Plain.
- 7.4.24 For LLCA 02: Ancient Woodland Ridge, whilst high quality physical features within the LLCA, such as the ancient woodland, will be protected and retained, the introduction of construction activity and features will result in a large alteration across an extensive area of LLCA 02 for the medium term, therefore resulting in a significant major adverse effect. For LLCA 06: Clay Farmlands, a significant effect is anticipated due to construction altering a wide area at a local level, however this would not result in the permanent loss of key features such as the overall landscape structure or the mature hedgerows network. A significant effect is anticipated on LLCA 10: Cottam Plain, as construction impacts will result from the installation of underground cable to tie into Cottam Power Station. The chapter concludes that construction will be within a substantial part of LLCA 10 and will be perceptible beyond the immediate Order limits within the wider LLCA.
- 7.4.25 The area of development within the Order limits in the AGLV is located within the Trent Valley LCA. The Applicant was unable to locate any evidence base documents setting out the rationale for this AGLV, a justification for the boundaries drawn or information on which areas are the most sensitive. However, the Applicant has given particular attention to the AGLV when assessing the sensitivity of the area and when developing the design. The Applicant is of the view that the most sensitive areas of the AGLV are those around designated heritage assets, particularly in the vicinity of Gate Burton. The Applicant has therefore carefully considered the layout in this area and introduced a significant buffer between the nearest solar panels and properties and heritage assets at Gate Burton.
- 7.4.26 Construction of the BESS and adjacent Substation, and construction of the solar panel arrays partially located within the southernmost extent of the Gainsborough ridge section of the AGLV will temporarily influence the character of the AGLV. However, construction will be in the eastern part of the AGLV, adjacent to and influenced by the railway line and avoiding more sensitive locations to the west. Construction within the AGLV falls outside the most sensitive areas adjacent to the Gate Burton Estate. A significant buffer has been provided between the Gate Burton Estate and the nearest panels to the east, with this buffer increased between statutory consultation and submission in response to concerns raised by Historic England about the impact on sensitive receptors at Gate Burton.
- 7.4.27 The key elements which add to the AGLV within the Order limits will also be retained in construction. Influence on the wider AGLV will be limited by

intervening woodland and use of access routes which avoid it. The magnitude of effect during construction on the AGLV is assessed as low, taking into consideration geographical extent, duration and reversibility as well as the scale of change and retention of key elements. Susceptibility to construction is assessed as medium. As a local designation of medium value, the sensitivity of the AGLV is assessed as medium and the level of effect will be minor adverse on it during the construction stage. Therefore, the construction of the Scheme is not predicted to have a significant effect on the AGLV.

Visual effects during construction

- 7.4.28 **Chapter 10: Landscape and Visual of the ES [EN010131/APP/3.1]** concludes that construction effects for residential receptors within or adjacent to the Order limits are limited, and only significant where there is construction activity at close range across a wide extent of a view. These affects would moderate and temporary. The affected residents are those at Clay Farm, Park Farm, South Park Farm, Sandy Barr Cottage and Nursery House along Willingham Road; residences at the western most fringe of Knaith Park along Station Road, Stephenson's Hill Farm along Station Road, and residences within Gate Burton Estate close to the eastern boundary of the estate. It will also affect residents facing the Grid Connection Corridor along sections of the A1500 / Stow Park Road at the eastern fringe of Marton, Marton Grange, Rectory Farm, individual properties located along High Street / A156 south of Marton, Brampton Grange, residences along the northern fringe of Cottam and the eastern fringe of Rampton.
- 7.4.29 Visual effects will decrease quickly so as not to be significant with increasing distance from the Order limits due to intervening vegetation, landform and built structures as well as to the gently undulating or flat nature of the landform of the Solar and Energy Storage Park and surroundings to the north, northeast, east and sections of the south.
- 7.4.30 **Chapter 10: Landscape and Visual of the ES [EN010131/APP/3.1]** also assesses the impact of the construction of the Scheme on road users and public transport. It states that occasional views of construction will be available through gaps in vegetation, but they will be fleeting and oblique to the direction of travel. Where more open views from the road network are available (sections of the A156, Willingham Road, Marton Road, Kexby Lane, Station Road and Clay Lane), construction will be adjacent to sections of these roads resulting in adverse significant effects. Visual effects along the remaining road network would reduce, due to roadside vegetation and distance to the Order limits, and as such are not considered to be significant. Visual effects for train passengers along the railway line within the Order limits would be fleeting and oblique to the direction of travel.
- 7.4.31 There is also considered to be significant visual effects for people walking PRow LL[Knai]44/2, and sections of ProW LL/Upto/53/1 during construction. In addition, along the Grid Connection Corridor, sections of the following ProW will be either located within the Grid Connection Corridor or in proximity with often open views of the proposed construction works: ProW LL|Mton|68|1, ProW LL|Mton|66|4, ProW NT|Cottam|FP1, ProW NT|Cottam|FP3, ProW NT|Cottam|RB4, ProW NT|South Leverton|BOAT16, ProW NT|Rampton|FP5, ProW NT|Treswell|FP4, NT|Treswell|FP5, NT|Rampton|BOAT13,

NT|Rampton|BOAT12, ProW NT|Rampton|FP20, and ProW NT|Rampton|FP1. These effects will be temporary for part or all of the construction period.

- 7.4.32 Views from all other ProW are not considered to be significant due to filtered or screened views, intervening landform and vegetation, and existing built structures.
- 7.4.33 **Chapter 10: Landscape and Visual of the ES [EN010131/APP/3.1]** also takes into consideration views of visitors to Tillbridge Lane viewpoint, Sundown Adventureland east of Treswell, and Lincoln Golf Club, and states that there will be no significant visual effects due to the distance from the Order limits and screening provided by vegetation and landform.
- 7.4.34 Boat users of the River Trent are also considered, and no significant effect is anticipated due the proposed avoidance area in the vicinity of the River, as well as mature bands of trees, and vegetation along the embankments. There is also considered to be no significant effect on outdoor workers including farmers in fields with view of the Scheme, due to screening by intervening hedgerows and trees along field boundaries.

Landscape effects during operation

- 7.4.35 Chapter 10: Landscape and Visual of the ES [EN010131/APP/3.1] sets out landscape effects of the Scheme in Year 1 (winter) and Year 15 (summer).
- 7.4.36 Similar to the construction period, operation of the Scheme during winter of the first year will not result in significant effects to the LCTs defined at a regional level, or the LCAs and LCPs defined at the County or District level.
- 7.4.37 For Local LCAs, the operation of the Scheme will result in significant effects to LLCA 02: Ancient Woodland Ridge and LLCA 06: Clay Farmlands during Year 1 and Year 15 (although impact would be reduced), as described below.
- 7.4.38 The majority of LLCA 02 will be occupied by the Scheme, including solar panels, inverters, the BESS and on-site Substation. By Year 1, the introduction of these features will result in a loss of openness, tranquillity and agricultural character. Although, the remaining key characteristics, including blocks of ancient woodland, will remain unchanged. However, overall, the Scheme will result in a large alteration to the majority of the LLCA which is considered significant. By Year 15, the proposed new and strengthened planting will have established and grown to maturity, improving the vegetated structure of the LLCA. However, given the introduction of the Scheme as described for Year 1 across most of the LLCA the large alteration in character is inevitable such that the magnitude of effect remains the same as for Year 1.
- 7.4.39 The section of the Order limits within LLCA 06 will be occupied by solar panels, inverters and a security building at the Order limits entrance. By Year 1, many key features will be maintained, including the plateau landform and field boundaries. However, the Scheme will result in the loss of some key characteristics, namely the agricultural character and a reduction in the sense of openness given the change of land use and the introduction of new built features in the landscape. This is therefore considered to be significant. By Year 15 the proposed new and strengthened planting will have established

and grown to maturity, improving the vegetated structure of the LLCA. However, given the introduction of the Scheme as described for Year 1 across most of the LLCA the alteration in character will be such that the magnitude of effect will remain medium.

- 7.4.40 The assessment also concludes that the magnitude of effect on the AGLV during operation is assessed as low, taking into consideration geographical extent, as well as the scale of change and retention of key elements, and is therefore not significant. These outcomes are the same at Year 15.
- 7.4.41 Careful design has minimised the operational impact of the Scheme on the AGLV, including introducing a buffer area between Gate Burton and the nearest solar panels to the east and carefully considering the nature and location of development within the remainder. In particular, the BESS and on-site Substation are located in the AGLV, but at the far eastern extent of the local designation. The location is therefore screened in views from the north west and south west (and north and south) by woodland blocks. The most sensitive area of this AGLV is considered to be the area around the II* Listed Gate Burton Hall and associated listed assets and non-designated parkland. The western edge of the BESS is located just under 1km from Gate Burton Hall, providing a significant separation distance. The area of the AGLV is also adjacent to the railway line at this point. Further areas within the AGLV are proposed for biodiversity mitigation and would not have any infrastructure within them. Finally, the landscape planting has been designed to reduce landscape impacts. These measures have all been successful in ensuring the impact on the AGLV is not significant.

Visual effects during operation

- 7.4.42 **Chapter 10: Landscape and Visual of the ES [EN010131/APP/3.1]** sets out the visual effects on residents, recreational users, road users and public transport and visitors to the area in Year 1 (winter) and Year 15 (summer).
- 7.4.43 In Year 1, the Scheme is anticipated to result in major or moderate adverse significant effects for residents of Sandy Barr Cottage (VP17, Residential 1a & 1b), Nursery House (VP17, Residential 2a & 2c) to the south of the Order limits, Gate Burton Estate (VP15, Residential 6a -6f), Stephenson's Hill Farm to the west of the Order limits, Clay Farm in the southern centre of the Scheme but outside the Order limits, South Park Farm (Residential 3a -3c), 30 Station Road (LCC 5, Residential 4a), 2 Heynings Court (Residential 5a) along the northern side of the Order limits, and Woodside, Kexby Lane (VP 10, Residential 7a) along the eastern side of the Order limits. This will be due to the visibility of PV arrays, and due to mitigation planting not being established yet. Significant visual effects will reduce to minor, negligible and neutral with increasing distance from the Order limits, due to intervening vegetation, landform and built structures.
- 7.4.44 By Year 15 however, proposed planting within and along the boundaries of the Order limits will have established which would result in no residential receptors with open views in proximity to the Order limits or set back from the Order limits in the surrounding settlements being identified as experiencing significant adverse effects at Year 15 of operation.

- 7.4.45 For road users and public transport, a range of moderate-major adverse significant effects are reported where more open views from the road network are available (sections of the A156, Willingham Road, Marton Road, Kexby Lane, Station Road and Clay Lane). By Year 15, these effects would reduce to not significant due to the establishment of tree planting, and maintenance of existing hedgerows at 3m height. Views from the elevated positions of B1398 (High Street), close to Scampton and the B1398 (Middle Street) east of Ingham, Fillingham and Glentworth are not considered to be significant. There will be some moderate-minor significance visual effect on users of the train on the railway line within the Order limits, which runs approximately 20 services a day in each direction running every hour (Monday to Friday); although these will be fleeting and oblique to the direction of travel both in Year 1 and Year 15. Given the nature of the views and the infrequent nature of the train service, a relatively small number of users would view the Scheme for a short period of time.
- 7.4.46 **Chapter 10: Landscape and Visual of the ES [EN010131/APP/3.1]** states that in Year 1, users of sections of PRow LL|Knai|44/2 will experience high visual effects similar to the effects experienced during construction. The magnitude of visual effects will be medium and the significance of these effects will be moderate adverse as the proposed Scheme is located adjacent to the PRow for approximately 360m. Views from other PRow will be screened by matured proposals landscape planting and intervening landform and effects range from moderate-minor adverse. By Year 15, these effects will be similar to those experienced during Year 1. There will be no significant effects on visitors to Tillbridge Lane Viewpoint, Sundown Adventureland east of Treswell, and Lincoln Golf Club due to distance from the Order limits and screening, in Year 1 and 15.

Decommissioning

- 7.4.47 Decommissioning effects on the landscape and visual amenity are likely to be similar to those temporary impacts experienced during construction of the Order Limits but reduced on account of the containment provided by landscape mitigation measures including proposed vegetation, which will have reached maturity, and general landscape management measures.
- 7.4.48 However, the decommissioning phase may result in localised significant adverse landscape and visual effects, like the construction phase, due to the presence of machinery and general activity to remove Scheme structures.

Conclusion

- 7.4.49 The Scheme is not located within or in close proximity to any nationally designated landscapes, therefore there is no need to consider alternatives under NPS EN-1 section 5.9.
- 7.4.50 In accordance with NPS EN-1 paragraph 5.9.22 and draft NPS EN-1 paragraph 5.10.26, the design of the Scheme has taken account of the landscape and landform in which it sits and has given careful consideration to its impact on views from sensitive receptors. Landscape and visual amenity considerations have influenced the design development at all stages, and the

design has directly and effectively responded to potential impacts identified in relation to landscape and visual impact.

- 7.4.51 In considering the acceptability of the landscape and visual impacts of the Scheme it is noted that that NPS EN-1 paragraphs 5.9.8 and 5.9.18, and Draft NPS EN-1 paragraphs 5.10.11 and 5.10.14 acknowledge that NSIP scale energy generation infrastructure is likely to have landscape and visual effects. NPS EN-1 paragraph 5.9.21 and Draft NPS EN-1 paragraph 5.10.25 go on to say that mitigation that would reduce the generation output of a scheme is only warranted in exceptional circumstances where the mitigation would have a very significant benefit in terms of impacts and would lead only to a small reduction in function. The Applicant has already taken significant action to reduce landscape and visual impacts, for example, removal of fields nearest to Gate Burton to reduce heritage, landscape and visual impacts removed approximately 5MW from the Scheme. It is not considered that any further reduction of the Scheme is justified to further reduce effects, which are considered minimal given the scale of development.
- 7.4.52 In accordance with NPS EN-1 paragraphs 5.9.15, and Draft NPS EN-1 paragraphs 5.10.34 it is considered that the landscape and visual effects of the Scheme are clearly and comprehensively outweighed by the benefits of the Scheme when considered individually and cumulatively with other Schemes.
- 7.4.53 In accordance with paragraph 5.9.18 of NPS EN-1 and paragraphs 5.10.34 to 5.10.36 of Draft NPS EN-1, further weight can be given to the above conclusion by the fact that some significant landscape effects identified during the construction phase and during Year 1 of operation are predicted to be reduced to a level that is less than significant by Year 15 of operation and will be further reversed on completion of decommissioning. The avoidance of significant landscape effects at year 15 of operation is a result of careful design, which has taken account of landscape and siting, in accordance with NPS EN-1 paragraph 5.9.17 and Draft NPS EN-1 paragraph 5.10.36.
- 7.4.54 The relevant local landscape policies include Policy DM9 and DM10 of the BCS, Policy ST37 of the Draft BLP, and Policy S62 of the CLLP. In terms of local policy, the 'acceptability' of the Scheme's landscape and visual impacts need to be weighed against the nationally significant benefits of and need for the Scheme and acknowledgement that with NSIP scale generation schemes some landscape and visual impacts are acceptable. In this context it is considered that the landscape and visual effects that would result are outweighed by the overriding benefits of the Scheme, and that the Scheme is therefore compliant with Policy DM9 and DM10 of the BCS, Policy ST37 of the Draft BLP and Policy S62 of the CLLP in respect of landscape and visual impact.

7.5 Cultural Heritage

- 7.5.1 **Chapter 7: Cultural Heritage of the ES [EN010131/APP/3.1]** and its supporting appendices provide an assessment of the likely effects of the Scheme upon heritage assets, including a description of the significance of the heritage assets and possible impacts (including cumulative) on the wider

historic environment. It also considers the contribution of their setting to their significance and the results of archaeological desk-based and field investigations. The assessment is informed by consideration of representative visualisations, where appropriate. This approach accords with NPS EN1 paragraphs 5.8.8 to 5.8.10 and Draft NPS EN-1 paragraphs 5.9.9 to 5.9.12 5.9.10 to 5.9.13.

- 7.5.2 No significant adverse effects are predicted on designated or undesignated heritage assets with the mitigation proposed.
- 7.5.3 There are no World Heritage Sites, Registered Park and Gardens, Registered Battlefields, or Protected Wrecks located within the Order limits or study areas. In addition, there are no designated heritage assets, scheduled monuments, conservation areas or listed buildings within the Order limits. There are scheduled monuments and listed buildings within the study areas around the Order limits.
- 7.5.4 There are a total of 31 non designated heritage assets recorded within the Solar and Energy Storage Park, and 9 within the Grid Connection Corridor, in addition to a number of designated and non-designated heritage assets identified within a 3km and 5km study area. All designated and non-designated heritage assets found within the Order limits, and within the study areas can be found in **Chapter 7: Cultural Heritage of the ES [EN010131/APP/3.1]**.
- 7.5.5 NPS-EN1 paragraph 5.8.14 states that: *“There should be a presumption in favour of the conservation of designated heritage assets and the more significant the designated heritage asset, the greater the presumption in favour of its conservation should be. Once lost heritage assets cannot be replaced and their loss has a cultural, environmental, economic and social impact. Significance can be harmed or lost through alteration or destruction of the heritage asset or development within its setting. Loss affecting any designated heritage asset resulting from its alteration or development in its setting should require clear and convincing justification”*.
- 7.5.6 Paragraph 5.9.25 of Draft NPS EN-1 states that: *“When considering the impact of a proposed development on the significance of a designated heritage asset, the SoS should give great weight to the asset’s conservation. The more important the asset, the greater the weight should be. This is irrespective of whether any potential harm amounts to substantial harm, total loss, or less than substantial harm to its significance.”*
- 7.5.7 NPPF paragraph 199 also requires the decision maker to *“give great weight to the conservation of designated heritage assets, and that the more important the asset, the greater the weight”*.
- 7.5.8 In designing the Scheme and to avoid and mitigate against any impacts to cultural heritage assets, mitigation has been embedded into the Scheme design, giving greatest weight to designated heritage assets in accordance with paragraph 5.8.14 of NPS EN-1, paragraph 5.9.25 of Draft NPS EN-1 and NPPF paragraph 199, as described below:

- Designing the site boundary to exclude all designated heritage assets from the site in order to avoid physical impacts;
- Retention of all non-designated historic buildings within the site with no physical impacts to those buildings proposed;
- The siting of the BESS and on-site Substation in an area of the site with reduced visibility limits visual intrusion into the setting of heritage assets;
- The use of a buried cable for the Grid Connection Corridor is proposed in order to remove potential impacts on the setting of heritage assets caused through the introduction of an overground cable; and
- The routing and siting for the Grid Connection Corridor was influenced by the identification of potentially significant below ground archaeological remains along the route corridor, with the route selected to avoid significant archaeological remains as far as practicable.

7.5.9 An additional two areas of archaeological activity were identified within the Solar and Energy Storage Park. These comprise the following:

- a Romano-British settlement site. Embedded mitigation is provided in the form of removal of Solar PV Panels from the Scheme design in this field, enabling preservation in-situ of these archaeological remains. During construction and operation, this panel free area will not be used for construction or operation-related activities. The boundary of the defined mitigation area will be fenced off from the Scheme. This is set out in the **Outline Design Principles [EN010131/APP/2.3]**.
- a possible medieval building that has the potential to be associated with the scheduled monument of Heynings Priory and, therefore, potentially of equal high value. Embedded mitigation is provided in the form of removal of Solar PV Panels from the Scheme design in this field enabling preservation in-situ of these archaeological remains. During construction and operation, this panel free area will not be used for construction or operation-related activities except for a route of access that runs north-south along the eastern boundary of the field. The boundary of the field will be fenced off from the Scheme, including along the access route. This is set out in the **Outline Design Principles [EN010131/APP/2.3]**.

7.5.10 In addition, the following embedded mitigation has been included with regard to the setting of heritage assets and the historic landscape:

- The use of panel free buffer zones within the settings of heritage assets, including a 100m buffer area to the east of the non-designated Gate Burton park and a panel exclusion zone between the park boundary and Burton Wood. During construction this panel free area will not be used for any construction related activities or laydown areas;
- A buffer area around the non-designated Clay Farm and Siding Farm. During construction this panel free area will not be used for any construction related activities or laydown areas;
- A buffer area in the vicinity of Heynings Priory scheduled monument to retain its connection with a probably associated building identified in the geophysical survey in Field 45 and to retain its landscaped

setting within a 'bowl' of lower-lying boggy ground. During construction this panel free area will not be used for construction-related activities except for a route of access that runs north-south along the eastern boundary of the field;

- Appropriate and sensitive screening to minimise the visual intrusion of the Scheme, while avoiding, as far as practicable, obscuring or intruding upon important views and relationships between heritage assets or significantly altering historic design intention; and
- Mitigation planting, including new native hedgerows, existing hedgerow enhancement, gapping up and infill planting, and new native woodland buffer planting to reinforce existing woodland and tree belts. The hedgerow that is required to be removed for visibility splays during construction will either be cut down to the base or where necessary replanted for the operational phase.

7.5.11 NPS EN-1 paragraph 5.8.15 states that “*Where the application will lead to substantial harm to or total loss of significance of a designated heritage asset the IPC (now the SoS) should refuse consent unless it can be demonstrated that the substantial harm to or loss of significance is necessary in order to deliver substantial public benefits that outweigh that loss or harm.*” Draft NPS EN-1 paragraph 5.9.29 sets out a similar test in the event that a development would lead to substantial harm or total loss of a heritage asset. The Scheme will not lead to substantial harm to any heritage assets.

7.5.12 NPS EN-1 paragraph 5.8.15 goes on to state that “*Any harmful impact on the significance of a designated heritage asset should be weighed against the public benefit of development, recognising that the greater the harm to the significance of the heritage asset the greater the justification will be needed for any loss.*”

7.5.13 The residual, non-significant impacts on designated assets described below should therefore be weighed against the public benefit of the development.

7.5.14 Relevant local policies include Policy S57 of the CLLP, Policy DM8 of the BCS, and Policy ST42 of the Draft BLP, which seek to conserve, enhance and protect historic assets.

7.5.15 **Chapter 7: Cultural Heritage of the ES [EN010131/APP/3.1]** provides an assessment of the likely effects of the Scheme taking into account the embedded mitigation measures. These are set out below:

Construction Impacts

7.5.16 There are 50 known heritage assets, together with the historical landscape, that have the potential to be subject to physical impacts or impacts to the value of assets through change to their setting as a result of the construction of the Scheme within the study area. These comprise 19 designated assets and 31 non-designated assets as detailed in Section 7.10 of **Chapter 7: Cultural Heritage of the ES [EN010131/APP/3.1]**.

Designated heritage assets

7.5.17 As all designated heritage assets are located outside of the Order limits, there would be no physical impacts to any designated heritage assets during

construction. In addition, following the embedded mitigation measures detailed above and in **Chapter 7: Cultural heritage of the ES [EN010131/APP/3.1]** there would be no significant impacts on the setting of all 19 designated assets identified as having an impact prior to mitigation.

7.5.18 There would be minor (non-significant) adverse effects upon the following designated assets:

- Segelocum Roman Town Scheduled Monument
- Roman fort south of Littleborough Lane Scheduled Monument
- Medieval Bishops Palace, Stow Park, Scheduled Monument
- Heynings Priory, Scheduled Monument
- Gate Burton Hall (II* listed building)
- Church of St Mary in Stow (Grade I listed building)

7.5.19 The magnitude of effect on all the above assets is 'very low', with minor adverse effects arising due to the high value assets not due to large changes made to the setting of the assets. All other effects on designated assets would be no more than negligible

Non-designated heritage assets

7.5.20 There is not anticipated to be any significant effects on 21 of the 31 non-designated heritage assets identified, following embedded mitigation measures outlined above. However, without additional mitigation, the Scheme would have had a significant effect on the following 10 non-designated assets:

- Cropmarks of undated rectangular enclosure (MLI90939; AEC007). The proposed works within the Solar and Energy Storage Park would result in the loss of multiple elements of this asset, which would affect our ability to understand the heritage interests of the asset.
- Romano-British settlement site (AEC009). The proposed works within the Solar and Energy Storage Park would result in the loss of multiple elements of this asset, which would affect our ability to understand the heritage interests of the assets.
- Iron Age / Romano-British enclosure (AEC010). The proposed works within the Solar and Energy Storage Park would result in the loss of multiple elements of this asset, which would affect our ability to understand the heritage interests of the assets.
- Romano-British field system (AEC011). The proposed works within the Solar and Energy Storage Park would result in the loss of multiple elements of this asset, which would affect our ability to understand the heritage interests of the assets.
- The Winter Camp of the Viking Great Army at Torksey (MLI125067). The proposed works in the Solar and Energy Storage Park would result in partial loss of a small proportion of this asset, which would slightly affect our ability to understand the heritage interests of the assets.
- Cropmarks indicating Iron Age and Romano-British activity (MLI52472; AEC013). The proposed Grid Connection Corridor works would result in the loss of multiple elements of this asset, which would affect our ability to understand the heritage interests of the asset.

- Cropmarks of probable Roman activity (MLI52489). The proposed Grid Connection Corridor works would result in the loss of multiple elements of this asset, which would affect our ability to understand the heritage interests of the asset.
- Cropmarks at South Leverton (MNT4983). Embedded mitigation is provided in the form of HDD below the depth of archaeological remains, which would not result in any physical impacts to parts of this asset. However, the HER record for this asset, as well as the features identified from the trial trench evaluation, extend outside of the HDD area, to the east and west.
- Iron Age / Roman settlement, Cottam (MNT15983). The proposed Grid Connection Corridor works would result in the loss of multiple elements of this asset, which would affect our ability to understand the heritage interests of the asset.
- Romano-British settlement site (AEC014). The proposed Grid Connection Corridor works would result in the loss of multiple elements of this asset, which would affect our ability to understand the heritage interests of the asset.

7.5.21 Additional mitigation measures have been agreed in principle in consultation with the Archaeological Advisors to LCC and NCC for archaeological assets which would otherwise experience significant adverse effects, which comprises excavation and recording (strip, map and record) of archaeological remains in advance of construction activities. This is set out in the Archaeological Mitigation Strategy [EN010131/APP/7.6] which is secured by Requirement 11 of the **draft DCO [EN010131/APP/6.1]**. Archaeological mitigation excavation and recording would not minimise the physical impact to these assets, as the archaeological evidence would still be removed, but would compensate for their loss by preserving them by record. This would reduce the magnitude of impact on individual assets, resulting in a residual minor adverse effect, which is not significant.

7.5.22 Enhancement measures which would have an additional beneficial outcome are also proposed, which would include the retention of selected field boundaries, planted during the construction phase, that have historic precedent as indicated on relevant Enclosure, tithe and OS maps. These boundaries would enhance and reinstate elements of the historic landscape character such as the pattern of 19th century enclosures that were lost due to boundary removals in the 20th century. These enhancement measures are not factored into determination of residual significant effects. However, the potential additional benefits can still be identified.

7.5.23 The Scheme will introduce a limited number of new hedgerows and tree and shrub belt planting within the Order limits as part of mitigation planting. **Chapter 7: Cultural Heritage of the ES [EN010131/APP/3.1]** concludes that the Scheme will not alter the ability to view and understand historic landscape areas, and it will have little effect on legibility of the historic landscape within the Order limits. This is considered to be not significant.

Operation Impacts

- 7.5.24 **Chapter 7: Cultural Heritage of the ES [EN010131/APP3.1]** states that the Scheme will not be permanently lit as it is envisaged that operational lighting will be controlled through infrared sensors, therefore, no impacts to cultural heritage assets are identified in relation to operational lighting.
- 7.5.25 It also states that **Chapter 11: Noise and Vibration of the ES [EN010131/APP/3.1]** concludes that there will be no significant noise or vibration effects to human noise-sensitive receptors during operation and this includes consideration of noise caused through operational traffic. **Chapter 7: Cultural Heritage of the ES [EN010131/APP/3.1]** assesses the setting of historic assets and the only asset considered to be particularly sensitive to noise intrusion is the Grade II listed Church of St Helen (1064087) in the non-designated parkland at Gate Burton due to tranquillity forming part of its illustrative historic interest as a place of worship. However, it is concluded there are no impacts predicted in relation to the setting of heritage assets through operational noise intrusion, including at the Grade II listed Church of St Helen in the parkland at Gate Burton.
- 7.5.26 The levels of operational traffic are not considered likely to result in additional or greater impact to cultural heritage assets than the physical presence of the Scheme within an asset's setting identified at construction and no impacts are therefore identified a result of operational traffic.
- 7.5.27 In addition, **Chapter 7: Cultural Heritage of the ES [EN010131/APP/3.1]** concludes that the potential annual minutes of glare caused at these assets, reported in **Chapter 15: Other Environmental Topics of the ES [EN010131/APP/3.1]** has been reviewed and there are no impacts predicted in relation to the setting of heritage assets through glint and glare, including at the assets within the parkland at Gate Burton.
- 7.5.28 **Chapter 7: Cultural Heritage of the ES [EN010131/APP3.1]** also states that it is not expected that the operation of the Scheme will result in any further intrusive activities and as such no impact to the buried archaeological assets is anticipated during this phase.

Decommissioning

- 7.5.29 The decommissioning of the Scheme would have due regard to health and safety, environmental impact and benefits, and economic aspects which will be set out in a **Framework DEMP [EN010131/APP/7.5]**, which will be secured through the DCO. This will result in the restoration of the rural landscape. It is also not anticipated to have any impact beyond the already-disturbed footprint of the Scheme and will take into account areas of archaeological deposits that have been preserved in situ; therefore, it is not anticipated that decommissioning activities would have a direct physical impact upon archaeological remains.

7.5.30 **Chapter 7: Cultural Heritage of the ES [EN010131/APP/3.1]** states that there would be temporary impacts to the setting of designated assets in the study area during decommissioning, resulting from the use of machinery to dismantle the Scheme. However, impacts would be no greater than those assessed during construction, and activities would be temporary, and the duration would be shorter than the impacts during construction. It is also anticipated that the effects on the setting of heritage assets as a result of the physical presence of the Scheme would be limited to the lifespan of the proposed Scheme. When removed during the decommissioning phase the impact will be reversed and the land returned to its previous use.

Summary

7.5.31 To summarise, the Scheme has been assessed by **Chapter 7: Cultural Heritage of the ES [EN010131/APP3.1]** which concludes that the Scheme will not have any have any residual significant impacts on designated or non-designated heritage assets or their settings following the implementation of embedded and additional mitigation. In addition, enhancement measures would be incorporated which would have an additional beneficial outcome. The Scheme is therefore in accordance with NPS EN-1 paragraph 5.8.6, Draft NPS EN-1 paragraph 5.9.31, Policy S57 of the CLLP, Policy DM8 of the BCS, and Policy ST42 of the Draft BLP on cultural heritage.

7.6 Ecology and Nature Conservation

7.6.1 The Order limits do not contain any Special Areas of Conservation, Special Protection Areas, Ramsar Sites, Sites of Special Scientific Interest, Ancient Woodlands, National Nature Reserves or Local Nature Reserves. A Habitats Regulations Assessment **[EN010131/APP/7.2]**, has been submitted alongside the Application, it concludes there are no likely significant effects on any European site from the Scheme alone or in-combination with any other plans or projects.

7.6.2 The Order limits are adjacent to some areas of Ancient Woodland, but as buffer areas are incorporated into the Scheme between infrastructure and the Ancient Woodlands, no significant effects are predicted on these areas. There are also no local ecological sites within the Solar and Energy Storage Park. The Grid Connection Corridor crosses one Local Wildlife Site, Cow Pasture Lane.

7.6.3 **Chapter 8: Ecology of the ES [EN010131/APP/3.1]** sets out the effects of the Scheme on ecology in accordance with NPS Paragraph 5.3.3 and Draft NPS EN-1 paragraph 5.4.17 to 5.4.18.

7.6.4 As a general principle, paragraph 5.3.7 of NPS EN-1, expects development to “*avoid significant harm to biodiversity and geological conservation interests, including through mitigation and consideration of reasonable alternatives but where significant harm cannot be avoided, then appropriate compensation measures should be sought*”. Draft NPS EN-1 paragraphs 5.4.42 to 5.4.43 set out the same principle.

- 7.6.5 The NPPF at paragraph 180 goes further and directs the decision maker to refuse consent if significant harm to biodiversity resulting from a development cannot be avoided, mitigated or compensated for.
- 7.6.6 NPS EN-3 adds that renewable energy NSIPs should demonstrate ‘good design’ by mitigating effects on ecology. Draft NPS EN-3 sets out a similar principle and identifies at paragraph 3.10.80 that solar farms have the potential to increase the biodiversity value of a site, in particular if the land was previously intensely managed. It sets out that: *“in some instances, this can result in significant benefits and enhancements beyond Biodiversity Net Gain, which result in wider environmental gains which is encouraged”*.
- 7.6.7 Local planning policies S14 and S60 of the CLLP, and strategic objective SO8 and policy DM9 of the BLCS seek to protect and enhance habitats, species and statutory and non-statutory sites of international, national and local importance. Policy DM9 of the BLCS states that *“development that will result in the loss of such features may be supported where replacement provision is made that is considered to be of equal or greater value than that which will be lost and which is likely to result in a net gain in biodiversity”*. Policy S60 of the CLLP goes further and states that development proposals will only be supported if the need for, and benefits of, the development clearly outweigh the harm to the habitat and/or species and that any adverse impacts are adequately mitigated or, as a last resort, compensated for.
- 7.6.8 **Chapter 8: Ecology and Nature Conservation of the ES [EN010131/APP/3.1]** provides an assessment of the Scheme’s impact on ecological receptors and is supported by extensive survey work to confirm the ecological habitats and species likely to be affected by the Scheme.
- 7.6.9 The ecological mitigation measures proposed as part of the Scheme are set out in **Chapter 8: Ecology of the ES [EN010131/APP/3.1]**. Mitigation measures embedded within the Scheme design ensure that designated sites are not impacted during construction, operation and decommissioning e.g. through siting construction routes away from and outside of designated sites, incorporating suitable buffer zones and erection of temporary construction fencing to avoid incursion into exclusion zones. In addition, from the outset the Scheme has been designed to avoid key nature conservation and ecological features present within or adjacent to the Order limits. Accordingly, the following buffers from key habitat features have been applied within the Solar and Energy Storage Park:
- All woodlands, including ancient woodland – at least 15m;
 - All trees within hedgerows and individual trees – protected by clearly defined root protection areas, concordant with the requirements for each individual tree;
 - All watercourses (where practicable) – at least 10m from the centre point of the watercourse; and
 - All hedgerows – at least 5m.

- 7.6.10 In addition, the **Framework CEMP [EN010131/APP/7.3]**, secured through the DCO, includes measures to manage the environmental effects of the Scheme and to demonstrate compliance with environmental legislation. The Framework CEMP details the measures required to mitigate any construction related effects on biodiversity, including those associated with dust deposition, air pollution, pollution incidents, water quality, light, noise and vibration. These are also set out in detail in **Chapter 8: Ecology of the ES [EN010131/APP/3.1]**. In addition, a number of habitat creation and enhancements have been included in the Scheme design for biodiversity, due to the mitigation measures identified within the LEMP, and are set out in detail in **Section 8.11 of Chapter 8: Ecology of the ES [EN010131/APP/3.1]**.
- 7.6.11 **Section 8.10 of Chapter 8: Ecology of the ES [EN010131/APP/3.1]** assesses the likely impacts and potential effects of the Scheme in the absence of any mitigation over and above the embedded mitigation. It then goes on to assess the residual ecological impacts following additional mitigation. The findings of the chapter are set out below.

Statutory Designated Sites

- 7.6.12 Paragraphs 4.3.1 and 5.3.9 of NPS EN-1 and paragraph 5.4.8 of NPS EN-1 set out that the Conservation of Habitats and Species Regulations 2017 (as amended) require the decision maker to consider whether the Scheme may have a significant effect on a European site, or on any site to which the same protection is applied as a matter of policy, either alone or in combination with other plans or projects. There are no designated European sites or sites to which the same protection is applied within the Order Limits or zone of influence.
- 7.6.13 There are no statutory national nature conservation sites within the Order Limits, with the nearest nationally designated site being Ashton's Meadow SSSI, which lies approximately 1.5km to the west of the Order Limits. The nearest point to the SSSI is the works at Cottam Power Station and the nearest section of underground cable. Lea Marsh SSSI is located approximately 1.9km to the north-west of the Order Limits and is the closest SSSI to the Solar and Energy Storage Park. The Scheme will not result in any impacts on either SSSI (or any other SSSIs) during construction, operation or decommissioning due to the distance of the Scheme to both sites, and there being no ecological or hydrological connections between the SSSI's and the Order Limits.
- 7.6.14 Standard environmental protection measures during construction, such as dust suppression and pollution prevention, will be adopted and these measures have been formalised into the **Framework CEMP [EN010131/APP/7.3]**, secured through the DCO. Consequently, construction related pollution will be mitigated and will not affect the integrity of either SSSI. Decommissioning impacts are assumed to be similar to those occurring during construction and mitigation measures are included within the **Framework DEMP [EN010131/APP/7.5]**.
- 7.6.15 In summary, the Scheme accords with NPS, Draft NPS, NPPF and local planning policies with regard to avoiding impacts on statutory national nature conservation sites.

Non-Statutory Designated Sites

- 7.6.16 Paragraph 5.3.13 of NPS EN-1 and paragraph 5.4.53 of Draft NPS EN-1 state that decision-makers should give due consideration to sites of regional and local biodiversity and geological interest, including Regionally Important Geological Sites, Local Nature Reserves and Local Sites. However, given the need for new infrastructure, these designations should not be used in themselves to refuse development consent. The NPPF (paragraph 174) gives similar protection to these sites.
- 7.6.17 There are 15 non-statutory sites within the Zone of Influence as identified in **Chapter 8: Ecology and Nature Conservation of the ES [EN010131/APP/3.1]**, with just one of these, Cow Pasture Lane Drains Local Wildlife Site (LWS), being within the Order Limits. The Scheme design avoids any significant effects on any of these sites.
- 7.6.18 Cow Pasture Land Drains LWS crosses the Grid Connection Corridor and is designated for its drain and associated defunct hedge. The Grid Connection Corridor crossing of Cow Pasture Lane Drains LWS will be undertaken using Horizontal Directional Drilling methods to lay cabling, therefore avoiding impacts to the drain and hedge, with setbacks of at least 10m from the centreline of the drain. This setback is considered sufficient to mitigate for potential hazards such as chemical and soils spills into watercourse and avoid potential direct impacts to the LWS and riparian habitats.
- 7.6.19 Access for construction of the Grid Connection Corridor will initially utilise an existing access track that runs alongside Cow Pasture Lane Drains LWS. However, where there is a need to cross the LWS, this will be via a Bailey bridge, rather than culvert to minimise negative impacts. Construction compounds will be setback from this LWS with a minimum 10m from the centre line of the watercourse. Furthermore, measures to ensure incursion into this LWS does not occur will be put in place, e.g. security fencing, which will be implemented at an early stage.
- 7.6.20 With respect to Cow Pasture Lane Drains, Knaith Park Woodland and Coates Wetlands LWSs, the **Framework CEMP [EN010131/APP/7.3]** specifies requirements for the safe storage of chemicals / other hazardous materials (e.g. fuel) reaching watercourses during flood events during construction. A full list of the crossing methods and an explanation of these techniques is provided in **Chapter 9: Water Environment of the ES [EN010131/APP/3.1]**.
- 7.6.21 As a result of all the measures discussed above, no significant effects or species mortality is predicted to the Cow Pasture Lane Drains LWS as a result of construction, operation or decommissioning of the Scheme.
- 7.6.22 Indirect effects are avoided on two other LWS Sites immediately adjacent to the Order limits (Knaith Park Woodland (15m from Order limits) and Coates Wetland (35m from Order Limits). This is due to measures to ensure incursions into the LWS do not occur, along with habitat buffers and construction mitigation measures relating to dust noise and light pollution, as formalised in the **Framework CEMP [EN010131/APP/7.3]** and secured through the DCO. In addition, boundary vegetation, such as hedgerows connecting woodland sites will be retained, which will maintain connectivity for

species across the Order limits. Furthermore, the construction of the majority of the Scheme will be screened by existing vegetation, which will prevent disturbance to species using habitats in both LWS. Decommissioning impacts will be similar to those occurring during construction and mitigation measures are included within the **Framework DEMP EN010131/APP/7.5**]. The chapter therefore concludes that there would be no species of mortality of any species, and there are no impacts pathways, either directly or indirectly, that would impact upon the integrity or functioning of either LWS during construction, operation or decommissioning.

- 7.6.23 The remaining LWSs are a significant distance from the Scheme and would be unaffected.
- 7.6.24 As the Scheme is not expected to lead to any adverse effects on sites of local biodiversity and geological interest it therefore complies with Paragraph 5.3.13 of NPS EN-1, paragraph 5.4.53 of Draft NPS EN-1, and Paragraph 174 of the NPPF.

Habitats and Species

- 7.6.25 There are not predicted to be any significant adverse effects on habitats or species during the construction, operation or decommissioning of the Scheme.
- 7.6.26 **Chapter 8: Ecology of the ES [EN010131/APP/3.1]** concludes that there will be no effect on the following habitats and species during construction:
- Broad-leaved woodland (including ancient woodland)
 - Acid Grassland (semi-improved)
 - Coastal and Floodplain and Grazing Marsh
 - Marshy Grassland
 - Swamp
 - Standing Water
 - Running Water
 - Arable Flora
 - Terrestrial Invertebrates
 - Great Crested Newt
 - Reptiles
 - Breeding Birds (general, Black Redstart, specially protected species)
 - Wintering Birds
 - Bats
 - Otter
 - Water Vole
 - Other Mammals (Brown Hare and Hedgehog)
- 7.6.27 The chapter concludes that there will be an effect on the following habitats and species during construction:
- Hedgerows
 - Breeding Birds (Skylark)
 - Badgers
- 7.6.28 During construction, hedgerow will potentially be lost as a result of grid connection cables, fences and access routes, although these will be lost in

small sections. The location of important hedgerows within the Order limits and sections affected are shown in the **Tree Protection Order and Important Hedgerows Location Plans [EN010131/APP/3.8]**.

- 7.6.29 Once replanted hedgerows establish along with additional hedgerow planting proposed across the Order limits, it is predicted that the Scheme will be able to deliver a net gain in this habitat and the overall impact will be beneficial. Taking into account embedded protection measures and Scheme design to minimise the impact of construction activities causing direct loss of small sections of species poor hedgerows only, it is assessed that the magnitude of this impact is low, which results in a temporary minor adverse effect, that is not significant to the overall hedgerow resource present within the Order limits or effects the integrity of any particular hedgerow.
- 7.6.30 Construction activities will result in the loss of arable farmland used by breeding Skylark. Therefore, additional mitigation measures have been incorporated into the Scheme design to avoid significant adverse effects on breeding Skylark. Through the evolution of the Scheme design, areas of habitat creation, alongside extensive habitat enhancements have been incorporated to offset the impact of loss of arable farmland for breeding Skylark as well as provide extensive benefits for other important ecological features and wider biodiversity. There are therefore not predicted to be significant effects on Skylark.

Enhancements

- 7.6.31 The Scheme design also includes a whole host of habitat creation and enhancements as part of mitigation measures identified within the **Outline Landscape and Ecological Management Plan [EN010131/APP/7.10]**. These measures would result in a number of significant and non-significant beneficial effects on important ecological features, once they are established.
- 7.6.32 These include woodland buffers and native tree belts, new hedgerows, and native shrubs to provide shelter and food resources for birds and other wildlife. In addition, an area 15 – 25 m wide adjacent to existing ponds and woodland, where these areas are within the Order limits, will be encouraged to naturally regenerate. Species rich grassland will also be established, ponds will be restored and a range of artificial bird and bat boxes will be installed, along with habitat piles. With consideration of enhancement measures set out above, the Scheme has the potential to result in significant beneficial effects to broad-leaved woodland, including ancient woodland, hedgerows and breeding birds, particularly farmland birds associated with hedgerows and field margins.
- 7.6.33 The BNG Assessment **[EN010131/APP/7.9]** provided with the Application sets out that the Scheme could achieve a net gain of 70.95% for area-based habitats, 37.24% for hedgerows and a net gain of 14.22% for rivers, providing significant additional benefits.

Conclusion

- 7.6.34 The Scheme has been carefully designed to consider ecology and nature, it will avoid and mitigate any significant harm to biodiversity, locally or nationally designated ecology sites, or important or protected habitats and species. In

addition, through biodiversity enhancements it will provide a substantial biodiversity net gain. In addition, because **Chapter 8: Ecology of the ES [EN010131/APP/3.1]** reports no likely significant adverse effects, there is no need to consider explicit alternatives as a result of biodiversity impacts. The Scheme is therefore in accordance with NPS EN-1, NPS EN3, Draft NPS EN-1, Draft NPS EN-3, the NPPF and local policies LP12, LP19 and DM9 relating to the protection and enhancement of biodiversity. It also will meet and exceed the requirements set out in the Environment Act 2021, the NPPF and local planning policy for biodiversity net gain.

7.7 Water and Drainage

- 7.7.1 The Grid Connection Corridor crosses beneath the River Trent and continues to the west to Cottam Substation and would require crossings of the Water Framework Directive designated waterbodies River Trent, Marton Drain and Seymour Drain for cable installation. There are also numerous ponds and agricultural ditches across the Order limits (refer to **ES Volume 2: Figure 9-1 [EN010131/APP/3.2]**).
- 7.7.2 Paragraph 5.12.2 of NPS EN-1 and paragraph 5.16.3 of Draft NPS EN-1 state that where a development is likely to have effects on the water environment, the applicant should undertake an assessment of the existing status of, and impacts of the proposed project on, water quality, water resources and physical characteristics of the water environment as part of the ES. Paragraphs 5.15.3 of NPS EN-1 and paragraphs 5.16.3 and 5.16.7 of Draft NPS EN-1 then go on to explain what the ES should describe as part of this assessment, including the effect of climate change on rainfall patterns and water availability across the water environment.
- 7.7.3 **Chapter 9: Water Environment of the ES [EN010131/APP/3.1]** sets out the existing status of the water environment and the likely effects of the Scheme upon it in accordance with NPS EN-1 and Draft NPS EN-1.
- 7.7.4 Paragraph 5.15.8 of NPS EN-1 and paragraph 5.16.8 of Draft NPS EN-1 states that the IPC should consider whether mitigation measures are needed over and above any embedded into the design, and states that a construction management plan may help codify mitigation at that stage.
- 7.7.5 The construction of the Scheme will take place in accordance with a CEMP, which would substantially in accordance with the **Framework CEMP [EN010131/APP/7.3]**, which is secured through a requirement of the DCO. The Framework CEMP provides the structure and content for the detailed CEMP, which will be completed once a contractor is appointed. The final CEMP will be supported by a Water Management Plan (WMP), that will provide greater detail regarding the mitigation to be implemented to protect the water environment from adverse effects during construction. The mitigation measures outlined in the Framework CEMP include measures to prevent and control run off.
- 7.7.6 Section 9.10 of **Chapter 9: Water Environment of the ES [EN010131/APP3.1]** assesses the likely impacts and effects of the Scheme. An overview of these effects is provided below.

Construction and Decommissioning

- 7.7.7 The risk to watercourses from construction activities is considered generally low. With regard to the River Trent, there is considered to be negligible potential for impact from works to install a cable beneath it given the mitigation measures in place, the distance of the launch/receiving pits from the banks and the size of the watercourse, which would dilute and disperse any pollutants. This results in an effect that is not significant.
- 7.7.8 There would also be no significant impacts on Seymour Drain and Marton Drain given the embedded mitigation including the buffer from the watercourse, as well as on the unnamed drainage ditches as a result of cable installation.
- 7.7.9 The chapter concludes that there is no significant effect on surface water quality of the River Till, Tributary of the Till and Skellingthorpe Main Drain, Padmoor Drain, Mother Drain, Causeway Drain, Littleborough Lagoon, Coates Wetland and Cottam Wetland, as well as agricultural drainage ditches (those that aren't directly crossed) and small ponds.
- 7.7.10 In addition, the Scheme will result in no significant effects on six drainage ditches where open cut installation of the cable for the Grid Connection Corridor will require intrusive works. There would be no significant impact on groundwater flow and abstractions, as well as water quality impacts to rivers receiving baseflow, and groundwater abstractions down gradient.

Operation

- 7.7.11 **Chapter 9: Water Environment of the ES [EN010131/APP/3.1]** concludes that the Solar and Energy Storage Park impermeable area will remain largely consistent with its pre-development state as PV panels are elevated above the ground. Overall, given the implementation of a Drainage Strategy including SuDS provision, there would be negligible impact to the receiving groundwater from operational surface water runoff, resulting in no significant effect.
- 7.7.12 In addition, as the land is being taken out of agricultural usage, it is considered there would a decrease in existing surface water runoff resulting from agricultural additives to the land (be those nutrients in the form of phosphates and nitrates, or from pesticides, herbicides or insecticides). Taking land out of arable production may also have other benefits by reducing the risk of soil erosion and the need for local water abstraction for crop irrigation. However, although a beneficial impact, in the context of the whole catchment, it is considered this would not be a sufficiently large change to result in a significant positive effect on the waterbodies. There is considered to be no change in future baseline conditions to any watercourse resulting in a neutral effect in all cases, which is not significant.
- 7.7.13 There would also be no significant effect on the agricultural ditches on the Solar and Energy Storage Park that are to be crossed by open span crossings for access tracks, and existing culverted agricultural ditches that may be extended.

7.7.14 Therefore, the Scheme would comply with paragraphs 5.12.2 and 5.13.3 of NPS EN-1 and paragraphs 5.16.2 and 5.16.8 of Draft NPS EN-1, as well as the relevant paragraphs of the NPPF and local policies.

7.8 Flood Risk

7.8.1 The grid connection point at Cottam Substation and its surrounding area is located in Flood Zones 2 and 3, therefore, any connection that utilises the capacity at the Substation would need to pass through these areas. However, the Solar and Energy Storage Park location was selected to be close to the grid connection point, but outside these flood zones, with these criteria providing a major component of site selection.

7.8.2 The majority of the Solar and Energy Storage Park lies in Flood Zone 1, with small areas of Flood Zone 2 and 3 in the north-east corner of the Solar and Energy Storage Park and along the eastern border, both associated with Padmoor Drain. The majority of the Grid Connection Corridor is in Flood Zone 3, associated with the River Trent and its floodplain, therefore a sequential test is required. A **Flood Risk Assessment (FRA)** accompanies the Application, provided in **Appendix 9-D of Chapter 9: Water Environment of the ES [EN010131/APP/3.1]**.

The Sequential Test

7.8.3 Paragraph 5.7.9 of NPS EN-1 states that in determining an application for development consent, *“the IPC should be satisfied that:*

- *The application is supported by an appropriate FRA*
- *The Sequential Test has been applied as part of site selection*
- *A sequential approach has been applied at the site level to minimise risk by directing the most vulnerable uses to areas of lowest flood risk*
- *The proposal is in line with any relevant national and local flood risk management strategy*
- *Priority has been given to the use of sustainable drainage systems (SuDs)*
- *In flood risk areas the project is appropriately flood resilient and resistant, including safe access and escape routes where required, and that any residual risk can be safely managed over the lifetime of the project.”*

7.8.4 NPS EN-1 paragraphs 5.7.12-5.7.13 and Draft NPS EN-1 paragraphs 5.8.21 to 5.8.23, NPPF paragraphs 165 to 166 and local policies: Policy S21 of the CLLP, Policy DM12 of the BLCS and Policy ST52 of the Draft BLLP also describe the need for developments to apply the Sequential Test.

7.8.5 Paragraph 5.7.13 of NPS EN-1 states that preference should be given to locating projects in Flood Zone 1 in England, and if there is no reasonably available site in Flood Zone 1, then projects can be located in Flood Zone 2. It then states if there is no reasonably available site in Flood Zones 1 or 2 then nationally significant energy infrastructure projects can be located in Flood Zone 3 subject to the Exception Test.

- 7.8.6 Paragraph 159 of the NPPF states that development should be directed away from areas at highest risk of flooding (whether existing or future). It states that where development is necessary in such areas, the development should be made safe for its lifetime without increasing flood risk elsewhere.
- 7.8.7 The Sequential and Exception Tests have been undertaken to satisfy both the NPS EN-1 and the NPPF requirements. The Scheme is classified as 'Essential Infrastructure' as defined in the NPPF, with the majority of the Solar and Energy Storage Park situated within an area of low risk of flooding from any source.
- 7.8.8 As part of the site selection process, extensive areas of land adjacent to the River Trent within the search is in Flood Zone 3 (high risk of flooding) and was excluded from the search for the Solar and Energy Park. Whilst there are small areas of the Solar and Energy Storage Park within Flood Zone 2 and Flood Zone 3, development has been sequentially located out of these areas i.e. the proposed infrastructure is in Flood Zone 1. A sequential approach has also been applied to the layout and design of the Solar and Energy Storage Park. The BESS, on-site Substation, the Power Conversion Unit and the solar PV panel arrays are all carefully located in areas with the lowest risk of flooding from any source. Therefore, the Exception Test does not need to be applied.
- 7.8.9 The Grid Connection Corridor is predominantly located within an area of high risk of fluvial flooding (Flood Zone 3). Whilst other grid connection corridors were explored (see section 3.5 of Chapter 3: Alternatives and Design Evolution of the ES [EN010131/APP/3.1]) these alternatives were also located in Flood Zone 3 and there are no alternative routes available that avoid Flood Zones 2 and 3. In this instance, it is therefore necessary to apply the Exception Test for the Grid Connection Corridor.

The Exception Test

- 7.8.10 NPS EN-1 paragraph 5.7.16 states that to pass the Exception Test:
- *“it must be demonstrated that the project provides wider sustainability benefits to the community that outweigh flood risk;*
 - *the project should be on developable, previously developed land or, if it is not on previously developed land, that there are no reasonable alternative sites on developable previously developed land subject to any exceptions set out in the technology-specific NPSs; and*
 - *a FRA must demonstrate that the project will be safe, without increasing flood risk elsewhere subject to the exception below and, where possible, will reduce flood risk overall.”*
- 7.8.11 Draft NPS EN-1 paragraph 5.8.11 requires the following criteria to be met for the Exception Test:
- *“the project would provide wider sustainability benefits to the community that outweigh flood risk, and*
 - *the project will be safe for its lifetime taking account of the vulnerability of its users, without increasing flood risk elsewhere, and, where possible will reduce flood risk overall”*

7.8.12 The NPPF states that for the Exception Test to be passed it should be demonstrated that the following criteria should be met:

- *“the development would provide wider sustainability benefits to the community that outweigh the flood risk; and*
- *the development will be safe for its lifetime taking account of the vulnerability of its users, without increasing flood risk elsewhere, and, where possible, will reduce flood risk overall.”*

7.8.13 The need for the Scheme as set out in Section 3 of this PDAS and the **Statement of Need [EN010131/APP/2.1]** demonstrate the urgent need for solar schemes as a component of a low carbon, secure and affordable electricity supply. The Scheme also delivers significant biodiversity net gain. The Scheme will clearly provide wider sustainability benefits that outweigh its impacts on flood risk.

7.8.14 As set out above, the Solar and Energy Storage Park has been located in areas of lowest risk of flooding, and whilst other Grid Connection Corridor options were considered, these were also located within Flood Zone 3 and therefore, there are no alternative routes at lower risk of flooding from any source. This meets the requirements of the exception test.

7.8.15 As detailed within the FRA in Section 7, embedded mitigation measures and an Outline Drainage Strategy (Appendix 9C of the ES **[EN010131/APP/3.3]**), secured by a requirement of the draft DCO will be implemented. The mitigation measures, including monitoring of weather, production of an Emergency Response Plan and buffers between panels and watercourse channels, and the Outline Drainage Strategy will ensure that the Scheme will not increase the risk of flooding from all sources either to, or arising from the Scheme during the construction, operational and decommissioning phases. Thus, the Scheme satisfies the third requirement of the Exception Test set out in NPS EN-1 and Draft NPS EN-1 and will remain safe throughout its lifetime without increasing flood risk to third party land.

7.8.16 The **Framework CEMP [EN010131/APP/7.3]** incorporates measures aimed at preventing an increase in flood risk during the construction works. The contractor will also be required to produce an Emergency Response Plan (secured via the CEMP) following receipt of DCO consent and prior to construction, which will provide details of the response to an impending flood.

Flood Risk to and From the Scheme

7.8.17 NPS EN-1 paragraph 5.7.9 and Draft NPS EN-1 paragraph 5.8.36 states that the SoS should be satisfied that where relevant that, along with applying a sequential and exception approach, priority should be given to the use of SuDs, and projects should be appropriately flood resilient and safe during their lifetime. NPS EN-5 paragraph 2.4.1 also expects electricity infrastructure such as substations to be resilient to flooding.

7.8.18 Paragraph 167 of the NPPF also expects development to ensure it does not increase flood risk elsewhere and sets out requirements for development to meet in flood risk zones. These requirements include locating the most vulnerable development in areas of lowest flood risk, unless there are

overriding reasons to prefer a different location; ensuring development is appropriately flood resistant and resilient; any residual risk can be safely managed, and safe access and escape can be provided. Local policies S21 of the CLLP, Policy DM12 of the BLCS and Policy ST52 of the Draft BLLP also require developments to be safe from flooding and to not worsen flood risk elsewhere.

Flood Risk to the Scheme

- 7.8.19 **Appendix 9-D: FRA of the ES [EN010131/APP/3.3] and Chapter 9: Water Environment of the ES [EN010131/APP/3.1]** assesses the different types of flood risk to and from the Scheme. Section 9-2 of the FRA states that with the majority of the Solar and Energy Storage Park located in Flood Zone 1, the current risk from fluvial sources to this area is considered to be 'low'. However, the Scheme does have areas of higher risk (Flood Zone 2 and 3) which increases the risk in these locations to 'high'. To mitigate this, the development will be designed to remain operational during times of flood, leading to the conclusion that the risk within these areas should be considered low.
- 7.8.20 The FRA concludes that there is a negligible, low and very low risk from tidal, groundwater, flooding from sewers and artificial sources. It states that the risk of surface water flooding to the majority of the Solar and Energy Storage Park is considered to be 'very low'. There are a few areas where the risk is higher but these generally cover a small spatial extent. The Outline Drainage Strategy incorporating SuDS will be implemented to manage these flow paths to ensure that the development remains safe throughout its lifetime.
- 7.8.21 The majority of the Grid Connection Corridor is in Flood Zone 3, associated with the River Trent and its floodplain and therefore considered 'high' risk without mitigation. The cable will be buried below ground, inherently flood protected, and protected by existing flood defences. It will therefore remain operational during times of flood. Incorporating mitigation as detailed above and in Section 7 of the **FRA [EN010131/APP/3.3]** and the Outline Drainage Strategy (**Appendix 9C of the ES [EN010131/APP/3.3]**), the risk within these areas is considered low.

Flood Risk from Development

- 7.8.22 Section 9-2 of the FRA states that structures and panels will be sequentially located to avoid areas of high fluvial flood risk and raised to a sufficient height to avoid flood water, being preferentially located in Flood Zone 1 (which is the majority of the Solar and Energy Storage Park). Therefore, there is no loss of floodplain storage, and structures will not impede water flows or increase flood risk elsewhere. In addition, the Grid Connection Corridor will be underground so there will be no loss of floodplain storage, impedance of water flows or increase to flood risk elsewhere.
- 7.8.23 An Outline Drainage Strategy has been developed alongside the FRA outlining how surface water will be managed in order to prevent increase in flood risk from surface water. This provides measures to manage drainage from new infrastructure required by the Scheme (e.g. PV panel arrays, access tracks and areas of hardstanding across the Site) and manage any required changes to existing land drainage arrangements (**Appendix 9-C of the ES [EN010131/APP/3.3]**).

7.8.24 When considered within the context of national, regional and local planning policy in respect of development and flood risk, it can be concluded that the Scheme remains safe from the risk of flooding, does not increase flood risk elsewhere and fulfils the Government's wider criteria for sustainable development. The Scheme is therefore compliant with NPS EN-1 paragraph 5.7.9, Draft NPS EN-1 paragraph 5.8.36, paragraph 167 of the NPPF, and local policies S21 of the CLLP, Policy DM12 of the BLCS and Policy ST52 of the Draft BLLP.

7.9 Transport and Access

7.9.1 The Scheme is located in a rural area and is not located near to the Strategic Highway Network. However, it is connected to the A57 by the A156, a local A road, which runs close to the west of the Order limits. The A156 High Street / Gainsborough Road runs north-south bordering the Solar and Energy Storage Park to the west between and including its junctions with the A631 / A159 within Gainsborough to the north and the A57 to the southwest of Saxilby to the south. The B1241 runs to the north and east of the Order limits between and including its junctions with the B1241 Kexby Lane / Upton Road / Willingham Road to the north and A1500 Till Bridge Lane to the southeast

7.9.2 Willingham Road, which becomes Marton Road, are both narrow rural roads with passing places along its route; the roads connect to the A156 to the west and B1241 to the east. Clay Lane is a no-through road single lane track (with passing places) accessed via the A156 to the southwest of the Solar and Energy Storage Park and passing underneath the railway via a relatively narrow and low underpass. The A1500 Stow Park Road / Marton Road / Till Bridge Lane runs east-west, to the south of the Solar and Energy Storage Park between and including its junctions with the A156 to the west and the B1241 to the east.

7.9.3 There is one PRow crossing the Solar and Energy Storage Park, and three further PRow which run in close proximity to its boundary. There are no on or off carriageway dedicated cycling facilities or equestrian facilities within the immediate vicinity of the Solar and Energy Storage Park, nor the Grid Connection Corridor.

7.9.4 Section 5.13 of NPS EN-1 and section 5.14 of Draft NPS EN-1 discuss the requirements for considering the potential transport and traffic related impacts and mitigation of NSIPs. Paragraphs 5.13.2 of NPS EN-1 and 5.14.4 of Draft NPS EN-1 explain the mitigation of such impacts is "*an essential part of Government's wider policy objectives for sustainable development*". Sections 3.10.111 to 3.10.117 of Draft NPS EN-3 set out that solar NSIP developments should consider the suitability of potential access routes, since solar farms are often located in areas served by the minor roads network.

7.9.5 The NPPF, at paragraph 104, also expects consideration and mitigation of transport impacts of development including the environmental impacts and impacts on transport networks. At paragraph 111, the NPPF also expects development to only be "*prevented or refused on highways grounds if there would be an unacceptable impact on highway safety, or the residual cumulative impacts on the road network would be severe*". Both NPS EN-1,

Draft NPS EN-1, and the NPPF require a transport assessment and travel plans to manage demand where development is likely to have significant transport implications. This is also expected by local planning policies, S47 of the CLLP, Policy DM13 of the BLCS and Policy ST54 of the Draft BLLP.

- 7.9.6 In response to these policies the Applicant has considered the likely traffic generation from the Scheme and undertaken an assessment of the impact of construction phase traffic. In accordance with paragraph 5.13.4 of NPS EN-1, paragraphs 5.14.7 and 5.14.8 of Draft NPS EN-1, paragraph 2.54 of NPS EN-3 and the NPPF, a **Transport Assessment (Appendix 13-D of the ES [EN010131/APP/3.3])** and **Framework Construction Traffic Management Plan (CTMP) (Appendix 13-E of the ES [EN010131/APP/3.3])** have been produced and submitted with the Application.
- 7.9.7 Mitigation measures are also set out in **Chapter 13: Transport and Access of the ES [EN010131/APP/3.1]**, in accordance with paragraph 5.13.3 of NPS EN-1, paragraph 5.14.4 of Draft NPS EN-1, the NPPF and local policies. These measures will minimise construction, decommissioning and operational impacts of the Scheme on transport and accessibility.
- 7.9.8 Construction and decommissioning mitigation measures include (but are not limited to) the implementation of the Framework CTMP, effective access points and construction routes, maintaining access to PRow, restricting HGV movements to certain routes and certain times of the day and developing a communications strategy to review and address any issues associated with travel. Details of all construction and decommissioning mitigation measures are set out in **section 13.9.3 of Chapter 13: Transport and Access of the ES [EN010131/APP/3.1]**.
- 7.9.9 Operational mitigation measures include (but are not limited to) providing suitable access points, converting internal construction routes to maintenance routes, prohibiting vehicles from using level crossings, providing additional screening, and maintaining access to PRow.

Construction effects

- 7.9.10 According to **Chapter 13: Transport and Access of the ES [EN010131/APP/3.1]** the construction phase for the Scheme is currently predicted to be 24 months between 2025 and 2027, with the construction peak in terms of activity and vehicle movements expected to take place in 2026. There is expected to be a daily peak of 400 construction workers, 30 LGVs and 60 HGVs associated with the Solar and Energy Storage Park. The associated vehicle trips will be split across four access points, with the majority using the A156 Gainsborough Road primary site access, and secondary access points provided on Kexby Lane (North and South) and Marton Road.
- 7.9.11 Although the Scheme is located close to a number of small villages/settlements including Willingham by Stow, Lea and Marton, only a small proportion of trips are expected to either originate from or pass through these villages during the construction, operation, or the decommissioning phases. The Framework CTMP restricts HGVs to routes which avoid these villages when travelling to/ from the main site access on the A156 Gainsborough Road as illustrated by the HGV routing plan shown in **ES Figure 13-3**

[EN010131/APP/3.2]. In addition, the majority of construction vehicle trips will travel to/ from the main site access on the A156 Gainsborough Road. Whilst some staff may originate from larger settlements nearby (e.g. Gainsborough and Lincoln) and may travel by public transport or bicycle (the distance is too far to walk) these modes are not expected to constitute a significant proportion of trips to the Solar and Energy Storage Park.

7.9.12 In terms of potentially utilising the railway for deliveries during the construction phase, whilst the existing Cottam Power Station is served by a rail station, it is understood that this section of track is no longer in use. The railway running through the Solar and Energy Storage Park is frequently used by mainline passenger services and is therefore not considered to be viable for serving the Scheme in terms of delivering equipment or materials.

7.9.13 **Chapter 13: Transport and Access of the ES [EN010131/APP/3.1]** concludes that the Scheme is not expected to cause congestion at A156 Gainsborough Road (south of Kexby Lane and north of the A1500), A1500 Stow Park Road (east) and A1500 Tillbridge Road (east of Saxilby Road), A156 High Street / A1500 Stow Park Road and A156 Gainsborough Road / Willingham road, during the AM and PM development peak hours.

7.9.14 The chapter states that there will be 52 additional trips as a result of construction traffic in the AM and PM peaks at A156 Gainsborough Road (south of A1500), a +10% increase in traffic across the day at Marton Road (south of B1241 Gainsborough Road) and B1241 Kexby Lane, and a +30% increase in traffic across the day at Headstead Bank (north of Cottam Road).

7.9.15 It is anticipated that as a worst case during the peak construction period, there would be up to 60 HGVs per day to and from the Solar and Energy Storage Park representing 120 movements and 30 LGVs per day to and from the Solar and Energy Storage Park representing 60 movements. In addition, there will be up to 138 cars and 16 shuttle services per day associated with staff for the Solar and Energy Storage Park, representing 308 movements. Furthermore, for the Grid Connection Corridor, there would be up to 16 HGVs, 12 LGVs and one minibus service for construction workers per day, representing 58 movements.

7.9.1 There will be no PRoW closures as a result of the Scheme and all PRoW receptors within the Order limits will be physically separated from construction routes and works as far as possible. Temporary diversions and crossing points are required for a number of PRoW to accommodate the installation of cables or to ensure that these remain physically separated from the proposed construction routes (see the **Outline PRoW Management Plan [EN010131/APP/7.8]** for further details). These temporary works are listed below:

- PRoW LL|Knai|44/2 (construction route crossing point);
- PRoW LL|Mton|68/1 (to be managed, although no crossing points or diversions expected);
- PRoW LL|Mton|66/4 (cable and construction route crossing point and a temporary diversion);
- PRoW LL|Bram|66/1 (temporary diversion to be separated from the construction route);

- PRoW NT|Cottam|FP1 (cable route crossing point and a temporary diversion);
- PRoW NT|Cottam|FP3 (temporary diversion to be separated from the construction route);
- PRoW NT|Cottam|RB4 (cable and construction route crossing point and a temporary diversion);
- PRoW NT|SouthLeverton|BOAT16 (cable and construction route crossing point and a temporary diversion);
- PRoW NT|Rampton|FP5 (cable and construction route crossing point and a temporary diversion);
- PRoW NT|Rampton|FP6 (temporary diversion to be separated from the construction route); and
- PRoW NT|Rampton|BOAT13 (to be managed, although no crossing points or diversions expected).

7.9.2 **Chapter 13: Transport and Access of the ES [EN010131/APP/3.1]** has assessed the impact of the Scheme on severance, driver delay, pedestrian delay, pedestrian and cyclist amenity, and fear and intimidation, and concludes that there are no significant impacts.

7.9.3 There is expected to be a less than 30% hourly and daily increase in traffic flows across the majority of links and junctions within the study area as a result of the Scheme including at the A1500 Tillbridge Road/ B1241 High Street/ Saxilby Road junction and on Cottam Road (both classified as medium in sensitivity) where there is expected to be a less than 10% increase in traffic flows in each instance. As such, the Scheme is expected to result in a very low magnitude of change with respect to accidents and safety across all receptors during the construction phase except for Kexby Lane (medium magnitude of change) and Headstead Bank (low magnitude of change). **Chapter 13: Transport and Access of the ES [EN010131/APP/3.1]** concludes that this impact is considered not significant.

Operational effects

7.9.4 The Scheme is expected to attract a low level of vehicle trips during the operational phase i.e. up to 15 vehicle arrivals and 15 vehicle departures daily, and a detailed assessment of this scenario was excluded from the ES, as agreed in the Scoping Opinion (see **ES Volume 3: Appendix 1-C [EN010131/APP/3.3]**).

7.9.5 A Glint and Glare Assessment is presented in **ES Chapter 15: Other Environmental Topics [EN010131/APP/3.1]**. The report states that the Solar and Energy Storage Park is considered to be a potential glare source and that screening will be provided in the form of vegetation or security fencing to ensure that this does not have an impact on road, railway or aviation safety, or the reasonable amenity of residents of nearby dwellings.

Summary

7.9.6 In summary, no significant effects have been identified as a result of the Scheme on transport and access during any phase on strategic local highway network users; including pedestrians, cyclists and users of public transport. It

is also not expected to have a significant impact on the strategic or local highway networks in terms of their capacity and highway safety. Effects resulting from the temporary diversion of PRoWs during construction are short term and will be managed appropriately with short diversion routes provided. The Scheme is therefore in accordance with the transport and access policies of NPS EN-1, Draft NPS EN-1, Draft NPS EN-3 and local policies.

7.10 Noise and Vibration

- 7.10.1 NPS EN-1 paragraph 5.11.4 and Draft NPS EN-1 paragraph 5.12.6 require a noise assessment to be prepared where noise and vibration impacts are likely to arise and sets out the methodology for this assessment. Draft NPS EN-3 sections 3.10.111 to 3.10.117 sets out that the noise and vibration impact of construction traffic should be considered. NPS EN-1 paragraph 5.11.6 and Draft NPS EN-1 paragraph 5.12.9 add that for operational noise this should be assessed using the principles of the relevant British Standards and other guidance.
- 7.10.2 **Chapter 11: Noise and Vibration of the ES [EN010131/APP/3.1]** provides a noise and vibration assessment. **Chapter 8: Ecology and Nature Conservation of the ES [EN010131/APP/3.1]** presents the results of the assessment of noise impacts upon ecological receptors. Consideration of the likelihood of operational noise impacts upon heritage receptors where relevant is also presented in **Chapter 7: Cultural Heritage of the ES [EN010131/APP/3.1]**.
- 7.10.3 NPS EN-1 paragraph 5.11.9 and Draft NPS EN-1 paragraph 5.12.17 state that the decision maker should not grant development consent unless it is satisfied that the proposals will meet the following aims:
- avoid significant adverse impacts on health and quality of life from noise;
 - mitigate and minimise other adverse impacts on health and quality of life from noise; and
 - where possible, contribute to improvements to health and quality of life through the effective management and control of noise.
- 7.10.4 Part (e) of NPPF paragraph 174 outlines that planning decisions should prevent “*new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of...noise pollution*”. At paragraph 185(a) it also states that decisions should “*mitigate and reduce to a minimum potential adverse impacts resulting from noise from new development – and avoid noise giving rise to significant adverse impacts on health and the quality of life*”.
- 7.10.5 Local planning policies S53 of the CLLP and Policy 48 of the Draft BLLP seek to ensure that residential amenity is protected from noise impacts. Policy S14 of the CLLP and Policy DM10 of the BLCS specifically relate to renewable energy proposals, stating that impacts from noise must not be unacceptable.

Operational Noise

7.10.6 **Chapter 11: Noise and Vibration of the ES [EN010131/APP/3.1]** has assessed the operational noise generated by the Scheme. The operational noise assessment concludes that no significant noise or vibration effects are predicted during the construction phase or the operational phase of the Scheme. The Scheme therefore accords with the first objective of NPS EN-1 paragraph 5.11.9 and Draft NPS EN-1 paragraph 5.12.17 which is to avoid significant adverse impacts on health and quality of life from noise.

Construction Noise

7.10.7 Construction noise levels are predicted to be at their highest during site preparation and civil phases of works, which include ground works and piling activities. The duration of any construction noise effects is considered to be temporary, short-term, with no permanent residual effect once works are completed. Working hours during construction will be from 7am to 7pm Monday to Friday and 9am to 1pm on Saturdays during summer months, and from 8am to 6pm Monday to Friday and 9am to 1pm on Saturdays during winter months. Construction noise levels will be controlled through the use of embedded mitigation and the **Framework CEMP [EN010131/APP/7.3]**.

7.10.8 Noise and vibration impacts from construction and decommissioning work are anticipated to be negligible to minor adverse and not significant.

7.10.9 Embedded mitigation is included in the design in order to minimise and mitigate noise impacts on receptors as a result of the Scheme. This includes:

- Plant selection.
- Design layout to minimise noise at receptors, including locating the BESS compound in an area away from large concentrations of receptors such that noise emissions from the BESS are less impactful; and careful consideration of the location and orientation of inverters and transformers.
- Transformers may be standalone units or pre-assembled with inverters and switchgear to form a single contained unit (i.e. enclosed).

7.10.10 Noise predictions have been undertaken for noise generating activities 1, 2 and 3 above, which will be undertaken during core daytime working hours. The results of construction noise predictions are summarised in **Table 11-12 in Chapter 11: Noise and Vibration of the ES [EN010131/APP/3.1]**

7.10.11 Embedded mitigation includes the use of measures identified in the Framework CEMP [EN010131/APP/7.3], such as the sequential start-up of plant and vehicles rather than all together, avoidance of unnecessary revving of engines, and provision of information to the relevant local authority and residents to advise of potential noisy works. The BESS compound has been located in an area away from large concentrations of receptors, such that noise emissions are less impactful. A construction noise monitoring scheme will be developed, as per requirements of the **Framework CEMP [EN010131/APP/7.3]**. A Section 61 consent will be obtained prior to noisy work being carried out to demonstrate that noise and vibration has been

minimised as far as reasonably practicable. Consideration has been given to traffic routing, timing and access points to minimise noise impacts at existing receptors.

- 7.10.12 No additional mitigation or enhancement for the construction and decommissioning phases are considered to be required given that no significant adverse effects have been predicted as a result of the Scheme.
- 7.10.13 Cumulative noise effects may occur when developments are located nearby to a common receptor, within a 500m distance of each other. At greater distances, any noise emissions would be attenuated such that there would normally be no combined effect. The precise scale of additional noise effects will be dependent on the exact work taking place at each location at any one time, however compliance with mitigation measures detailed within the **Framework CEMP [EN010131/APP/7.3]** and **DEMP [EN010131/APP/7.5]** will reduce these effects as far as possible. It has been assumed that other developments will also adopt standard practices during their construction phases and comply with set limits.
- 7.10.14 Based on distances from key project components to cumulative developments, and the requirements to implement standard practices, it is considered that any overlapping of construction phases between the Scheme and other nearby developments would not result in any cumulative effects at common noise-sensitive receptors. Therefore, construction, operation and decommissioning noise effects will be unchanged and remain negligible to minor adverse and not significant.
- 7.10.15 Construction traffic has also been assessed in **Chapter 11: Noise and Vibration of the ES [EN010131/APP/3.1]**, which indicates that changes in noise due to construction traffic on all assessed road links are not considered to be significant.
- 7.10.16 Overall, no significant noise or vibration effects are predicted during the construction phase or the operational phase.
- 7.10.17 NPS EN-1 and NPS EN-3 expect energy NSIPs to demonstrate good design with regard to mitigating noise impacts. Specifically NPS EN-1 paragraph 5.11.8 expects projects to *“demonstrate good design through selection of the quietest cost-effective plant available; containment of noise within buildings wherever possible; optimisation of plant layout to minimise noise emissions; and, where possible, the use of landscaping, bunds or noise barriers to reduce noise transmission.”* Draft NPS EN-1 at paragraphs 5.12.15 and 5.12.16 contains the same policy.
- 7.10.18 With the inclusion of embedded mitigation to mitigate and minimise noise impacts on receptors the Scheme complies with the second objective of NPS EN-1 paragraph 5.11.9 and Draft NPS EN-1 paragraph 5.12.17 which is to mitigate and minimise other adverse impacts on health and quality of life from noise. It also meets the NPS EN-1 paragraph 5.11.8 and NPS EN-1 paragraph 5.12.9 objective of demonstrating good design in terms of noise impacts.
- 7.10.19 Therefore, the Scheme accords with NPS EN-1 and Draft NPS EN-1, specifically the three policy aims of paragraph 5.11.9 (and 5.12.17 in Draft

NPS EN-1); the NPPF and local planning policies by avoiding significant noise and vibration impacts on health and quality of life; minimising adverse impacts of noise and vibration through appropriate mitigation; and providing additional mitigation through the design and selection of operational plant to effectively manage and control operational noise.

7.11 Mineral Safeguarding

7.11.1 The majority of the land within the Order limits, including all of the Solar and Energy Storage Park, is located outside Mineral Safeguarding Areas (MSA). However a section of Grid Connection Corridor is located within a MSA for Sand and Gravel.

7.11.2 With regard to mineral safeguarding, paragraph 5.10.9 of NPS EN-1 and paragraph 5.11.19 of Draft NPS EN-1 state that applicants should safeguard any mineral resources on the proposed site as far as possible, taking into account the long-term potential of the land use after any future decommissioning has taken place. Paragraph 5.10.22 of NPS EN-1 and paragraph 5.11.21 further add that the decision maker should ensure that appropriate mitigation measures have been put in place to safeguard mineral resources in the event that a proposed development has an impact on an MSA. Paragraph 206 of the NPPF states that Local Planning Authorities “*should not permit development in Mineral Safeguarding Areas if it might constrain potential future use for mineral working*”.

7.11.3 Policy M11 (Safeguarding of Mineral Resources) of the Lincolnshire Minerals and Waste Local Plan states that applications for non-minerals development in a minerals safeguarding area must be accompanied by a Minerals Assessment. It adds that “*planning permission will be granted for development within a Minerals Safeguarding Area provided that it would not sterilise mineral resources within the Mineral Safeguarding Areas or prevent future minerals extraction on neighbouring land.*”

7.11.4 Policy SP7 of the Nottinghamshire Waste Local Plan sets out the following:

- Locally and nationally important mineral resources, permitted reserves, allocated sites and associated minerals infrastructure will be safeguarded from needless sterilisation by non-minerals development through the designation of minerals safeguarding areas as identified on the Policies Map.
- Non-minerals development within minerals safeguarding areas will have to demonstrate that mineral resources will not be needlessly sterilised as a result of the development and that the development would not pose a serious hindrance to future extraction in the vicinity.

7.11.5 Following further development of the project, it was confirmed with NCC and LCC that there is not a need for a standalone Mineral Safeguarding Assessment to accompany the DCO Application. This is on the basis that:

- The area of concern raised at scoping by NCC was relating to an option for the northern route corridor of the Grid Connection Corridor. The feasibility and environmental work to date determined that the northern and central route option would not be considered further. The

rest of the Grid Connection Corridor lies within an MSA for sand and gravel but it is acknowledged by NCC in their scoping response (**Appendix 1-C of the ES [EN010131/APP/3.3]**) that no problems are foreseen in terms of sterilisation.

- There would be no permanent above ground infrastructure within previously undisturbed land in the Grid Connection Corridor. The connection to the grid would be at Cottam Power Station and not result in new permanent land take for substation infrastructure.
- It is acknowledged that the Solar and Energy Storage Park (where the PV will be located) is not a concern for mineral safeguarding by NCC in their scoping response (**Appendix 1-C of the ES [EN010131/APP/3.3]**).

7.11.6 It was also agreed that wherever possible, the route of the Grid Connection Corridor follow existing corridors/linear features (field boundaries), to minimise sterilisation of the MSA for sand and gravel. This has been considered in the final design of the Scheme.

7.11.7 Therefore, there is not predicted to be any sterilisation of minerals within the MSA that the Grid Connection Corridor lies within, and the Scheme would not pose a serious hindrance to future extraction in the vicinity. The Scheme therefore complies with paragraph 5.10.9, 5.10.22 and 5.11.21 of NPS EN-1, paragraph 5.11.19 of Draft NPS EN-1, paragraph 206 of the NPPF, Policy M11 of Lincolnshire Minerals and Waste Local Plan, and Policy SP7 of the Nottinghamshire Waste Local Plan.

7.12 Socio-economic Impacts and Human Health

7.12.1 Section 5.12 of NPS EN-1 and section 5.13 of Draft NPS EN-1 set out the requirements of the assessment of local and regional socio-economic impacts of energy NSIPs.

7.12.2 Section 4.13 of NPS EN-1 and section 4.3 of Draft NPS EN-1 discuss the potential health impacts of energy NSIPs and expects applicants to present in their ES an assessment of health effects for each project stage and identifying measures to avoid, reduce or compensate for these impacts as appropriate.

7.12.3 The NPPF (paragraphs 81, 84, 92, 93 and 100) and local planning policies support sustainable economic growth; the achievement of healthy, inclusive and safe places; and the protection of existing land uses and community infrastructure including rights of way.

7.12.4 **Chapter 12: Socio-economics and Land Use, of the ES [EN010131/APP/3.1]** provides an assessment of socio-economic effects including upon employment, the local economy, development land, public rights of way and local amenities and land use, in accordance with NPS EN-1 paragraph 5.12.3 and Draft NPS EN-1 paragraph 5.13.4. Effects upon tourism are considered relevant to the Scheme due to it being requested during statutory consultation.

7.12.5 In accordance with NPS EN-1 section 4.13 and Draft NPS EN-1 section 4.3, the Applicant has undertaken a Human Health and Wellbeing Impact Assessment of the Scheme which is presented at **Chapter 14: Human Health**

of the ES [EN010131/APP/3.1]. This has assessed the principal health benefits and disbenefits to residents of the local community of the Scheme.

- 7.12.6 The socio-economic and human health effects of the Scheme are discussed in the following sections.

Construction Impacts

Employment

- 7.12.7 **Chapter 12: Socio-economics and Land Use [EN010131/APP/3.1]** estimates that the Scheme will require an average of 323 gross direct full-time equivalent (FTE) jobs on-site per day during the construction period for 24-36 months. It states that although these jobs are temporary, they represent a positive economic effect for a substantial period. It is estimated that 184 FTE of these jobs per annum will be created for residents within the local area during the construction period. There will also be indirect job creation outside the site, resulting in a total of 363 full time equivalent jobs created during the construction period in total.
- 7.12.8 **Chapter 12: Socio-economics and Land Use of the ES [EN01013/APP/3.1]** states that the direct, indirect and induced employment, expenditure and upskilling created from the construction of the Scheme must be judged in the context of the labour pool of construction workers in the Study Area (60-minute travel area) (106,000). Taking this into account, the impact of construction employment generation in the Study Area has been assessed as temporary low beneficial, which results in a medium-term temporary minor beneficial effect. This is not considered significant.
- 7.12.9 An **Outline Skills, Supply Chain and Employment Plan [EN01310/APP/7.1]** would be implemented to promote employment and training in the local economy and promote STEM education and careers.

Public Rights of Way

- 7.12.10 Changes to journey times, local travel patterns, and certainty of routes for users would arise from the temporary diversions of PRow. The Order limits intersects a small section of a PRow at Knaith Park, and although the intersection is slight, construction vehicles will cross the PRow to access a field within the north western portion of the Site. The PRow will be managed throughout the construction phase to ensure that routes can continue to be used safely.
- 7.12.11 In a small number of cases, where PRow cross the grid connection construction spread, temporary diversions will be put in place as described in Section 7.9 above and in more detail in the **Outline PRow Management Plan [EN010131/APP/7.8]**. The affected PRow are predominantly used for recreational purposes and form part of a wide network of PRow in the surrounding area as shown in **ES Volume 2: Figure 13-8 [EN010131/APP/3.2]**. Due to the limited scale of impacts upon PRow, these effects are assessed to be very low adverse, which results in a negligible effect.

Local Amenities and Land Use

- 7.12.12 Taking into account the residual effect assessment results of the air quality, noise, traffic and visual assessments described in this PDAS, there are no residents, businesses or community facilities that would likely experience a significant effect on their amenity during construction from effects acting in combination. Therefore, there are no impacts arising from the Scheme on these local amenities during construction.
- 7.12.13 In addition, there are no planning applications, permissions or allocations affected by land required for the construction of the Scheme and thus no effects have been assessed. The application for two agricultural barns explored in Section 3.4 of this PDAS does not yet have consent and it is considered likely that a solution will be found that enables both projects to proceed. The Cottam Power Station site is identified as being a Priority Regeneration Area within the emerging Local Plan, however, the site isn't currently allocated for any alternative uses.

Operational Impacts

Employment

- 7.12.14 The impact of operational employment generation in the local economy would be slightly increased by the Scheme but the increase would be marginal.

Public Rights of Way

- 7.12.15 There is one PRoW located within the Solar and Energy Storage Park, and the Grid Connection Corridor will pass through six PRoW. PRoW are not expected to be affected during operation. However in the event that PRoW are affected by maintenance activities temporary diversions will be put in place.

Local Amenity and Land Use

- 7.12.16 Taking into account the residual effect assessment results of the noise, traffic, air quality and visual assessments, there are no residents, community facilities or businesses that would likely experience a significant effect on their amenity during operation.
- 7.12.17 In addition, there are no planning applications, permissions or allocations affected by land required for the operation of the Scheme and thus no effects have been assessed. The Cottam Power Station site is identified as being a Priority Regeneration Area within the emerging Local Plan, however the site isn't currently allocated for any alternative uses. Therefore, there are no significant effects expected during the operational phase of the Scheme.

Decommissioning

Employment

- 7.12.18 The estimated duration of the decommissioning period is expected to be similar to that of the construction period of 24-36 months. Therefore, the likely effects will be of a medium-term temporary nature. Although these jobs are temporary, they represent a positive economic effect for a substantial period

that can be estimated as the function of the scale and type of activities required to decommission the Scheme.

7.12.19 It is assumed based on the activities taking place that the same number of jobs required for constructing the Scheme will be needed to carry out the activities required to remove the infrastructure.

7.12.20 It can be expected that if the Scheme is shut down and all infrastructure is removed, the employment required to carry out maintenance activities (14 jobs) will no longer be generated at this point. These workers can be expected to be integrated into the economy and find new employment after the loss of their job at the Scheme. As the Scheme is assumed to revert back to agriculture land after decommissioning, it is likely that the existing up to 3 jobs related to agriculture activities would be generated again.

Public Rights of Way

7.12.21 There is one PRow within the Solar and Energy Storage Park, and six PRow within the Grid Connection Corridor. In a worst-case scenario, removing infrastructure within the Grid Connection Corridor would require removal of cables from manholes and vehicles accessing the site to retrieve them. No open excavation or ground disturbance is likely. This is not considered to be a significant effect.

Human Health

7.12.22 According to **Chapter 14: Human Health of the ES [EN010131/APP/3.1]** it is unlikely that there will be any severance between local residents and the healthcare facilities or other social infrastructure which they use during the construction, operation or decommissioning phase. This is because neither the additional construction/decommissioning traffic flow nor the traffic flow generated during the operational phase will exceed the future baseline traffic flows (without the Scheme). No road closures are anticipated at any point during the Scheme.

Summary

7.12.23 In summary, the Scheme results in beneficial socio-economic effects as a result of the significant employment created during construction and decommissioning. The temporary diversions of PRow within the Order limits during construction will be adequately managed and have short term negligible impacts on human health. The Scheme therefore accords with NPS EN-1, Draft NPS EN-1, and the NPPF which support sustainable economic growth and the protection of health, existing and future land uses and community infrastructure including rights of way.

7.13 Agricultural Land

7.13.1 Agricultural Land is identified using the Agricultural Land Classification (ALC) as Grades 1, 2, 3a, 3b, 4 and 5 in accordance with its quality and productivity. Paragraph 3.10.18 of Draft NPS EN-3 states that the ALC is the only approved system for grading agricultural quality in England and Wales. Agricultural land within Grades 1, 2, and 3a is defined as BMV land and is considered strategic,

finite and irreplaceable national resource, with longstanding policy to prevent the unnecessary loss of such land to non-agricultural development. Powering Up Britain affirms that the Government is not intending to change categories of agricultural land.

- 7.13.2 NPS EN-1 paragraph 5.10.8 and Draft NPS EN-1 paragraph 5.11.12 state that: *"Applicants should seek to minimise impacts on the best and most versatile agricultural land (defined as land in grades 1, 2 and 3a of the Agricultural Land Classification) and preferably use land in areas of poorer quality (grades 3b, 4 and 5)"*
- 7.13.3 NPS EN-1 paragraph 5.10.15 states that the decision maker: *"should ensure that applicants do not site their scheme on the best and most versatile agricultural land without justification"* but that *"little weight should be given to the loss of poorer quality agricultural land (in grades 3b, 4 and 5)"*.
- 7.13.4 Draft NPS EN-1 5.11.34 states *'The Secretary of State should ensure that applicants do not site their scheme on the best and most versatile agricultural land without justification. Where schemes are to be sited on best and most versatile agricultural land the Secretary of State should take into account the economic and other benefits of that land. Where development of agricultural land is demonstrated to be necessary, areas of poorer quality land should be preferred to those of a higher quality.'*
- 7.13.5 The latest Draft NPS EN-1 wording now omits the sentence stating that little weight is given to poorer quality agricultural land. However, given there is no sentence stating that justification is required for development on poorer quality land (in contrast to development on BMV land) and paragraph 5.11.12 encourages developers to use poorer quality land, it remains the case that little weight should be given to the loss of poorer quality agricultural land.
- 7.13.6 Draft NPS EN-3 provides clarification and guidance on how policies relating to BMV agricultural land should be interpreted for solar NSIP schemes. It clarifies at paragraph 3.10.14 that *"while land type should not be a predominating factor in determining the suitability of the site location applicants should, where possible, utilise previously developed land, brownfield land, contaminated land and industrial land. Where the proposed use of any agricultural land has been shown to be necessary, poorer quality land should be preferred to higher quality land (avoiding the use of "Best and Most Versatile" agricultural land where possible)"*.
- 7.13.7 Powering Up Britain makes it clear that the Government expects large scale solar development on low/ medium grade agricultural land. Similarly, Paragraph 3.10.16 of Draft NPS EN-3 recognises that, given the scale of NSIP solar projects, the use of some agricultural land is likely, and that applicants should explain their choice of site, noting the preference for development to be on brownfield and non-agricultural land. Draft NPS EN-3 paragraph 3.10.17 provides that where proposals are sited on agricultural land, consideration may be given to continued agricultural use and/or whether the proposal can be co-located with other functions (e.g. onshore wind generation or storage) to maximise the efficiency of land use.

- 7.13.8 A similar approach is adopted by the NPPF as is taken in the NPSs above, indicating that planning decisions should contribute to and enhance the natural and local environment by recognising the economic and other benefits of BMV agricultural land. It also advises that planning decisions should promote an effective use of land. The revised draft NPPF published in December 2022 indicates that the availability of agricultural land for food production should be considered when deciding what sites are most appropriate for development. However, as recognised in Powering Up Britain, solar and farming can be complementary and meeting energy security and climate change goals are urgent and can be achieved together with maintaining food security. As stated in section 6.7 above, the NPPF was written to guide decision making on developments consented through the Town and Country Planning Act 1990 and consequently will have lesser weight than policy set out in NPSs. The draft NPPF would have less weight than the draft NPSs.
- 7.13.9 On 25 March 2015 a Written Ministerial Statement (WMS) was published by the former Secretary of State for Communities and Local Government. This was published eight years ago, prior to the key energy strategy documents driving the industry today but is mentioned here because it has been mentioned by stakeholders in development of the Scheme. The WMS recognised the importance of solar PV as part of the UK's energy mix. However, it also acknowledged that some local communities have genuine concerns that insufficient weight has been given to protecting BMV agricultural land and the benefits of high quality agricultural land in relation to solar farms. It advises local planning authorities that, in light of these concerns, any proposal for a solar farm involving BMV agricultural land would need to be justified by the most compelling evidence.
- 7.13.10 Whilst the WMS could be a relevant and important matter in decision making on DCOs, it has very limited weight because:
- The WMS was written to provide guide decision-making on applications determined under the Town and Country Planning Act 1990 rather than the Planning Act 2008
 - The WMS was published in 2015 and is 8 years old and was not published under the same energy context. 8 years ago:
 - ground mounted solar was not being developed at scale (it was five years before the first solar NSIP was consented in 2020;
 - there were no ambitious targets for solar and no strategy aiming for 70GW of solar by 2035. Solar was not anticipated to play the same role in our National Grid as it is now;
 - energy security was a less prominent issue than it has been since the Covid pandemic and the Ukraine war; and
 - solar was more expensive than it is today.
 - The WMS is a Ministerial Statement not policy. It was not developed under the rigour required of policy documents and was not subject to consultation.
 - The WMS was not mentioned in the Planning Statements, ExAs Recommendation Report or Secretary of State's Decision Letter for Cleve Hill Solar Park (2020) or Little Crow (2022) solar NSIPs.

- The ExA for Longfield Solar (2023) did consider the WMS a relevant and important matter but did not conclude that the scheme conflicted with it. Further information on the Longfield decision is provided below.

7.13.11 Policies S14 and S67 of the CLLP state that there is a presumption against photovoltaic solar farm proposals on the best and most versatile agricultural land. Policy S67 of the CLLP states that:

7.13.12 *“With the exception of allocated sites, significant development resulting in the loss of the best and most versatile agricultural land will only be supported if:*

a. The need for the proposed development has been clearly established and there is insufficient lower grade land available at that settlement (unless development of such lower grade land would be inconsistent with other sustainability considerations); and

b) The benefits and/or sustainability considerations outweigh the need to protect such land, when taking into account the economic and other benefits of the best and most versatile agricultural land; and

c) The impacts of the proposal upon ongoing agricultural operations have been minimised through the use of appropriate design solutions; and

d) Where feasible, once any development which is supported has ceased its useful life the land will be restored to its former use (this condition will be secured by planning condition where appropriate).”

7.13.13 Policy DM10 of the BLCSS seeks to support renewable and low carbon energy proposals as long as they demonstrate that they will not lead to the loss of or damage to high-grade agricultural land, which it identifies as being Grades 1 and 2.

7.13.14 In considering the site, the Applicant has had regard to agricultural land quality in site selection and the layout of the development. A survey has been undertaken to identify the ALC of the land within the Solar and Energy Storage Park and is reported in **Chapter 12: Socio-Economics and Land Use of the ES [EN010131/APP/3.1]**. A small area of land within the Solar and Energy Storage Park to the north west was not included in the soil survey and has been estimated as BMV land. This land is proposed to be kept in agricultural use, with the area retained in the Order limits in case it is required for additional ecological mitigation or enhancement. Given that this land is predicted to be BMV, any ecological enhancements would be made in a way that would retain agricultural use on the majority of the site. Given this context, soil surveys are not considered necessary to inform the ES.

7.13.15 A desktop assessment was made of the likely ALC grade of land within the Grid Connection Corridor. The land within the Grid Connection Corridor would be utilised temporarily for the installation of the underground grid connection and then could be returned to agricultural use provided that use did not conflict with the terms of the easement. Given that there would be no loss of agricultural land within this area, soil surveys were not considered necessary to inform the ES.

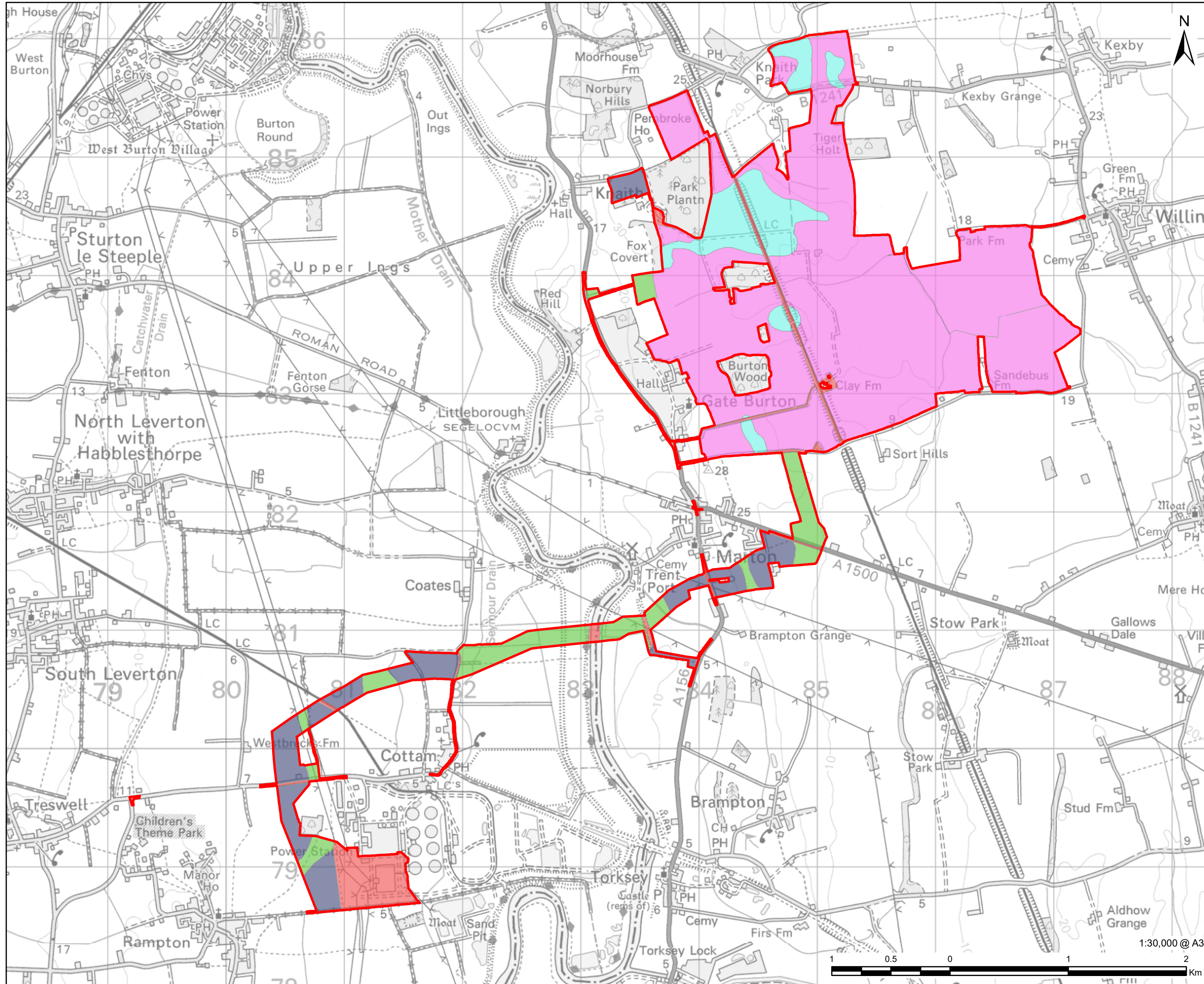
7.13.16 Figure 7-1 in this PDAS has been reproduced from the ES and shows the classification of agricultural land within the Order limits. Figure 7-2 (also included as Figure 3-4 in the ES) shows the agricultural land in the wider area around the grid connection point, illustrating that no areas of lower quality land are available for the Scheme.

7.13.17 Tables 7-1 and 7-2 below show that the majority of land within the Solar and Energy Storage Park is not BMV land and the majority of BMV land that is within the Solar and Energy Storage Park will not be permanently lost. There is likely to be more BMV land within the Grid Connection Corridor but impacts on agricultural use in this area are predominantly restricted to the construction period. Across the Grid Connection Corridor agricultural activities can continue across all of this area after construction and no land will be lost either for the operational period or permanently.

Table 7-1 Agricultural Land Within the Solar and Energy Storage Park

ALC Grade	Total Area (Ha)	Proportion of Area	Comments
Best and Most Versatile Land			
Subgrade 3a (permanent loss)	2	0.3%	Area lost due to installation of battery storage, Substation and permanent planting
Subgrade 3a (reduced output)	71.6	11%	This area would be utilised for the solar park, but with some agricultural use remaining possible (e.g. sheep grazing). Reversible after decommissioning.
Estimated BMV (retained)	6.8	1%	This area would remain in agricultural production. No loss.
<i>Total BMV Land</i>	80.4	12.3%	Total BMV is 80.4 hectares (12.3%) but only 73.6 hectares (11.2%) will be affected.
Other Land			
Subgrade 3b	548.9	84%	Majority of area used for solar farm but with some agricultural use remaining possible (e.g. sheep grazing).
Estimate subgrade 3b	4.5	0.7%	Area proposed for use for access and a construction compound. No solar panels or battery storage so limited impact after construction.
Non-agricultural land	18.2	3%	Includes railway line, Clay Farm steading and areas of woodland.
<i>Total Non-BMV Land</i>	571.6	87.7%	
Total	652	100%	

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LEGEND

- Order Limits

Agriculture Land Classification

- Estimated Subgrade 3a (BMV)*
- Estimated Subgrade 3b*
- Non Agricultural Land
- Subgrade 3a (BMV)
- Subgrade 3b

NOTES

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*Grade estimated using published soils and geology data and nearby observation points. Grade to be confirmed by survey pre-construction as part of the Soil Resource Management Plan (SRMP)

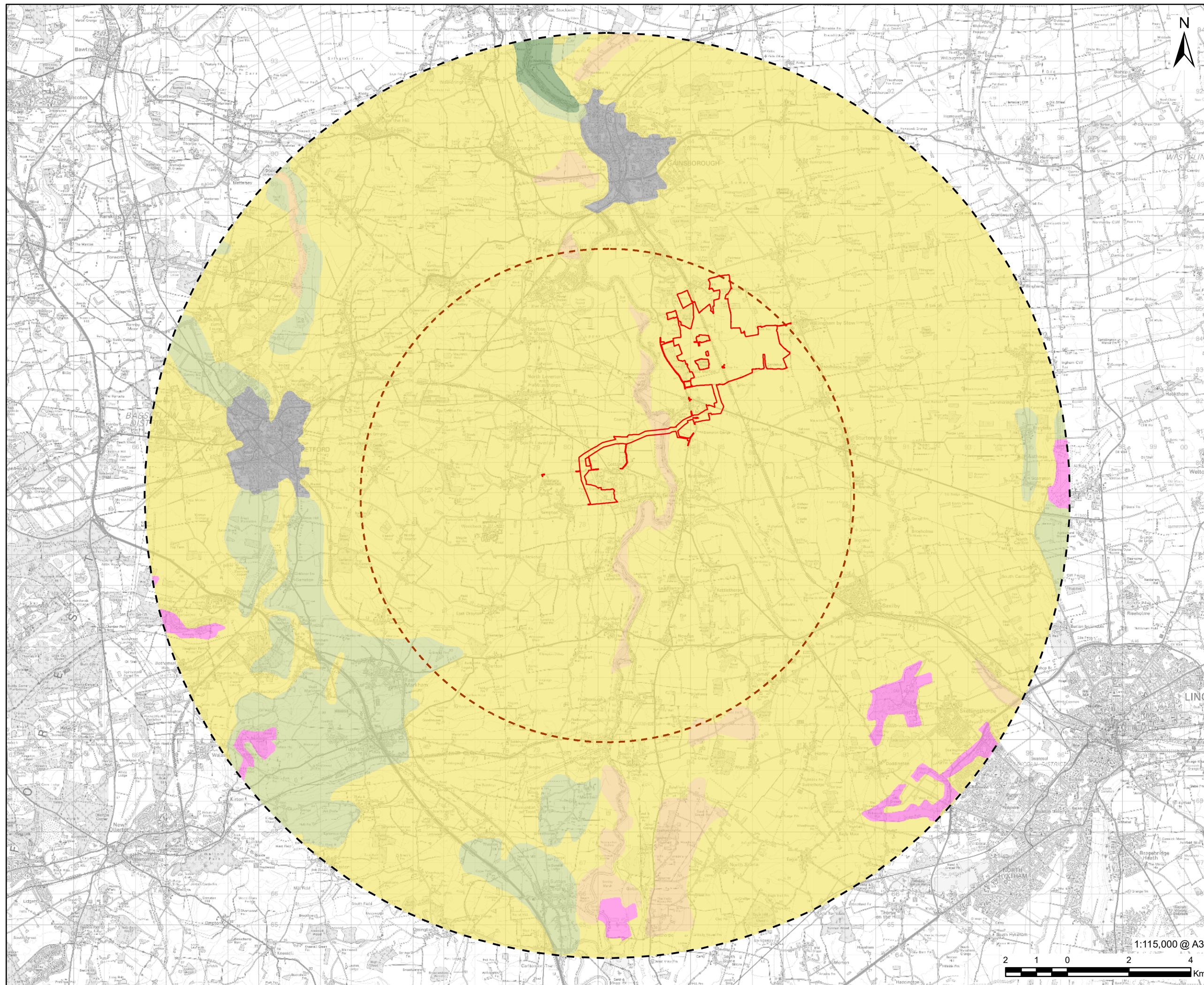
ISSUE PURPOSE
Environmental Statement

PROJECT NUMBER
60664324


FIGURE TITLE
Agricultural Land Classification

FIGURE NUMBER
Figure 7-1

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LEGEND

- Order Limits
- Cottam Substation - 8km Buffer
- Cottam Substation - 15km Buffer

Agricultural Land Classification

- Grade 1
- Grade 2
- Grade 3
- Grade 4
- Non Agricultural
- Urban

NOTES

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More accurate Agriculture Land Classification
 data can be found in figure 12-1.

ISSUE PURPOSE
 Environmental Statement

PROJECT NUMBER
 60664324

FIGURE TITLE
 Agricultural Land Classifications -
 Overview

FIGURE NUMBER
 Figure 7-2

Table 7-2 Agricultural Land Within the Grid Connection Corridor

ALC Grade	Total Area (Ha)	Proportion of Area	Comments
Best and Most Versatile Land			
Subgrade 3a (permanent loss)	0	0%	None anticipated ⁶
Estimated BMV (retained)	74.8	43%	Land retained in agricultural use following the construction period
Total BMV Land	74.8	43%	
Other Land			
Estimated subgrade 3b	58.4	34%	Land retained in agricultural use following the construction period
Non-agricultural land	38.8	23%	
Total Non-BMV Land	97.2	57%	
Total	172	100%	

7.13.18 Overall, Figure 7-1 and the tables above show that the majority of the land within the Order Limits (approximately 81%, 668.8ha) comprises lower Grade 3b agricultural land or non-agricultural land, while approximately 19% (155.2ha) of the land within the Order Limits comprises (or is likely to comprise) BMV agricultural land. However, these figures are misleading as the majority of this land can either stay entirely in agricultural production after construction or can continue to have some agricultural use alongside the solar farm use.

7.13.19 As shown in Figure 7-1 the areas of land that are classified as grade 3a within the Solar and Energy Park are oddly shaped and dispersed. The 3a areas to the north and south of Burton Wood are small areas surrounded by areas of the Scheme; as are the small areas in the far north of the Scheme. The larger area of 3a land to the east of Knaith is also an oddly shaped area of land and omitting this area would remove a significant number of panels from the Scheme. The area is a parcel of land separated by the railway line and located between two woodlands. Therefore, the remaining areas of 3a land within the Solar and Energy Storage Park would not be economically viable to farm should they be removed from the Scheme but would reduce the benefits associated with the Scheme.

7.13.20 The areas of 3a land within the Grid Connection Corridor are estimated. Given that the grid connection point is fixed and there are only limited routes between the site and the grid connection point, the temporary impact on areas estimated to be 3a is unavoidable during construction. However, this land can be returned to agricultural use following construction of the grid connection given that the cable route is underground. There will be an easement in place over the grid connection, but this will have limited impact on agricultural uses.

⁶ Given the stage of design it is not possible to say with certainty that no land will be lost as it is possible that some small areas of loss could occur due to a requirement for access improvements or works at Cottam Power Station. However, any loss would be negligible and, if required, would likely be adjacent to existing roads or the Power Station.

- 7.13.21 The Scheme has been designed to take into account the quality of agricultural land such as positioning the permanent infrastructure (the Substation and the BESS) to avoid BMV land as far as practicable. The BES, Substation and associated planting is estimated to lead to the permanent loss of a maximum of 2ha of grade 3a land.
- 7.13.22 As the loss of the vast majority of grade 3a BMV agricultural land is temporary and reversible (after operation), and the permanent loss of grade 3a BMV land falls significantly below the 20ha threshold above which effects are considered to be significant, the effect of the Scheme on the use of BMV agricultural land is assessed to be low adverse which results in a minor adverse effect. This is not considered significant.
- 7.13.23 Construction work will involve relatively little displacement of the soil material, with the dominant impact being the trafficking over land with delivery and construction vehicles and the soil compaction this might cause, although measures can be adopted to minimise impacts. The nature of the works for the Grid Connection Corridor (cable burial and restatement of land) indicate that temporary impacts only would occur.
- 7.13.24 Agricultural land as a long-term resource will not therefore be permanently lost as a result of the Scheme, aside from a very small area where the Substation will be located, and where new woodland and hedgerow planting has established and may be retained by the landowner.
- 7.13.25 Prior to the commencement of decommissioning, an assessment will be made of the land and soil, and a programme of remedial action will be agreed and during decommissioning undertaken to return land to arable agricultural use. It is therefore expected that the land will therefore be in the same or better condition than it is currently as a result of the expected natural enhancement through approximately 60 years of being set-aside. Overall, given the short time frame of any disruption to farming activities during decommissioning and the return of the site to solely farming practices following completion of decommissioning, there is only considered to be a low non-significant impact. This impact ends following completion of the decommissioning activities when the land is returned to farming use.
- 7.13.26 It should be noted that in June 2023 the Development Consent Order was made for the Longfield Solar Farm. This scheme comprised 34% BMV land, which would be temporarily lost for the period of the Scheme's operation. The Secretary of State concluded that the Scheme accorded with national planning policy and gave the loss of agricultural land '*a small amount of weight in the overall planning balance*' (paragraph 5.7.50). This decision shows that policy compliance can be achieved by solar farms containing significantly more BMV land than is affected by the Gate Burton Scheme.

7.14 Major accidents and disasters

- 7.14.1 The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 require an assessment of the potential effects of the Scheme on the environment resulting from the vulnerability of the Scheme to risks of relevant major accidents or disasters.

- 7.14.2 As the energy NPSs were published in 2011, they pre-date the existing EIA Regulations. The NPPF does refer at paragraph 97 that: *“Planning policies and decisions should promote public safety and take into account wider security and defence requirements by: a) anticipating and addressing possible malicious threats and natural hazards” and taking “appropriate and proportionate steps that can be taken to reduce vulnerability, increase resilience and ensure public safety and security”.*
- 7.14.3 Chapter 16, Other Environmental Topics, of the ES [EN010131/APP/3.1] considers a number of potential accidents and disasters, including fire, utilities failure, plant disease, and criminal damage.
- 7.14.4 Minimising the risk of major accidents during construction, operation and decommissioning will be addressed through appropriate risk assessments as required in the **Framework CEMP [EN010131/APP/7.3]**, **OEMP [EN010131/APP/7.4]** and **DEMP [EN010131/APP/7.5]**. The implementation of those plans will be secured via a requirement to the DCO. In addition, an **Outline Battery Safety Management Plan [EN010131/APP/7.1]** has been produced for the Scheme and will be updated and maintained as a ‘live document’ throughout the operational phase of the Scheme. The implementation of the strategy will be secured via requirement to the DCO.
- 7.14.5 As discussed in section 2 of this PDAS, the Scheme is proposing to build a BESS. There is a potential fire risk associated with certain types of batteries such as lithium ion during the operation of the Scheme. In response to the statutory consultation the Host Authorities expressed concern that the risks associated with the battery storage fires had not been fully explored. In addition, the statutory consultation also included feedback from local residents regarding their concerns about battery fires.
- 7.14.6 The Applicant recognises how important it is to demonstrate that the BESS would be safe and therefore has prepared an **Outline Battery Fire Safety Management Plan [EN010131/APP/7.1]** with the Application. The **Outline Battery Fire Safety Management Plan** has been informed by consultation with Lincolnshire Fire Service and fully explores the risks associated with fires from BESS equipment and minimises the impact of an incident during construction, operation and decommissioning of the facility and includes the following:
- Details of the hazards associated with lithium-ion (li-ion) batteries;
 - Isolation of electrical sources to enable firefighting activities;
 - Measures to extinguish or cool batteries involved in fire;
 - Minimise environmental impact of an incident;
 - Containment of fire water run-off;
 - Handling and responsibility for disposal of damaged batteries; and
 - Establishment of regular onsite training exercises
- 7.14.7 The design of the Scheme has also taken account of fire safety through provision of two accesses to the BESS, internal access roads around the BESS and a commitment to erect signage to alert the public to the use on the site.

- 7.14.8 **Chapter 15: Other Environmental Topics of the ES [EN010131/APP/3.1]** concludes that during construction and decommissioning, the Scheme is not expected to have an effect on the environment due to the risk of a major accident occurring as a result of fire during construction and decommissioning.
- 7.14.9 **Chapter 15: Other Environmental Topics of the ES [EN010131/APP/3.1]** also assesses the Schemes impact in relation to criminal damage during construction. It states that the Order limits would be managed by the contractor during construction and decommissioning to mitigate the risk of criminal activity. The design will include safety measures to protect the sites from criminal damage, including fencing, CCTV cameras and lighting in critical areas. Therefore, the Scheme is not expected to have an effect on the environment due to the risk of a major accident occurring as a result of criminal damage during construction and decommissioning.
- 7.14.10 **Chapter 15: Other Environmental Topics of the ES [EN010131/APP/3.1]** concludes that given the nature of accidents and disasters, there is the potential for significant effects if an event does occur, however, the assessment has concluded that the risk of such events occurring is low for the Scheme and significant effects on the environment are therefore not anticipated. Taking into account the good industry practice and additional mitigation measures discussed above, the risk of accidents and disasters is considered low. The assessment has considered the likely effects resulting from an event, should one occur, and has concluded there would be no significant effects on the environment or people.
- 7.14.11 **Chapter 15: Other Environmental Topics of the ES [EN010131/APP/3.1]** also considers the cumulative effect of the Scheme in relation to major accidents and disasters. It states that the solar developments in close proximity to the Order limits are located to the south of the Grid Connection Corridor and east of the Solar and Energy Storage Park. West Burton Solar Farm is located in close proximity to the Grid Connection Corridor, however, with the embedded mitigation and additional mitigation no significant effects are expected. For these reasons, it is concluded that no significant cumulative effects would arise from the Scheme.
- 7.14.12 In summary the Scheme is unlikely to pose a significant risk to the health and safety of the public from major accidents and disasters and therefore is in accordance with the NPPF related to public safety.

7.15 Other construction, operation and decommissioning impacts

- 7.15.1 Other impacts of the Scheme during its construction, operation and decommissioning have been identified and are assessed and discussed in **Chapter 15: Other Environmental Topics of the ES [EN010131/APP/3.1]**

Air Quality

- 7.15.2 **Chapter 15: Other Environmental Topics of the ES [EN010131/APP/3.1]** assesses the impacts of the construction and decommissioning of the Scheme on local air quality.

- 7.15.3 The assessment considers dust generation by undertaking a dust risk assessment as required by NPS EN-1 paragraph 5.6.4. This assessment also considers ecological receptors in addition to local amenity. There are no ecological sites likely to be affected by emissions to air, due to their distance from the site, so the effect on ecological receptors is not significant.
- 7.15.4 Additional road traffic and plant emissions during the construction phase have also been assessed. The assessment refers to the decommissioning phase explaining it will be similar in nature, duration, and extent to the construction phase and so effects of the construction phase are to be similar for decommissioning.
- 7.15.5 The dust risk assessment concludes that, following the implementation of the **Framework CEMP [EN010131/APP/7.3]**, which will incorporate the mitigation measures (which are set out in **Tables 14-5 and 14-6 of Chapter 14 of the ES [EN010131/APP/3.1]**) the effect on ecology, dust deposition, and human health is not anticipated to be significant. It is anticipated that the residual effects will be at worst minor adverse (not significant).
- 7.15.6 With regard to additional road traffic emissions on local air quality, the assessment concludes that given the relatively good air quality conditions within the Order limits and surrounding area, in addition to the below-threshold traffic generation, it is not expected that the additional road traffic will lead to any exceedances of the national air quality strategy objectives. The effect is expected to be negligible and no worse than minor adverse.

Glint and Glare

- 7.15.7 The full glint and glare study has been undertaken for the Scheme by Neo Environmental and is available in **Appendix 15-D of the ES [EN010131/APP/3.3]**. The glint and glare study assumes a PV Table angle of between 5 and 45 degrees from horizontal in a fixed tilt arrangement, with a maximum height of 3.5m.
- 7.15.8 The embedded design mitigation for screening the Scheme from view of receptors to glint and glare, as well as landscape and visual impacts, is described in detail in **Chapter 10: Landscape and Visual Amenity [EN010131/APP/3.1]** of the ES. These measures will be secured through the Outline Landscape and Ecological Management Plan (LEMP) **[EN010131/APP/7.10]**.
- 7.15.9 The embedded mitigation measures include:
- Careful siting of the Scheme in the landscape with offsets from existing residential areas, vegetation patterns and road networks;
 - Conserving existing vegetation patterns; and
 - Creating new Green Infrastructure (i.e., vegetation planting) within the Order limits with extensive planting proposals.
- 7.15.10 Mitigation measures are also required to be put in place due to the High and Medium impacts that found during the visibility analysis at two residential receptors and 16 road receptors.

- 7.15.11 These mitigation measures include hedgerows to be implemented along the boundaries highlighted in ES Volume 3, **Appendix 10-D: Figure 5 [EN010131/APP/3.3]**. These hedgerows will be infilled and maintained to a height of at least 3 metres and will screen all views of the Scheme where glint and glare is possible at the identified receptors. Further information is presented in **Appendix 10-D of the ES [EN010131/APP/3.3]**. These measures will be secured through the **Outline LEMP [EN010131/APP/7.10]**.
- 7.15.12 Following embedded mitigation measures, there would be no significant impact in relation to glint and glare on residential, road, rail and aviation receptors as a result of the Scheme.
- 7.15.13 Additional mitigation measures include hedgerows to be implemented along the boundaries highlighted in **Appendix 10-D: Figure 5 of the ES [EN010131/APP/3.3]**. These hedgerows will be infilled and maintained to a height of at least 3 m and will screen all views of the Scheme where glint and glare is possible at the identified receptors. These measures will be secured through the **Outline LEMP [EN010131/APP/7.10]**. Following this additional mitigation, the impacts of glint and glare on residential and road receptors reduce and this results in low and negligible impacts respectively that are not significant.

Ground Conditions

- 7.15.14 **Chapter 15: Other Environmental Topics of the ES [EN010131/APP/3.1]** assesses hazards to controlled waters, hazards to human health, and the environment. A Phase 1 Preliminary Risk Assessment (PRA) has been prepared, covering land within the Solar and Energy Storage Park boundary, and is available in **ES Volume 3: Appendix 15-E [EN010131/APP/3.3]**.
- 7.15.15 The risk to human health and controlled waters is considered acceptable. Therefore, the Scheme is not considered to pose an unacceptable risk to human health or the environment either during construction, during operation or decommissioning. Mitigation to prevent surface runoff, discharge into watercourses and dust generation will form part of the construction phase obligations and requirements.

Telecommunications, Television Reception and Utilities

- 7.15.16 **Chapter 15: Other Environmental Topics of the ES [EN010131/APP/3.1]** also evaluates the effects of the Scheme on telecommunication, infrastructure, television reception and existing utilities. The assessment concludes that the Scheme is unlikely to interfere with telecommunications infrastructure and television reception, and therefore no effects are anticipated in the construction, operation and decommissioning phases. The **draft DCO [EN010131/APP/6.1]** includes protective provisions for the protection of telecommunications.
- 7.15.17 In relation to utilities, avoidance measures are included as part of the embedded mitigation for the Scheme. These include locating the Scheme outside of utilities protection zones; the use of ground penetrating radar before excavation to identify any unknown utilities; and consultation and agreement of construction/demobilisation methods prior to works commencing. These

measures, along with those listed within the **Framework CEMP [EN010131/APP/7.3]**, would reduce the likelihood of effects on utilities during construction.

7.15.18 In addition, in advance of construction, the Applicant will liaise with all utility providers with assets in the area with regard to construction timelines, construction activities, proximity to assets and the construction planning and management measures that will be in place to ensure no impact to utilities. No adverse effects are expected during construction.

Waste and Recycling

7.15.19 **Section 15.8 of Chapter 15: Other Environmental Topics of the ES [EN010131/APP/3.1]** assesses the impacts of the Scheme in relation to waste and recycling. It states that the type of waste generated during construction is likely to comprise small quantities of general, packaging and supporting infrastructure and as such no significant impacts are expected during construction. It also states that large-scale earthworks are not expected, and therefore there is not expected to be either a large surplus or shortfall of fill material requiring either export or import. A Site Waste Management Plan (SWMP) will be prepared by the contractor, and all management of waste will be in accordance with the relevant regulations and waste will be transported by licensed waste hauliers to waste management sites which hold the necessary regulatory authorisation and/or permits for those wastes consigned to them.

7.15.20 **Section 15.8 of Chapter 15: Other Environmental Topics of the ES [EN010131/APP/3.1]** states that during operation waste arisings from activities are expected to be small in quantity, and they would be managed by appropriately permitted commercial waste carriers and facilities.

7.15.21 It also states that during the anticipated 60-year operational life of the Scheme, it is expected that there will be requirement for periodic replacement of some or all of the solar and storage energy park elements. Recycling routes are generally available for these materials at present, and decades into the future, it is likely that there will be even greater opportunities for recycling. It states that a nearby company “Recycle Solar”, based in North Lincolnshire, reports that 90% of the glass and 95% of the semiconductor materials in end-of-life PV panels can be extracted for use in new PV panels. Therefore, the overall recovery rate is expected to be greater than 60% (and potentially greater than 90%), and hence effects are not significant.

Summary

7.15.22 With appropriate mitigation, impacts from the construction and decommissioning of the Scheme in relation to air quality, glint and glare, ground conditions, telecommunications, television reception and utilities, and waste and recycling are not likely to lead to significant adverse environmental effects or cumulative effects and can be controlled and minimised as far as possible to acceptable standards. The Scheme is therefore in accordance with NPS EN-1, Draft NPS EN-1, NPPF and local planning policies relating specifically to these impacts.

7.16 Cumulative Impacts

7.16.1 Paragraph 4.1.3 of NPS EN-1 states that:

7.16.2 *“In considering any proposed development, and in particular when weighing its adverse impacts against its benefits, the IPC should take into account:*

- *its potential adverse impacts, including any long-term and cumulative adverse impacts, as well as any measures to avoid, reduce or compensate for any adverse impacts.”*

7.16.3 Paragraph 4.2.1 further adds that the ES is required to provide an assessment of the likely significant effect of the proposed project on the environment, covering cumulative effects at all stages of the project. Paragraph 4.2.5 states that when considering cumulative effects:

7.16.4 *“the ES should provide information on how the effects of the applicant’s proposal would combine and interact with the effects of other development (including projects for which consent has been sought or granted, as well as those already in existence).”*

7.16.5 It also adds in paragraph 4.2.6 of NPS EN-1 that the IPC (now SoS) should consider how the accumulation and interrelationships of such developments might affect the environment, economy or community as a whole even though they might be acceptable on their own with mitigation in place.

7.16.6 **Chapters 6 to 15** of the **ES [EN010131/APP/3.1]** present an assessment of cumulative effects derived from their own shortlist of schemes, based on the shortlist of cumulative schemes presented in **ES Volume 3: Appendix 16-A [EN010131/APP/3.3]** and shown on **Figure 16-1 [EN010131/APP/3.2]**. The assessment of cumulative effects arising from the Scheme in combination with other proposed Schemes (inter-project effects) is based upon a review of current submitted planning applications, DCO application and a study of planning policy documents.

7.16.7 Given the proximity of the Scheme with West Burton and Cottam Solar Projects, Low Carbon has worked in partnership with the developer of the West Burton and Cottam projects to identify areas where all projects can collaborate to manage environmental effects. A key example of this approach is the commitment to a Shared Grid Connection Corridor as outlined in **Chapter 3: Alternatives and Design Evolution [EN010131/APP/3.1]**. Other commitments to joint mitigation are identified below:

- **Chapter 7: Cultural Heritage [EN010131/APP/3.1]** within the Shared Grid Connection Corridor, the developers have been working together to discuss a consistent approach to managing archaeological mitigation within the shared area.
- **Chapter 9: Water Environment [EN010131/APP/3.1]** joint consultation with the Environment Agency and Trent Valley Internal Drainage Board for the purpose of pre-construction permits and consents (e.g. discharge of water during installation of cable trenches) should these be required;

- **Chapter 11: Noise and Vibration and Chapter 15: Other Environmental Issues – Air Quality [EN010131/APP/3.1]** a commitment to co-ordinated monitoring, and a Joint Community Liaison Group during construction of the Shared Grid Connection Corridor
- **Chapter 12: Ecology and Nature Conservation [EN010131/APP/3.1]** for the purpose of the Shared Grid Connection Corridor, the **Framework CEMP [EN010131/APP/7.3]** includes a commitment to working together where there is overlap in surveys, pre-construction mitigation and monitoring between projects;
- **Chapter 13: Traffic and Transport [EN010131/APP/3.1]**, a Joint Construction Traffic Management Plan which is outlined in Annex E of the Framework CTMP. The Joint CTMP will include mitigation such as timing of HGV movements, staff travel routes and timings, coordination of deliveries, and shared banksmen provided at access points and PRoW; and
- A Joint Community Liaison Group which will comprise a co-ordinated approach to receipt, recording and response to shared corridor construction phase complaints and questions.

7.16.8 The Applicant has also engaged with the developers of the Tillbridge Scheme to discuss similar points, but discussions have not been as in-depth given the stage of development of the Tillbridge Scheme.

7.16.9 The sections below provide a summary of the cumulative effect of the relevant identified developments and effects within each ES chapter.

Ecology and Nature Conservation

7.16.10 The schemes identified in **Appendix 16-A of the ES [EN010131/APP/3.3]** which were considered to have the potential to interact cumulatively with the Scheme have been reviewed. It is considered that the West Burton Solar Farm Project and the Cottam Solar Farm Project have the potential to result in cumulative effects where the overall loss of arable farmland has the potential to reduce nesting and foraging habitat for Skylark. Both projects identify Skylark as requiring mitigation, therefore it is assumed that there will be no significant cumulative effects arising from the three projects because sufficient mitigation will be provided.

7.16.11 Cumulative construction, operational and decommissioning effects of the Scheme on ecology are predicted to be not significant.

Landscape and Visual Amenity

7.16.12 There is potential for cumulative construction and operational effects on landscape character and visual amenity from the addition of the Scheme with other schemes. The cumulative assessment is set out in ES Volume 3: Appendix 10-H **[EN01031/APP/3.3]**.

7.16.13 During the construction phase, there is the potential for minor adverse effects on the landscape character as a result of construction activity which is considered not significant. During operation, the Scheme and adjacent schemes will potentially introduce 4 solar farms within or partially within the

5km study area. At the County and District Landscape Character Area scale all 4 schemes will lie within the Trent Valley LCA. Although inter-visibility between the schemes will be limited and views in combination typically dominated by the closest solar farm, others are likely to be visible as a distant but discernible element in the view.

- 7.16.14 The relatively flat nature of the landform (albeit rising to the Willingham ridgeline) is such that no elevated views of the footprint of the solar farms will be obtained. Experience of them as an element influencing landscape character will typically be in sequence through repeated views from footpaths or roads. The scale of addition to the landscape of the Trent Valley LCA assuming each scheme includes mitigation through hedgerow or other planting is such that solar farms will be a notable localised element rather than a key characteristic. The Trent Valley LCA will not be defined by solar farms or become a “solar farm landscape” in which they are the defining characteristic.
- 7.16.15 There are predicted to be a small number of significant adverse cumulative effects when the Scheme is considered alongside West Burton Solar Project (moderate adverse) and when Gate Burton, West Burton Cottam and Tillbridge solar projects are considered in terms of their combined impact on the landscape (moderate adverse).

Cultural Heritage

- 7.16.16 Three schemes have been identified from ES Volume 1, Chapter 16: Cumulative Effects and Interactions [EN010131/APP/3.1] which have the potential to result in cumulative effects on heritage assets. The remaining schemes were reviewed in relation to the heritage assets identified in ES Volume 1, Chapter 7: Cultural Heritage [EN010131/APP/3.1] and no further potential for cumulative effects were identified.
- 7.16.17 The Stow Park Road Residential Development (Ref. 141141) will contribute to the impact identified on the non-designated heritage asset (MLI52472; AEC013) through additional physical impacts to the asset. The asset comprises a series of ditches and linear features which represent an Iron Age / Romano-British field system, which extend outside of the Scheme boundary towards the north-west, extending into the redline boundary of the other development. However, it is not considered that the combined impact of these projects, either individually or together in combination with the Scheme, would raise the assessed level of impact reported in this ES. Impacts on heritage assets would remain non-significant.
- 7.16.18 The proposed Cottam Solar Project and West Burton Solar Project will contribute to the impact identified in this assessment on the Grade I listed Church of St Mary at Stow (1146624) through additional development within its wider landscape setting. However, it is not considered that the combined impact of these projects, either individually or together in combination with the Scheme, would raise the assessed level of impact reported in this ES. Impacts on heritage assets would remain non-significant.

Water Environment

7.16.19 There is the potential for overlap between construction of adjacent schemes and construction of this Scheme. Thus, there is potential for short term, temporary construction related pollutants generated from both the Scheme and adjacent developments to impact on watercourses in the study area. Provided that standard and good practice mitigation is implemented on the construction sites through their respective CEMPs as is being proposed for this Scheme, the cumulative risk can be effectively managed and there would not be a significant increase in the risks to any waterbodies. As such, there would not be any significant cumulative effects anticipated during construction, operation or decommissioning of the Scheme.

Noise and Vibration

7.16.20 Based on the distances from key project components to cumulative developments, it is considered that any overlapping of construction phases between the Scheme and other developments would not result in any cumulative effects at common noise-sensitive receptors. Given the requirement for new developments to achieve operation noise standards, and the relative distance between cumulative developments and the Scheme, operational noise effects from the Scheme will remain unchanged from the residual effects.

Socio-Economics and Land Use

7.16.21 The combined effect of the construction of the cumulative developments is likely to bring considerable additional employment to the local economy. The overall cumulative effect from the generation of construction workers is likely to remain as temporary minor beneficial effect on the local economy, which is not considered significant.

7.16.22 If all the schemes are to be realised there will be considerable additional employment demand from some of the cumulative schemes. Most cumulative schemes, however, will not generate considerable operational employment due to their nature as infrastructure or utilities projects and therefore the combined effect would not be significant.

7.16.23 The overall cumulative effect from the generation of gross value added from construction is likely to remain temporary minor beneficial on the local economy, resulting in a temporary minor beneficial effect (and negligible for Scenario 2), which are both not considered significant.

7.16.24 The overall cumulative effect on PRowS is likely to remain temporary minor adverse. Therefore, there are likely to be no significant cumulative effects. No PRow that intersect the Order Limits of the Scheme are expected to be affected during the operation of adjacent schemes of West Burton and Cottam Solar Projects. Therefore, it is expected that there will be a permanent negligible effect, which is not considered significant.

Transport and Access

- 7.16.25 Any overlaps between the construction vehicle trips associated with the Scheme and other schemes are likely to be primarily confined to wider strategic routes. Other schemes are not likely to contribute to the effects on transport and access receptors (including the A156, Kexby Lane, Willingham Road, Marton Road, and the A1500 in Lincolnshire and Cottam Road, Headstead Bank, Broad Lane, Cow Pasture Lane and Town Street in Nottinghamshire) identified in this chapter and therefore the cumulative effects are not significant.
- 7.16.26 The opportunity to combine mitigation such as by consolidating trips in order to reduce the impact on local roads will be considered for the West Burton Solar Farm, Cottam Solar Farm and Tillbridge Solar schemes in order to reduce cumulative impacts during the construction phase.
- 7.16.27 During operation the traffic generated by the Scheme would be very limited so would not generate cumulative effects when considered alongside any or all of the Schemes considered in the cumulative impact assessment.

Human Health

- 7.16.28 From a non-motorised user environment perspective, changes in traffic flows have already been assessed as part of **Chapter 13: Transport and Access [EN010131/APP/3.1]** and in the assessment presented within **Chapter 15: Human Health [EN010131/APP/3.1]** and are therefore inherent as part of the assessment presented in the chapter. It is therefore concluded that the potential cumulative effects on non-motorised users during all stages of the Scheme will be the same as when assessed in isolation (not significant).
- 7.16.29 The construction phases of the Scheme and other cumulative developments would both be expected to generate employment. Despite this increase in employment opportunities, as this is anticipated to be in the construction and decommissioning phase, the overall cumulative effect is assessed to remain at temporary minor beneficial effect (not significant).

Other Environmental Topics

- 7.16.30 **Waste** - It is likely that the waste generated by the Scheme during Operation and Decommissioning would be managed by specialist regional or national facilities, and that such facilities would be developed over the operational period in response to demand generated by the UK-wide PV industry. The capacity of such facilities is not expected to be influenced by other non-solar energy projects in the surrounding area. Therefore, no cumulative waste impacts have been identified for the Scheme.
- 7.16.31 **Air Quality** - The Cottam/ West Burton projects have similarly scoped out the impact of construction vehicle emissions, but assuming each of the West Burton/ Cottam schemes have a similar number of vehicles as Gate Burton, there could potentially be a peak weekly average of 198 vehicle movements on local roads. To mitigate any potential effects, a joint CTMP will be produced in order to manage the construction traffic appropriately. If, once contractors are appointed there are likely to be more than 100 construction HGV

movements per day, which is the IAQM criteria for further assessment, then a detailed air quality assessment will be undertaken, and appropriate further mitigation identified.

7.16.32 **Glint and Glare** - It is anticipated that the cumulative developments will be designed to ensure that there will be effective screening to prevent glint and glare effects from other individually planned solar farms, and therefore cumulative effects would be unlikely.

7.16.33 **Major Accidents and Disasters** – No plans or projects identified in **ES Volume 3: Appendix 16-A [EN010131/APP/3.3]** are considered in combination to impact important Major Accidents and Disasters as identified in this assessment. Therefore, the main potential for Major Accidents and Disasters impacts during construction, operation and decommissioning of the Scheme is considered within the Scheme boundary itself.

7.16.34 **Telecommunications, Television Reception and Utilities** – The Scheme has been assessed to have no effect on telecommunication, television, or utilities. It is expected that the other solar developments included within the cumulative schemes shortlist would also have no effect on telecommunications and television reception and would adhere to the same mitigation as set out above to reduce the risk of damaging utilities.

Summary

7.16.35 The Scheme has assessed the cumulative impacts of the schemes shown in Figure 3-1a of this PDAS and its own impacts, in accordance with paragraphs 4.1.3, 4.21 and 4.26 of NPS EN-1. There will be a limited number of cumulative landscape and visual effects arising from the Scheme when considered alongside those generated by the West Burton, Cottam and Tillbridge Schemes. It is concluded within **Chapter 16: Cumulative Effects and Interactions of the ES [EN010131/APP/3.1]** that there will be no other significant cumulative effects.

8. Conclusion and Planning Balance

8.1 Decision-Making on the Gate Burton Energy Park Application

- 8.1.1 The Scheme will be determined pursuant to section 105 of the PA 2008⁷. Applications determined under section 105 require the SoS to have regard to: (a) any local impact report; (b) matters prescribed in relation to development of the description to which the application relates; and (c) any other matters which the Secretary of State considers to be both important and relevant. This PDAS provides evidence of the Scheme's compliance with the relevant prescribed matters and matters the Applicant considers are likely to be important and relevant, with a particular focus on relevant planning policy. The aim of the PDAS is to inform the Secretary of State's decision as to whether to grant a DCO for the Scheme.
- 8.1.2 There are no specific references to solar NSIPs in NPS EN-1, EN-3 and EN-5, but these documents were written to guide decision-making on renewable energy NSIPs and their grid connections. Unlike local policy documents, they have been produced to guide decision-making on projects consented through the Planning Act 2008 and projects of a nationally significant scale. Therefore, the policies within these documents are considered to be important and relevant to decision making on the Scheme and significant weight should be given to the Scheme's compliance with these policies (see Appendix A).
- 8.1.3 Once the Draft Energy NPSs are designated (likely Q2 of 2023), new applications for solar NSIPs (subject to any transitional provisions) will be required to be determined in accordance with the designated versions of Draft NPS EN-1, EN-3 and, for the grid connection, EN-5. It is therefore also expected that the SoS will consider the Draft NPSs as important and relevant matters in their decision. The Draft NPSs have been prepared in light of up-to-date government policy and commitments relating to energy and decarbonisation, particularly the British Energy Security Strategy (2022). Draft NPS EN-1 and EN-3 have also been prepared specifically to guide decision-making on solar NSIPs, unlike the adopted NPSs. The policy within these documents is therefore considered highly relevant and important and substantial weight should be given to the Scheme's compliance with these policies (see Appendix A).
- 8.1.4 Less weight should be applied to the National Planning Policy Framework and Local Planning Policy due to their focus on guiding decisions on applications submitted through the Town and Country Planning Act 1990, and projects of a local or regional scale. However, some policies are still considered important and relevant. Compliance with policies at a local level should also be given some weight (see Appendix B).

⁷ In theory Application could be determined under Section 104 if either a/ the revised energy NPSs are designated before the Application is accepted; or b/ the revised energy NPSs are designated after acceptance, but with amendments to the transitional arrangements (currently set out in Section 1.6 of draft NPS EN-1) that mean they take effect for applications after they have been accepted. Both these scenarios are considered highly unlikely

8.2 Benefits of the Scheme

- 8.2.1 The Energy NPSs, Draft Energy NPSs, and other national energy policy documents set out the Government's aims to provide secure and affordable energy supplies whilst decarbonising the energy system. This is in order to enable the UK to achieve its legally binding commitment to reduce carbon emissions and achieve net zero carbon emissions by 2050; as well as provide a resilient and low-cost electricity network for the future. The Government recognises that the need to deliver these aims and commitments is immediate and therefore renewable energy NSIPs, including large scale solar projects, need to be delivered urgently.
- 8.2.2 The Scheme will make a significant contribution to these policy aims, providing an estimate 26.99TWh of low carbon electricity over its lifetime; and providing resilience, security and affordability of supplies due to its large scale and proposed integration of BESS. It will supply electricity for the equivalent of approximately 155,000 households. Solar development is rapid to develop and with the grid connection already secured, the Scheme could be operational by 2028. This is important in the context of the need for an urgent transition to renewable energy.
- 8.2.3 The overall greenhouse gas impact of the Scheme is beneficial and significant. Combining lifetime generation figures and operational emissions figures gives an operational carbon intensity value of 17.98 gCO₂e/kWh for the Scheme, which is 95% lower than that of a gas-fired generating facility. Each kilowatt hour of electricity generated by the Scheme would emit 336g CO₂e less than if it was generated by a combined cycle gas turbine facility. Over 60 years this would result in a carbon reduction relative to a gas-fired facility of over 8 million tonnes CO₂e.
- 8.2.4 The Scheme will therefore be a critical part of the national portfolio of renewable energy generation that is required to decarbonise its energy supply quickly whilst providing security and affordability to the energy supply. It is clear that there is a compelling case for the need for the Scheme and that it will deliver national economic and social benefits in line with the Government's wider objectives of delivering sustainable development.
- 8.2.5 The Scheme will also deliver other more localised economic, social and environmental benefits. The Scheme could deliver biodiversity net gain of approximately 70.95% for area-based habitats, 37.24% for hedgerows and a net gain of 14.22% for rivers, providing significant additional benefits. The measures proposed for ecological mitigation and enhancement as part of the Scheme ensure that there will be no significant adverse effects on ecology, but there will be significant beneficial effects to broad-leaved woodland, hedgerows and breeding birds.
- 8.2.6 The Scheme will also deliver employment benefits, including on average 363 full time equivalent jobs created during the construction period of the Scheme and 14 permanent full time equivalent positions during Scheme operation. The Scheme will generate more employment in the operation of the Scheme than is currently provided by the existing agricultural uses.

- 8.2.7 The Applicant has also prepared an **Outline Skills, Supply Chain and Employment Plan (OSSCEP) [EN010131/APP/7.7]** to identify potential opportunities for activities relating to Skills, Supply Chain and Employment (SSCE) which the Applicant could take forward post-consent. These activities will help local individuals and businesses access the SSCE benefits associated with the Scheme. The OSSCEP identifies means for publicising SSCE opportunities and for joint working with key partners going forward. It also provides a framework for future delivery.
- 8.2.8 Analysis of planning policy compliance demonstrates that the need for the Scheme is supported by planning policy and other national energy and environmental policy and that the Scheme addresses relevant national and local planning policies through its design, avoiding and minimising adverse impacts where possible.

8.3 Adverse Impacts of the Scheme

- 8.3.1 With the mitigation proposed, the ES demonstrates that the Scheme will not have any significant adverse residual effects in relation:

- Landscape character areas or types identified at the regional, county or district level;
- National or local designated landscapes;
- Designated and non-designated heritage assets and their setting;
- Biodiversity sites or protected species or habitats;
- Flood risk and water quality;
- Noise and vibration;
- Agricultural land;
- Transport and access;
- Air quality;
- Glint and glare;
- Ground conditions;
- Major accidents and disasters
- Telecommunications, television receptors or utilities;
- Waste; or
- Health.

- 8.3.2 The large number of topics where no significant effects are predicted is a result of significant work in the development of the Scheme; with regard had to consultation responses received and action taken to develop the Scheme layout and design in response to comments and to reduce environmental effects. On heritage, for example, this has meant the Applicant has gone from a position at statutory consultation where Historic England had 'serious concerns' about the impact on Gate Burton Hall and associated assets and Heynings Priory to a position where Historic England has no concerns (see Statement of Common Ground with Historic England **[EN010131/APP/4.3D]**). This has been achieved through a reduction in the size of the Scheme to remove panels in areas close to these assets, careful layout design to locate larger elements of the Scheme and internal access roads away from sensitive views and landscape design.

8.3.3 The Applicant has also worked closely with the developers of the nearby Cottam and West Burton Solar applications to minimise cumulative impacts. In particular, a shared grid corridor has been agreed across all three projects to reduce the cumulative impacts associated with the grid connection. More recently similar discussions have been held with the developers of Tillbridge Solar. The developers have also worked together to coordinate consultation events, including signposting to the other projects at each event to minimise the risk of confusion between projects. Cumulative effects have been considered throughout development of the Gate Burton Scheme and opportunities taken to reduce them where possible. Section 16.5 of the Cumulative Impacts chapter of the ES provides a summary of all actions taken to share mitigation and approaches across the Gate Burton, West Burton and Cottam solar projects. A small number of moderate adverse (significant) landscape and visual effects are expected between the Gate Burton Energy Park and the three mentioned solar NSIPs and other projects identified. No other significant adverse cumulative effects are anticipated.

8.3.4 The Scheme will result in residual significant adverse effects upon landscape and visual receptors. These effects are limited in terms of the number of receptors affected and the scale of effects considering the scale of the project. The significant effects will only occur while the Scheme is under construction, operational or being decommissioned and will disappear when the Scheme is decommissioned. The Scheme is partially located with an Area of Great Landscape Value, although the effect upon it would be minor, so would not be a significant effect. The significant adverse effects include effects on:

- Two local landscape character areas where the Scheme is situated across most of the character areas during all stages of development and a third that will be affected during construction and decommissioning;
- A number of visual receptors including some of the closest residential properties, road users (including public transport) and users of one section of Public Right of Way LL|Knai|44/2.

8.3.5 With regard to landscape and visual amenity the Applicant has carefully designed the Scheme to ensure landscape and visual impacts are minimised through sensitive siting of the largest Scheme components in the most well screened areas of the Order limits and a green infrastructure led landscape and ecological design. The effects above have therefore been mitigated and reduced where possible.

8.3.6 Chapter 10: Landscape and Visual Amenity of the ES states in paragraph 10.11.5 puts the above effects into context by stating that [EN010131/APP/3.1]:

8.3.7 *the LVIA indicates that:*

- *there are relatively few sensitive receptors nearby, few PRow across the site, few residents with views, and no nationally designated landscapes;*
- *a lot of the site is not openly visible due to the flat landscape and hedgerows/ trees screening views;*

- *more extensive views from higher land are distant and encompass a wide panorama in which the Scheme would not dominate;*
- *embedded mitigation and use of stand-offs to more sensitive receptors is effective in reducing and/or mitigating effects.*
- *significant residual effects are predominantly not at the highest level of significance and include only two residential locations with a moderate significant effect by Year 15.'*

- 8.3.8 National policy acknowledges that some landscape and visual impacts are unavoidable for major infrastructure projects, including solar developments and that these impacts do not indicate that a project does not comply with policy or that an application should be refused.
- 8.3.9 With relevance to the minor effect on the Area of Great Landscape Value, NPS EN-1 (5.9.13) states that: *'Outside nationally designated areas, there are local landscapes that may be highly valued locally and protected by local designation. Where a local development document in England or a local development plan in Wales has policies based on landscape character assessment, these should be paid particular attention. However, local landscape designations should not be used in themselves to refuse consent, as this may unduly restrict acceptable development.'* Draft NPS EN-1 paragraph 5.10.11 contains nearly identical wording.
- 8.3.10 With relevance to the residual significant landscape and visual effects NPS EN-1 (5.9.15) and Draft NPS EN-1 (5.10.34)⁸ states:
- 8.3.11 *'The scale of such projects means that they will often be visible within many miles of the site of the proposed infrastructure. The IPC should judge whether any adverse impact on the landscape would be so damaging that it is not offset by the benefits (including need) of the project.'*
- 8.3.12 With relevance to the residual visual effects NPS EN-1 (5.9.18) and Draft NPS EN-1 (5.10.12 to 5.10.13)⁹ state:
- 8.3.13 *'All proposed energy infrastructure is likely to have visual effects for many receptors around proposed sites. The IPC will have to judge whether the visual effects on sensitive receptors, such as local residents, and other receptors, such as visitors to the local area, outweigh the benefits of the project.'*
- 8.3.14 Therefore, given that the design has maximised landscape and visual mitigation and enhancement in design; the residual effects are localised and will be reversed following decommissioning; and that NPS EN-1 and Draft NPS EN-1 acknowledge that adverse effects are likely given the scale of energy NSIPs, the Scheme is considered to be compliant with landscape policies that are important and relevant to decision-making. Local policies on landscape and visual impact were not written to guide decision-making on NSIP scale solar projects, which by their nature are likely to have unavoidable landscape and visual effects and require a rural location. Therefore, the relevance of local landscape and visual impact policies in assessing the Application is reduced.

⁸ In the wording in Draft NPS EN-1 'IPC' is substituted for 'Secretary of State' but the wording otherwise remains the same.

⁹ In the wording in Draft NPS EN-1 'IPC' is substituted for 'Secretary of State' but the wording otherwise remains the same.

8.4 Best and Most Versatile Agricultural Land

- 8.4.1 The impact of the Scheme on agricultural land has been an area of great interest to local planning authorities and the local community so are summarised here, although no significant adverse effects are predicted in the ES.
- 8.4.2 The majority of the Solar and Energy Storage Park (approximately 88%) is not BMV agricultural land. The Applicant has sought to minimise the amount of BMV land included within the Order limits and reduce the impacts of development upon these areas; seeking to utilise areas of poorer quality land where possible, particularly for permanent components of the Scheme. The inclusion of some BMV agricultural land within the Order Limits is justified by other sustainability considerations, including the need to maximise the amount of low carbon electricity generated by the Scheme and the particular opportunities and constraints offered by some of the areas of BMV land. The impacts on BMV land have been minimised by the nature of the Scheme and its design, and the impact on the vast majority of BMV land is temporary and reversible. Some agricultural use can also continue on most of the BMV land contained within the Order limits. Within the Grid Connection Corridor the land can be returned to agricultural use after installation of the underground cable so there will be no long-term impacts on BMV land in this area.
- 8.4.3 The permanent loss of BMV land would be approximately 2 hectares, which is not significant. The benefits of the Scheme outweigh the reversible loss of the agricultural use of the BMV land, particularly noting that Draft NPS EN-3 (paragraph 3.10.14) states that land type should not be the predominating factor in determining the suitability of a site for NSIP scale solar development.
- 8.4.4 It should be noted that the use of any other land in the area around the Cottam Substation for a comparably sized scheme is likely to result in a similar impact on agricultural land, or potentially an increased impact on BMV land if the Scheme were located to the south of the Substation on Grade 2 land.

8.5 Conclusion and Planning Balance

- 8.5.1 Every aspect of the Scheme has been influenced by consultation with local planning authorities, key stakeholders and the community. It is this engagement that has assisted in developing a Scheme with few adverse impacts and significant beneficial impacts.
- 8.5.2 As described in Section 7 of this PDAS, all adverse impacts have been minimised where possible, through careful and sensitive design and detailed mitigation strategies. When considered against the NPS and NPPF, the Scheme accords with relevant policies, and with regard to specific policy tests, the national and local benefits of the Scheme are considered on balance to outweigh its adverse impacts. The Scheme is also considered to be broadly consistent with relevant local planning policy and accords with local policies DM10 of the BCS, Policy S14 of CLLP and Policy ST15 Draft BLP which

concern renewable and low carbon energy schemes. Therefore, it is considered that development consent for the Scheme should be granted.

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Appendices

Appendix A: National Policy Accordance Table

Overarching National Policy Statement for Energy (EN-1), July 2011

The Energy National Policy Statements were designated by the then Secretary of State for Energy and Climate Change on 19 July 2011. EN-1 is the overarching national policy document setting out policies that apply to all energy developments within its scope, with more project specific policies provided in the other Energy NPSs, EN-2, EN-3, EN-4, EN-5 and EN-6. EN-1 sets out the national policy for the energy infrastructure as defined in Section 1.3 of EN-1, which includes electricity generating stations with a capacity of more than 50 megawatts onshore, including generation from fossil fuels, wind, biomass, waste and nuclear. EN-1 does not mention solar development so solar development is not within the scope of the NPS. However, as a designated national policy document, providing policy guidance for NSIPs over 50 MW, including renewables, it is considered likely to be an important and relevant matter in decision making on the Gate Burton Energy Park DCO.

The table below considers the extent to which the Scheme complies with policies in EN-1. **The ‘compliance with policy’ column demonstrates that the Scheme complies with all relevant policies in EN-1**, with the Scheme supporting the delivery of renewable, affordable, predictable electricity generation in line with the main aims of the document.

Paragraph No.	Policy Requirement	Compliance with Policy
Need for the Development		
Paragraph 2.2.6	The UK needs to wean itself off such a high carbon energy mix: to reduce greenhouse gas emissions, and to improve the security, availability and affordability of energy through diversification. Under some of the illustrative 2050 pathways, electricity generation would need to be virtually emission-free.	The Statement of Need [EN010131/APP/2.1] and Section 2 of the PDAS explain that the Scheme is a substantial infrastructure asset, capable of delivering large amounts of secure, affordable, low-carbon electricity to local and national networks. Chapter 6: Climate Change of the ES [EN010131/CPP/3.1] presents a lifecycle greenhouse gas (GHG) impact assessment over the lifetime of the Scheme. It concludes that over its 60 year operational lifetime the Scheme will produce approximately 26.99 TWh of electricity, with an average operational carbon intensity value of 17.98 grams of carbon dioxide equivalent per kWh (gCO ₂ e/kWh). This demonstrates the Scheme’s very low carbon attributes
Paragraph 2.2.20	The 2050 pathways show that the need to electrify large parts of the industrial and domestic heat and	

Paragraph No.	Policy Requirement	Compliance with Policy
Paragraph 2.2.22	<p>transport sectors could double demand for electricity over the next forty years. It makes sense to switch to electricity where practical, as electricity can be used for a wide range of activities (often with better efficiency than other fuels) and can, to a large extent, be scaled up to meet demand. To meet emissions targets, the electricity being consumed will need to be almost exclusively from low carbon sources. Contrast this with the first quarter of 2011, when around 75% of our electricity was supplied by burning gas and coal.</p>	<p>compared to other non-renewable forms of electricity generation, providing an overall major beneficial impact in relation to the UK meeting its carbon reduction targets.</p>
Paragraph 3.2.3	<p>... the Government considers that, without significant amounts of new large-scale energy infrastructure, the objectives of its energy and climate change policy cannot be fulfilled. However, as noted in Section 1.7, it will not be possible to develop the necessary amounts of such infrastructure without some significant residual adverse impacts. This Part also shows why the Government considers that the need for such infrastructure will often be urgent. The IPC should therefore give substantial weight to considerations of need. The weight which is attributed to considerations of need in any given case should be proportionate to the anticipated extent of a project's actual contribution to satisfying the need for a particular type of infrastructure.</p>	<p>Whilst EN-1 did not explicitly consider solar development, solar projects can make a significant contribution to meeting the urgent need for large-scale, low carbon NSIPs. In the Applicant's view, substantial weight is to be placed on the need for the development in line with paragraph 3.2.3 because the need is demonstrated in the Statement of Need [EN010131/APP/2.1] and because solar developments can contribute significantly to requirements of climate policy both in 2011 and more recently. Without the Scheme, a significant and vital opportunity to develop a large-scale low-carbon generation scheme will have been passed over, increasing materially the risk that future Carbon Budgets and Net Zero 2050 will not be achieved.</p>
Paragraph 3.3.15	<p>In order to secure energy supplies that enable us to meet our obligations for 2050, there is an urgent need for new (and particularly low carbon) energy NSIPs to be brought forward as soon as possible, and certainly in the next 10 to 15 years, given the crucial role of electricity as the UK decarbonises its energy sector.</p>	<p>The Scheme will make a sizeable contribution to meeting the Government's decarbonisation commitments, in direct accordance with this policy.</p> <p>In line with paragraph 3.3.15 of EN-1, the Scheme can directly respond to the urgent need to deliver a large amount of renewable generation capacity quickly. Subject to obtaining the necessary consents, construction is anticipated to commence in Q1 2025 and be completed ready for operation in Q1 2028. The Scheme will quickly deliver significant amounts of low carbon power. Solar is relatively quick to construct compared to other technologies which have longer construction timeframes or have potentially not yet been proven at scale.</p>
Paragraph 3.4.3	<p>... Future large-scale renewable energy generation is likely to come from the following sources: Onshore Wind... Offshore Wind... Biomass...Energy from Waste... and Wave and Tidal.</p>	<p>In 2011 ground mounted solar developments tended to be smaller in scale and so it was not anticipated that solar projects would be developed on the NSIP (50MW+) scale. For this reason solar projects were not listed in the designated NPS EN-1 as a large-scale renewable energy source. The solar market has changed dramatically since 2011 with the technology becoming cheaper and being deployed at scale. National policy now recognises the</p>

Paragraph No. Policy Requirement

Compliance with Policy

major contribution that solar can make to our energy mix. For example, this is recognised in:

- **Net Zero: Opportunities for the Power Sector (2020):** Where in NIC recommends that the generation mix of up to around 90% renewables is required to meet the target and that across all scenarios significant solar, onshore wind and offshore wind would need to be installed. The report estimates that between 129-237 GW of renewable capacity would need to be in operation by 2050, including 56-121 GW of solar.
- **Energy White Paper: Powering our Net Zero Future (2020)** which states that a ‘*low-cost, net zero consistent system is likely to be composed predominantly of wind and solar*’
- **British Energy Security Strategy (2022)** which states that ‘*With the sun providing enough daily energy to power the world 10,000 times over, solar power is a globally abundant resource. There is currently 14GW of solar capacity in the UK split between large scale projects to smaller scale rooftop solar. The cost of solar has fallen by around 85% over the past decade and can be installed in just one day on a domestic roof. We expect a five-fold increase in deployment by 2035.*’

The weight applied to paragraph 3.4.3 is therefore considered to be minimal given that it does not reflect the current commercial realities of solar development or current Government policy.

Paragraph 4.1.2 Given the level and urgency of need for infrastructure of the types covered by the energy NPSs set out in Part 3 of this NPS, the IPC should start with a presumption in favour of granting consent to applications for energy NSIPs. That presumption applies unless any more specific and relevant policies set out in the relevant NPSs clearly indicate that consent should be refused. The presumption is also subject to the provisions of the Planning Act 2008 referred to at paragraph 1.1.2 of this NPS.

The Applicant notes this policy and considers that the Scheme should be treated as if presumption in favour of granting consent applies, as more recent planning and energy policies set out that solar generation is expected to comprise an import part of an energy mix required to meet objectives and commitments for the energy system and climate change. For example, Draft NPS EN-1 states:

3.3.44: “*Known technologies that are included within the scope of this NPS are: Offshore Wind (including floating wind), Solar PV, Wave, Tidal Range, Tidal Stream, Pumped Hydro, Energy from Waste (including ACTs) with or without CCS, Biomass with or without CCS, Natural Gas with or without CCS, low carbon hydrogen, large-scale nuclear, Small Modular Reactors, Advanced*

Paragraph No. Policy Requirement

Compliance with Policy

Modular Reactors, and fusion power plants. The need for all these types of infrastructure is established by this NPS and is urgent.”

3.3.21: *“Our analysis shows that a secure, reliable, affordable, net zero consistent system in 2050 is likely to be composed predominantly of wind and solar.”*

Requirements

Paragraph 4.1.8	The IPC may take into account any development consent obligations that an applicant agrees with local authorities. These must be relevant to planning, necessary to make the proposed development acceptable in planning terms, directly related to the proposed development, fairly and reasonably related in scale and kind to the proposed development, and reasonable in all other respects.	The Applicant includes draft Requirements in Schedule 2 of the Draft DCO [EN010131/APP/6.1] .
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Ecology

Paragraph 4.3.1	The applicant should seek the advice of Natural England and/or the Countryside Council for Wales and provide the IPC with such information as it may reasonably require to determine whether an Appropriate Assessment is required.	A Habitats Regulations Assessment [EN010131/APP/7.2] . has been submitted alongside the Application, it concludes there are no likely significant effects on any European site from the Scheme alone or in-combination with any other plans or projects. Natural England has been consulted throughout the Scheme development, please see Statement of Common Ground for further detail [EN010131/APP/4.3C] .
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Alternatives

Paragraph 4.4.1	As in any planning case, the relevance or otherwise to the decision making process of the existence (or alleged existence) of alternatives to the proposed development is in the first instance a matter of law, detailed guidance on which falls outside the scope of this NPS. From a policy perspective this NPS does not contain any	There is no general requirement from a policy perspective to consider alternatives or to establish whether the Scheme represents the ‘best option’. The PDAS sets out how the Scheme accords with policies and legislation where consideration of alternatives may be relevant, such as flood risk and
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Paragraph No.	Policy Requirement	Compliance with Policy
Paragraph 4.4.2	<p>general requirement to consider alternatives or to establish whether the proposed project represents the best option.</p> <p>However:</p> <ul style="list-style-type: none"> • applicants are obliged to include in their ES, as a matter of fact, information about the main alternatives they have studied. This should include an indication of the main reasons for the applicant's choice, taking into account the environmental, social and economic effects and including, • where relevant, technical and commercial feasibility; in some circumstances there are specific legislative requirements, notably under the Habitats Directive, for the IPC to consider alternatives. These should also be identified in the ES by the applicant; and <p>in some circumstances, the relevant energy NPSs may impose a policy requirement to consider alternatives (as this NPS does in Sections 5.3, 5.7 and 5.9).</p>	<p>explains how the Scheme has taken account of the locational criteria for solar farms that is set out in relevant policies.</p> <p>In addition, Chapter 3: Alternatives and Design Evolution of the ES [EN010131/APP/3.1] sets out information in relation to alternatives that is required by the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 and, as a matter of fact, includes information about the main alternatives studied.</p> <p>Due to the location of the development and limited impacts, there is no potential for impacts to sites protected under the Habitats Directive, no requirement to consider alternatives due to biodiversity effects (there are no likely significant adverse effects on biodiversity) and no potential for development within nationally designated landscapes (the Scheme is not within or in close proximity to any nationally designated landscapes).</p> <p>On flood risk, the grid connection point is in the flood zone and a key aspect of site selection was selecting a site close to the grid connection but outside Flood Zones 2 and 3. Alternatives closer to the grid connection point would have been in areas of higher flood risk. Given that the grid connection point is in the flood zone, the Grid Connection Corridor also crosses it and there are no alternatives that would avoid this. On the site itself areas around small watercourses have elevated flood risk so a sequential approach has been applied at the site level to minimise risk by directing the most vulnerable uses to areas of lowest flood risk. A Flood Risk Assessment is provided with the Application in Appendix 9D of the Environmental Statement [EN010131/APP/3.3] and provides further information on how flood risk is managed. Therefore, the Application satisfies all requirements to consider alternatives related to flood risk.</p>
Paragraph 4.4.3	<p>Where there is a policy or legal requirement to consider alternatives the applicant should describe the alternatives considered in compliance with these requirements. Given the level and urgency of need for new energy infrastructure, the IPC should, subject to any relevant legal requirements (e.g. under the Habitats Directive) which</p>	<p>The alternatives considered in compliance with requirements are set out in Chapter 3: Alternatives and Design of the ES [EN010131/APP/3.1] and Chapter 4 of this PDAS.</p>

Paragraph No. Policy Requirement

Compliance with Policy

indicate otherwise, be guided by the following principles when deciding what weight should be given to alternatives:

- the consideration of alternatives in order to comply with policy requirements should be carried out in a proportionate manner;
- the IPC should be guided in considering alternative proposals by whether there is a realistic prospect of the alternative delivering the same infrastructure capacity (including energy security and climate change benefits) in the same timescale as the proposed development; where (as in the case of renewables) legislation imposes a specific quantitative target for particular technologies... the IPC should not reject an application for development on one site simply because fewer adverse impacts would result from developing similar infrastructure on another suitable site, and it should have regard as appropriate to the possibility that all suitable sites for energy infrastructure of the type proposed may be needed for future proposals;
- alternatives not among the main alternatives studied by the applicant (as reflected in the ES) should only be considered to the extent that the IPC thinks they are both important and relevant to its decision;
- as the IPC must decide an application in accordance with the relevant NPS (subject to the exceptions set out in the Planning Act 2008), if the IPC concludes that a decision to grant consent to a hypothetical alternative proposal would not be in accordance with the policies set out in the relevant NPS, the existence of that alternative is unlikely to be important and relevant to the IPC's decision;
- alternative proposals which mean the necessary development could not proceed, for example because the alternative proposals are not commercially viable or alternative proposals for sites would not be physically suitable, can be excluded on the grounds that they are not important and relevant to the IPC's decision;

The Applicant considers that the approach taken to the consideration of alternatives is proportionate.

Paragraph 4.4.3 emphasises that: *'the IPC should not reject an application for development on one site simply because fewer adverse impacts would result from developing similar infrastructure on another suitable site, and it should have regard as appropriate to the possibility that all suitable sites for energy infrastructure of the type proposed may be needed for future proposals.'*

This is an important paragraph. It means that not only is there no explicit requirement to consider alternative sites (outside the policy and legislative requirements discussed above) but that even if an alternative site were identified and would result in fewer adverse effects, this would not indicate that the application should be refused. Indeed, those alternative sites would be more accurately described as additional sites than alternatives as all suitable sites may be needed. In this context, there would be little merit in identifying and comparing the effects of different sites in the area surrounding Gate Burton. Indeed, there are clearly at least three potential 'additional' sites in the area and it is possible that all may be required to meet the national energy and climate change targets.

The Applicant is not aware of any alternatives not studied by the Applicant that would be important and relevant to decision making.

Paragraph No.	Policy Requirement	Compliance with Policy
	<ul style="list-style-type: none"> - alternative proposals which are vague or inchoate can be excluded on the grounds that they are not important and relevant to the IPC's decision; and - it is intended that potential alternatives to a proposed development should, wherever possible, be identified before an application is made to the IPC in respect of it (so as to allow appropriate consultation and the development of a suitable evidence base in relation to any alternatives which are particularly relevant). Therefore where an alternative is first put forward by a third party after an application has been made, the IPC may place the onus on the person proposing the alternative to provide the evidence for its suitability as such and the IPC should not necessarily expect the applicant to have assessed it. 	

Design

Paragraph 4.5.1	<p>Applying “good design” to energy projects should produce sustainable infrastructure sensitive to place, efficient in the use of natural resources and energy used in their construction and operation, matched by an appearance that demonstrates good aesthetic as far as possible. It is acknowledged, however that the nature of much energy infrastructure development will often limit the extent to which it can contribute to the enhancement of the quality of the area.</p>	<p>As detailed in Section 4 of this PDAS the Scheme has been subject to a detailed and sensitive iterative design process. The process of design evolution has been informed by ongoing environmental assessments, engineering and design considerations, as well as engagement with stakeholders. This has taken account of the context and features of the land within the Order limits, nearby sensitive receptors and assets, consultation responses and information emerging from environmental surveys to develop a good design that balances the need to maximise the energy generation, with the avoidance and mitigation of impacts, and provision of environmental and other enhancements. The Outline Design Principles [EN010131/APP/2.3] secure elements of good design and ensure they are implemented.</p>
Paragraph 4.5.3	<p>... the IPC needs to be satisfied that energy infrastructure developments are sustainable and, having regard to regulatory and other constraints, are as attractive, durable and adaptable (including taking account of natural hazards such as flooding) as they can be.</p>	<p>As detailed above, the Scheme adheres to these principles as far as practicable. Whilst the appearance of solar panels is largely set by their function, the site layout, landscaping and access design have all been designed to reflect good design principles.</p>

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	<p>In so doing, the IPC should satisfy itself that the applicant has taken into account both functionality (including fitness for purpose and sustainability) and aesthetics (including its contribution to the quality of the area in which it would be located) as far as possible. Whilst the applicant may not have any or very limited choice in the physical appearance of some energy infrastructure, there may be opportunities for the applicant to demonstrate good design in terms of siting relative to existing landscape character, landform and vegetation. Furthermore, the design and sensitive use of materials in any associated development such as electricity substations will assist in ensuring that such development contributes to the quality of the area.</p>	
Paragraph 4.5.4	<p>For the IPC to consider the proposal for a project, applicants should be able to demonstrate in their application documents how the design process was conducted and how the proposed design evolved. Where a number of different designs were considered, applicants should set out the reasons why the favoured choice has been selected. In considering applications the IPC should take into account the ultimate purpose of the infrastructure and bear in mind the operational, safety and security requirements which the design has to satisfy.</p>	<p>See Section 4 of this PDAS and Chapter 3: Alternatives and Design Evolution of the ES [EN010131/APP/3.1].</p>
Paragraph 4.5.5	<p>Applicants and the IPC should consider taking independent professional advice on the design aspects of a proposal. In particular, Design Council CABE can be asked to provide design review for nationally significant infrastructure projects and applicants are encouraged to use this service.</p>	<p>The Applicant has engaged extensively with local authorities, key stakeholders and the community in the development of the design, through meetings, correspondence and a site visit, including with local authorities on design principles associated with landscape, ecology and heritage.</p>

Climate Change

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Paragraph 4.8.4	In certain circumstances, measures implemented to ensure a scheme can adapt to climate change may give rise to additional impacts, for example as a result of protecting against flood risk, there may be consequential impacts on coastal change (see Section 5.5).	No additional impacts have been identified as a result of the mitigation measures set out in Chapter 6 of the ES.
Paragraph 4.8.5	New energy infrastructure will typically be a long-term investment and will need to remain operational over many decades, in the face of a changing climate. Consequently, applicants must consider the impacts of climate change when planning the location, design, build, operation and, where appropriate, decommissioning of new energy infrastructure. The ES should set out how the proposal will take account of the projected impacts of climate change. While not required by the EIA Directive, this information will be needed by the IPC.	<p>As outlined in Chapter 6: Climate Change of the ES [EN010131/APP/3.1], the effects of climate change have been taken into account in the design of the Scheme, and when considering how it will be constructed, operated and decommissioned decommissioning. This includes:</p> <ul style="list-style-type: none"> - The design of drainage systems will ensure that there will be no significant increases in flood risk downstream during storms up to and including the 1 in 100 (1%) annual probability design flood, with an allowance of 40% for climate change; - Health and safety plans developed for construction and decommissioning activities will be required to account for potential climate change impacts on workers, such as flooding and heatwaves; and - Adaptation measures to reduce the effect of projected temperature increases on electrical equipment over the course of the Scheme's design life have been taken into account. Inverters (PV and BESS) will have a cooling system installed to control the temperature and allow the inverters to operate efficiently in warmer conditions. The PV modules and transformers have a wide range of acceptable operating temperatures, and it has been determined that increasing temperatures will not adversely affect their operation. <p>A Decommissioning Environmental Management Plan (DEMP) (taking account of climate change risks at the time) will be prepared prior to decommissioning. A Framework DEMP [EN010131/APP/7.5] is provided as part of the Application.</p>
Paragraph 4.8.6	The IPC should be satisfied that applicants for new energy infrastructure have taken into account the potential impacts of climate change using the latest UK Climate Projections available at the time the ES was prepared to ensure they have identified	As stated in Chapter 6: Climate Change of the ES [EN010131/APP.3.1] , UKCP18 climate projections have been used to identify potential future climate change impacts on the Scheme. Future climate change impacts are reviewed based on the UKCP18 projections and have been taken into account

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	<p>appropriate mitigation or adaptation measures. This should cover the estimated lifetime of the new infrastructure. Should a new set of UK Climate Projections become available after the preparation of the ES, the IPC should consider whether they need to request further information from the applicant.</p>	<p>in the design of the Scheme. Mitigation and adaptation measures have considered the full lifetime of the Scheme.</p>
Paragraph 4.8.7	<p>Applicants should apply as a minimum, the emissions scenario that the Independent Committee on Climate Change suggests the world is currently most closely following – and the 10%, 50% and 90% estimate ranges. These results should be considered alongside relevant research which is based on the climate change projections</p>	<p>The RCP8.5 scenario has been used to generate the UKCP18 climate projections used. As per the UKCP18 user guidance, this is the closest available model to the 'high emissions scenario' available within UKCP09, which were the latest available projections at the time of publication of the NPS EN-1. The UKCP18 climate projections are presented in Section 6.6 of Chapter 6: Climate Change of the ES [EN010131/APP/3.1].</p>
Paragraph 4.8.8	<p>The IPC should be satisfied that there are not features of the design of new energy infrastructure critical to its operation which may be seriously affected by more radical changes to the climate beyond that projected in the latest set of UK climate projections, taking account of the latest credible scientific evidence on, for example, sea level rise (for example by referring to additional maximum credible scenarios – i.e. from the Intergovernmental Panel on Climate Change or EA) and that necessary action can be taken to ensure the operation of the infrastructure over its estimated lifetime</p>	<p>As stated in Chapter 6: Climate Change of the ES [EN010131/APP/3.1], UKCP18 climate projections have been used to identify potential future climate change impacts on the Scheme. Future climate change impacts are reviewed based on the UKCP18 projections. Adaptation measures have been incorporated and the design is therefore not considered likely to be seriously affected by the more radical changes to the climate.</p>
Paragraph 4.8.9	<p>Where energy infrastructure has safety critical elements (for example parts of new fossil fuel power stations or some electricity sub-stations), the applicant should apply the high emissions scenario (high impact, low likelihood) to those elements. Although the likelihood of this scenario is thought to be low, it is appropriate to take a more risk-averse approach with elements of infrastructure which are critical to the safety of its operation.</p>	<p>The RCP8.5 scenario has been used to generate the UKCP18 climate projections used. As per the UKCP18 user guidance, this is the closest available model to the 'high emissions scenario' available within UKCP09, which were the latest available projections at the time of publication of the NPS EN-1. The UKCP18 climate projections are presented in Section 6.6 of Chapter 6: Climate Change of the ES [EN010131/APP/3.1]. The ES methodology therefore demonstrates compliance with this policy.</p>
Paragraph 4.8.10	<p>If any adaptation measures give rise to consequential impacts (for example on flooding, water resources or coastal change) the IPC should consider the impact of the latter in relation to the application as a whole and the impacts guidance set out in Part 5 of this NPS.</p>	<p>No consequential impacts have been identified as a result of climate change adaptation measures.</p>

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Paragraph 4.8.11	Any adaptation measures should be based on the latest set of UK Climate Projections, the Government's latest UK Climate Change Risk Assessment, when available and in consultation with the EA.	Chapter 6: Climate Change of the ES [EN010131/APP/3.1] utilises the latest UK climate projections (UKCP18) to determine the historic and future baseline conditions and uses these projections to embedded adaptive measures into the design. Adaptation measures have been embedded in the design and take into account the effects of climate change predicted by these projections.

Electricity Connection

Paragraph 4.9.1	The connection of a proposed electricity generation plant to the electricity network is an important consideration for applicants wanting to construct or extend generation plant. In the market system, it is for the applicant to ensure that there will be necessary infrastructure and capacity within an existing or planned transmission or distribution network to accommodate the electricity generated. The applicant will liaise with National Grid who own and manage the transmission network in England and Wales or the relevant regional Distribution Network Operator (DNO) to secure a grid connection. It may be the case that the applicant has not received or accepted a formal offer of a grid connection from the relevant network operator at the time of the application, although it is likely to have applied for one and discussed it with them. This is a commercial risk the applicant may wish to take for a variety of reasons, although the IPC will want to be satisfied that there is no obvious reason why a grid connection would not be possible.	The Applicant has secured a connection to the National Grid via a new below ground grid connection cable located within the Grid Connection Route. This will connect the new Gate Burton on-site Substation with the existing Cottam Substation. Further details are included in the Grid Connection Statement [EN010131/APP/7.11] .
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Pollution and Health

Paragraph 4.10.7	The IPC should be satisfied that development consent can be granted taking full account of environmental impacts. Working in close cooperation with EA and/or the pollution control authority, and other relevant bodies, such as the MMO, Natural England, the Countryside Council for Wales, Drainage Boards, and water and	A Phase 1 Preliminary Risk Assessment (PRA) report has been prepared, covering land within the Order limits, and is available in Appendix 15-E of the ES [EN010131/APP/3.2] .
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sewerage undertakers, the IPC should be satisfied, before consenting any potentially polluting developments, that:

- the relevant pollution control authority is satisfied that potential releases can be adequately regulated under the pollution control framework; and
- the effects of existing sources of pollution in and around the site are not such that the cumulative effects of pollution when the proposed development is added would make that development unacceptable, particularly in relation to statutory environmental quality limits.

The information collected as part of the PRA suggests that there are no significant constraints with regards to contamination of soil and groundwater that would limit the development of the Order limits.

The potential risks that have been identified have all been assessed by the PRA as being moderate/low, and area presented in Chapter 16: Other Environmental Topics of the ES **[EN010131/APP/3.1]**. As stated in Chapter 16: Other Environmental Topics of the ES **[EN010131/APP/3.1]**, provided that the requirements of relevant policy and legislation relating to land contamination and remediation are integrated within the design and appropriate mitigation measures are applied during the demolition and construction phases of each cumulative scheme, it is considered that the cumulative effect on ground conditions will be negligible.

Paragraph 4.10.8 The IPC should not refuse consent on the basis of pollution impacts unless it has good reason to believe that any relevant necessary operational pollution control permits or licences or other consents will not subsequently be granted.

There are not predicted to be any significant pollution impacts associated with the Scheme (see Chapter 15: Other Environmental Topics in the ES **[EN010131/APP/3.1]**). The Applicant is not aware of any reason that consent would not be granted for consents listed in the Consents and Agreements Position Statement **[EN010131/APP/6.3]**.

Paragraph 4.13.2 As described in the relevant sections of this NPS and in the technology specific NPSs, where the proposed project has an effect on human beings, the ES should assess these effects for each element of the project, identifying any adverse health impacts, and identifying measures to avoid, reduce or compensate for these impacts as appropriate. The impacts of more than one development may affect people simultaneously, so the applicant and the IPC should consider the cumulative impact on health.

Chapter 14: Human Health of the ES **[EN010131/APP/3.1]** includes a Health Impact Assessment that has followed the 'HUDU Rapid Health Impact Assessment Matrix', which is generally considered as a best practice tool to use when undertaking health and well-being impact assessments. , It identifies measures to address the potential impacts that have incorporated into the Scheme. Section 14.13 of Chapter 14: Human Health of the ES **[EN010131/APP/3.1]** outlines the cumulative impacts on health. Chapter 14 concludes that there will be no significant residual effects on health and wellbeing during construction, operation or decommissioning.

Paragraph 4.13.3 The direct impacts on health may include increased traffic, air or water pollution, dust, odour, hazardous waste and substances, noise, exposure to radiation, and increases in pests.

Chapter 14: Human Health of the ES **[EN010131/APP/3.1]** includes and assessment of the effects of traffic, air or water pollution, dust, odour, hazardous waste and substances, noise, and exposure to radiation.

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Paragraph 4.13.4	New energy infrastructure may also affect the composition, size and proximity of the local population, and in doing so have indirect health impacts, for example if it in some way affects access to key public services, transport or the use of open space for recreation and physical activity.	Chapter 14: Human Health of the ES [EN010131/APP/3.1] assesses indirect impacts to health. No significant adverse effects are predicted as a result of the Scheme.
Paragraph 4.13.5	Generally, those aspects of energy infrastructure which are most likely to have a significantly detrimental impact on health are subject to separate regulation (for example for air pollution) which will constitute effective mitigation of them, so that it is unlikely that health concerns will either constitute a reason to refused consents or require specific mitigation under the Planning Act 2008. However, the IPC will want to take account of health concerns when setting requirements relating to a range of impacts such as noise.	Chapter 14: Human Health of the ES [EN010131/APP/3.1] fully assesses indirect impacts to health. No significant adverse effects are predicted as a result of the Scheme. Measures to control noise are included in the Framework CEMP [EN010131/APP/7.3] , OEMP [EN010131/APP/7.4] and DEMP [EN010131/APP/7.5] .
Paragraph 5.2.6	Where the project is likely to have adverse effects on air quality the applicant should undertake an assessment of the impacts of the proposed project as part of the Environmental Statement (ES).	Chapter 15: Other Environmental Topics of the ES [EN010131/APP/3.1] includes an Air Quality Assessment, incorporating a Construction Phase Road Traffic Assessment and a Dust Risk Assessment. No significant adverse effects residual effects are predicted in terms of air quality as a result of the Scheme.
Paragraph 5.2.11	The IPC should consider whether mitigation measures are needed both for operational and construction emissions over and above any which may form part of the project application. A construction management plan may help codify mitigation at this stage.	Mitigation measures pertaining to air quality are incorporated into the Framework CEMP [EN010131/APP/7.3] and summarised in Table 15-3 and Table 15-4 of Chapter 15: Other Environmental Topics of the ES [EN010131/AP/3.1] . Production of a final CEMP is secured by way of a requirement in the draft DCO. The Scheme is compliant with this policy.
Paragraph 5.6.4- 5.6.5	<p>The applicant should assess the potential for insect infestation and emissions of odour, dust, steam, smoke and artificial light to have a detrimental impact on amenity, as part of the Environmental Statement.</p> <p>In particular, the assessment provided by the applicant should describe:</p> <ul style="list-style-type: none"> ● the type, quantity and timing of emissions; ● aspects of the development which may give rise to emissions; ● premises or locations that may be affected by the emissions; 	<p>A Dust Risk Assessment has been carried out as part of Section 15.3 Air Quality of Chapter 15: Other Environmental Topics of the ES [EN010131/APP/3.1].</p> <p>During winter months, mobile lighting towers with a power output of 8kVA may be used during construction in isolated work areas. There will also be lighting at the main construction compounds while construction is underway. All construction lighting will be deployed in accordance with the recommendations set out in the Framework CEMP [EN010131/APP/3.1].</p>

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- effects of the emission on identified premises or locations; and
- measures to be employed in preventing or mitigating the emissions.

Details of operational lighting are set out in Chapter 2: The Scheme, of the ES **[EN010131/APP/3.1]**. This explains that lighting sensors for security purposes will be deployed around the electrical infrastructure and potentially at other pieces of critical infrastructure. No areas are proposed to be continuously lit. It is anticipated that the lighting will be controlled via infrared.

The Scheme is not expected to result in an increased risk of insect infestation and will not emit any odour. Construction and decommissioning activities will not include burning materials (as set out in the Framework CEMP **[EN010131/APP/7.3]**). For these reasons, smoke, odour and insect infestation risk has not been assessed in the ES.

The assessments meet all requirements of this policy.

Ecology and Geology

Paragraph 5.3.3 Where the development is subject to EIA the applicant should ensure that the ES clearly sets out any effects on internationally, nationally and locally designated sites of ecological or geological conservation importance, on protected species and on habitats and other species identified as being of principal importance for the conservation of biodiversity. The applicant should provide environmental information proportionate to the infrastructure where EIA is not required to help the IPC consider thoroughly the potential effects of a proposed project.

Section 8.7 of Chapter 8: Ecology of the ES **[EN010131/APP/3.1]** sets out all the designated sites of ecological or geological conservation importance; protected species; and habitats and other species identified as being of principal importance for the conservation of biodiversity within the study area for the Scheme. Sections 8.10 and 8.12 of ES Chapter 8 **[EN010131/APP/3.1]** go on to set out the expected effects on the above receptors during the construction, operation and decommissioning phases of the Scheme. This concludes that with the application of mitigation measures set out in Chapter 8: Ecology of the ES **[EN010131/APP/3.1]** no significant adverse effects have been identified on any internationally, nationally or locally designated sites during construction, operation or decommissioning of the Scheme. The scope of the ES **[EN010131/APP/3.1]** accords with this policy

Paragraph 5.3.4 The applicant should show how the project has taken advantage of opportunities to conserve and enhance biodiversity and geological conservation interests.

Chapter 8: Ecology of the ES **[EN010131/APP/3.1]** concludes that the Scheme has the potential to result in significant beneficial effects to broad-leaved woodland, including ancient woodland, hedgerows and breeding birds, particularly farmland birds associated with hedgerows and field margins, with

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the application of enhancement measures set out in section 8.11 of Chapter 8: Ecology of the ES **[EN010131/APP/3.1]**.

A Biodiversity Net Gain (BNG) Assessment, using Defra's Metric 3.1, has been provided with the DCO application **[EN010131/APP/7.9]**. This report demonstrates that the project has the potential to deliver significant biodiversity net gain on site, significantly exceeding the 10% target. The Scheme has therefore taken advantage of opportunities to conserve and enhance biodiversity and accords with this policy.

Paragraph 5.3.6 In having regard to the aim of the Government's biodiversity strategy the IPC should take account of the context of the challenge of climate change: failure to address this challenge will result in significant adverse impacts to biodiversity. The policy set out in the following sections recognises the need to protect the most important biodiversity and geological conservation interests.

The benefits of nationally significant low carbon energy infrastructure development may include benefits for biodiversity and geological conservation interests and these benefits may outweigh harm to these interests. The IPC may take account of any such net benefit in cases where it can be demonstrated.

As explained in the Statement of Need **[EN010131/APP/2.1]**, and summarised in Section 4 of the PDAS, the Scheme is a substantial infrastructure asset, capable of delivering large amounts of low-carbon electricity to help meet the UK's commitments to decrease carbon emissions and reach net zero by 2050. As noted by the policy, failure to address climate change will result in significant adverse impacts to biodiversity. Without the Scheme, a significant and vital opportunity to develop a large-scale low-carbon generation scheme will have been passed over, increasing materially the risk that future Carbon Budgets and Net Zero 2050 will not be achieved.

By enhancing biodiversity within the Order limits, and by generating renewable electricity and thereby helping to address the causes of climate change, the Scheme delivers benefits in relation to both elements of this policy.

A BNG Assessment, using Defra's Metric 3.1, has been provided with the DCO application **[EN010131/APP/7.9]**. This report demonstrates that the project has the potential to deliver significant biodiversity net gain on site that will significantly exceed the 10% target.

Paragraph 5.3.7 As a general principle, and subject to the specific policies below, development should aim to avoid significant harm to biodiversity and geological conservation interests, including through mitigation and consideration of reasonable alternatives (as set out in Section 4.4 above); where significant harm cannot be avoided, then appropriate compensation measures should be sought.

As outlined in Section 8.8 and 8.12 of Chapter 8: Ecology of the ES **[EN010131/APP/3.1]**, with the application of mitigation measures no significant adverse effects have been identified on biodiversity. The Scheme is compliant with this policy

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Paragraph 5.3.8 In taking decisions, the IPC should ensure that appropriate weight is attached to designated sites of international, national and local importance; protected species; habitats and other species of principal importance for the conservation of biodiversity; and to biodiversity and geological interests within the wider environment

There are no designated sites of international or national importance within the Order limits or likely to be adversely affected by the development. There is one Local Wildlife Site within the Order limits and the Scheme has been designed to minimise any risk to this site, ensuring there will be no significant adverse effects upon it. The works within the LWS are limited to the grid connection corridor passing under the site. Further information is provided in Chapter 8: Ecology of the ES **[EN010131/APP/3.1]**,

Paragraph 5.3.13 Sites of regional and local biodiversity and geological interest, which include Regionally Important Geological Sites, Local Nature Reserves and Local Sites, have a fundamental role to play in meeting overall national biodiversity targets; contributing to the quality of life and the well-being of the community; and in supporting research and education. The IPC should give due consideration to such regional or local designations. However, given the need for new infrastructure, these designations should not be used in themselves to refuse development consent.

There is one Local Wildlife Site (LWS) within the Order limits, Cow Pasture Lane Drains LWS, which is crossed by the grid connection. The Grid Connection Corridor crossing of Cow Pasture Lane Drains LWS will be undertaken using HDD methods to lay cabling, therefore avoiding impacts to the drain and hedge, with setbacks of at least 10m from the centreline of the drain. Access for construction of the Grid Connection Corridor will utilise an existing access track that runs alongside Cow Pasture Lane Drains LWS. However, where there is a need to cross the LWS, this will be via a Bailey bridge, rather than culvert to minimise negative impacts.

Construction compounds will be set back from this LWS with a minimum 10m from the centre line of the watercourse. Furthermore, measures to ensure incursion into this LWS does not occur will be put in place, e.g. security fencing, which will be implemented at an early stage. With these measures in place, the Scheme is not predicted to adversely affect the LWS.

There are two further LWS, Knaith Park Wood and Coates Wetland, located close to the Order limits. There are not predicted to be any adverse effects on either site.

With respect to Cow Pasture Lane Drains, Knaith Park Woodland and Coates Wetlands LWSs, the Framework CEMP **[EN010131/APP/7.3]** specifies requirements for the safe storage of chemicals / other hazardous materials (e.g. fuel) reaching watercourses during flood events during construction. A full list of the crossing methods and an explanation of these techniques is provided in Chapter 9: Water Environment of this ES **[EN010131/APP/3.1]**.

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Paragraph 5.3.14	Ancient woodland is a valuable biodiversity resource both for its diversity of species and for its longevity as woodland. Once lost it cannot be recreated. The IPC should not grant development consent for any development that would result in its loss or deterioration unless the benefits (including need) of the development, in that location outweigh the loss of the woodland habitat. Aged or 'veteran' trees found outside ancient woodland are also particularly valuable for biodiversity and their loss should be avoided. Where such trees would be affected by development proposals the applicant should set out proposals for their conservation or, where their loss is unavoidable, the reasons why.	<p>Chapter 8: Ecology of the ES [EN010131/APP/3.1] concludes that there are no potential significant adverse effects on local or regional biodiversity sites as a result of the construction, operation or decommissioning of the Scheme.</p> <p>There will be no loss of ancient woodland or veteran trees as a result of the Scheme.</p> <p>As outlined in Chapter 8: Ecology of the ES [EN010131/APP/3.1], the Scheme has been designed to avoid key nature conservation and ecological features with buffers introduced between solar panels/ BESS elements and:</p> <ul style="list-style-type: none">- All woodlands, including ancient woodland – at least 15m;- All trees within hedgerows and individual trees – protected by clearly defined root protection areas, concordant with the requirements for each individual tree;- All hedgerows – at least 5m <p>Within some of these buffers, particularly around the ancient woodland, natural regeneration of woodland will create additional scrub and woodland habitat. Other areas will be managed as grassland. Tree Root Protection fencing will be erected around retained trees, in line with British Standard BS 5837: Trees in relation to design, demolition and construction – Recommendations</p>
Paragraph 5.3.15	Development proposals provide many opportunities for building-in beneficial biodiversity or geological features as part of good design. When considering proposals, the IPC should maximise such opportunities in and around developments, using requirements or planning obligations where appropriate.	The Scheme has built in opportunities for maximising and enhancing biodiversity. The BNG [EN010131/APP/7.9] demonstrates that significant net gain that could be achieved on the site.
Paragraph 5.3.17	Other species and habitats have been identified as being of principal importance for the conservation of biodiversity in England and Wales and thereby requiring conservation action. The IPC should ensure that these species and habitats are protected from the adverse effects of development by using requirements or planning	Chapter 8 of the ES [EN010131/APP/3.1] concludes that there will be no significant adverse effects on species or habitats of principle importance. There would be significant beneficial effects on broad-leaved woodland, hedgerows and breeding birds.

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obligations. The IPC should refuse consent where harm to the habitats or species and their habitats would result, unless the benefits (including need) of the development outweigh that harm. In this context the IPC should give substantial weight to any such harm to the detriment of biodiversity features of national or regional importance which it considers may result from a proposed development.

No Protected Species licences are anticipated to be required for the Scheme.

Paragraph 5.3.18 The applicant should include appropriate mitigation measures as an integral part of the proposed development. In particular, the applicant should demonstrate that:

- during construction, they will seek to ensure that activities will be confined to the minimum areas required for the works;
- during construction and operation best practice will be followed to ensure that risk of disturbance or damage to species or habitats is minimised, including as a consequence of transport access arrangements;
- habitats will, where practicable, be restored after construction works have finished; and
- opportunities will be taken to enhance existing habitats and, where practicable, to create new habitats of value within the site landscaping proposals

Embedded design mitigation measures such as those set out in this policy are outlined in Section 8.9 of Chapter 8: Ecology of the ES **[EN010131/APP/3.1]** and are illustrated within the Framework CEMP **[EN010131/APP/7.3]**, Framework OEMP **[EN010131/APP/7.4]** and Framework DEMP **[EN010131/APP/7.5]**. These include habitat avoidance, creation and replacement measures; mitigation relating to protected and notable species; and standard mitigation measures that comply with industry good practice and environmental legislation.

Production of a final CEMP, OEMP and DEMP are secured by way of a requirement in the draft DCO. The Framework CEMP **[EN010131/APP/7.3]** includes best practice measures to ensure that activities will be confined to the minimum areas required for the works during construction, in accordance with this part of the policy.

Section 8.9 of Chapter 8: Ecology of the ES **[EN010131/APP/3.1]** outlines mitigation measures pertaining to habitat avoidance, creation and replacement measures that comply with this part of the policy.

Paragraph 5.3.20 The IPC will need to take account of what mitigation measures may have been agreed between the applicant and Natural England (or the Countryside Council for Wales) or the Marine Management Organisation (MMO), and whether Natural England (or the Countryside Council for Wales) or the MMO has granted or refused or intends to grant or refuse, any relevant licences, including protected species mitigation licences.

Chapter 8: Ecology of the ES **[EN010131/APP/3.1]** concludes that the with the inclusion of embedded and additional mitigation measures, there will be no significant effects on ecological receptors during construction, operation and decommissioning of the Scheme. No protected species licences are expected to be needed. A deemed Marine Licence is included in the draft DCO **[EN010131/APP/3.1]**.

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Flood Risk

Paragraph 5.7.4	Applications for energy projects of 1 hectare or greater in Flood Zone 1 in England. and all proposals for energy projects located in Flood Zones 2 and 3 in England... should be accompanied by a flood risk assessment (FRA).	A Flood Risk Assessment (FRA) is provided at Appendix 9-D of the ES [EN010131/APP/3.3] . The FRA provides a detailed assessment of the risk of flooding to and from the Scheme (taking account of climate change) and concludes that the risk of flooding will not be increased as a result of the construction, operation or decommissioning of the Scheme.
Paragraph 5.7.5	Sets out minimum requirements for FRAs.	The FRA provided at Appendix 9-D of the ES [EN010131/APP/3.3] meets all requirements.
Paragraph 5.7.7	Applicants for projects which may be affected by, or may add to, flood risk should arrange pre-application discussions with the EA, and, where relevant, other bodies such as Internal Drainage Boards, sewerage undertakers, navigation authorities, highways authorities and reservoir owners and operators. Such discussions should identify the likelihood and possible extent and nature of the flood risk, help scope the FRA, and identify the information that will be required by the IPC to reach a decision on the application when it is submitted. The IPC should advise applicants to undertake these steps where they appear necessary, but have not yet been addressed.	An FRA is provided at Appendix 9-D of the ES [EN010131/APP/3.3] . The preparation of the FRA, and the ES has taken account of advice and consultation with key bodies. The extent and nature of this consultation and a summary of agreements reached (and under discussion) are provided in the Statements of Common Ground with the following bodies: <ul style="list-style-type: none">• Environment Agency [EN010131/APP/4.3E]• Lincolnshire County Council (as Lead Local Flood Authority) [EN010131/APP/4.3H]• Nottinghamshire County Council (as Lead Local Flood Authority (with Bassetlaw District Council) [EN010131/APP/4.3B]• Trent Valley Internal Drainage Board [EN010131/APP/4.3F]• Upper Witham Internal Drainage Board [EN010131/APP/4.3G]
Paragraph 5.7.9	In determining an application for development consent, the IPC should be satisfied that where relevant: <ul style="list-style-type: none">▪ the application is supported by an appropriate FRA;▪ the Sequential Test has been applied as part of site selection;▪ a sequential approach has been applied at the site level to minimise risk by directing the most vulnerable uses to areas of	A FRA is provided at Appendix 9-D of the ES [EN010131/APP/3.1] . This demonstrates how the development passes the Sequential Test including its application at the site level. Section 7.2 of Appendix 9-D of the ES [EN010131/APP/3.1] states that the proposed surface water drainage network has been designed to accommodate runoff from all storms up to and including the 1% AEP +40% for

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lowest flood risk;

- the proposal is in line with any relevant national and local flood risk management strategy;
- priority has been given to the use of sustainable drainage systems (SuDs) (as required in the next paragraph on National Standards); and
- in flood risk areas the project is appropriately flood resilient and resistant, including safe access and escape routes where required, and that any residual risk can be safely managed over the lifetime of the development.

climate change, which will be achieved through sustainable drainage systems (SuDs), as set out by the Appendix 9-C: Outline Drainage Strategy **[EN010131/APP/3.1]**

The site selection was guided by the aim to select a site close to the grid connection but outside the areas of highest flood risk. This guided the selection of the Gate Burton site, with all areas to the west closer to the grid connection being subject to flooding.

Appendix 9-D of the ES **[EN010131/APP/3.1]** also explains that through the sequential process and design iterations the Solar and Energy Storage Park with the BESS, Substation, the Power Conversion Unit, and the solar PV panel arrays are located in areas with the lowest risk of flooding from any source.

The Grid Connection Corridor is predominantly located within an area of high risk of fluvial flooding (Flood Zone 3); therefore an Exception Test has been undertaken. Given that the grid connection point is located within an area at high risk of fluvial flooding it was not possible to select a grid connection route that avoided areas of high flood risk. However, given that the development will comprise an underground cable, it will not be vulnerable to flooding or increase the risk of flooding elsewhere through its installation.

During construction, the Framework CEMP **[EN010131/APP/7.3]** sets out measures to ensure the safety of staff during construction from flood risk. This includes the appointment of at least one designated Flood Warden who is familiar with the risks and remains vigilant to news reports, Environment Agency flood warnings, relevant weather warnings and water levels of the local waterway. Health and safety plans developed for construction and decommissioning activities will also be required to account for potential climate change impacts on workers, such as flooding and heatwaves.

Paragraph 5.7.10 For construction work which has drainage implications, approval for the project's drainage system will form part of the development consent issued by the IPC. The IPC will therefore need to be satisfied that the proposed drainage system complies with any National

Appendix 9-C Outline Drainage Strategy of the ES **[EN010131/APP/3.1]** and Section 7.2 of Appendix 9-D of the ES **[EN010131/APP/3.1]** states that the proposed surface water drainage network has been designed to accommodate runoff from all storms up to and including the 1% AEP +40% for climate change, which will be achieved through sustainable drainage systems

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	<p>Standards published by Ministers under Paragraph 5(1) of Schedule 3 to the Flood and Water Management Act 2010.</p> <p>In addition, the development consent order, or any associated planning obligations, will need to make provision for the adoption and maintenance of any SuDS, including any necessary access rights to property.</p>	<p>(SuDs), as set out by the Appendix 9-C: Outline Drainage Strategy [EN010131/APP/3.1]. This includes details of the adoption and maintenance of SuDS features.</p>
Paragraph 5.7.12	<p>The IPC should not consent development in Flood Zone 2 in England... unless it is satisfied that the sequential test requirements have been met. It should not consent development in Flood Zone 3 or Zone C unless it is satisfied that the Sequential and Exception Test requirements have been met.</p>	<p>Appendix 9-D FRA of the ES [EN010131/APP/3.3] demonstrates that the Sequential Test is met for the Solar and Energy Storage Park, which is predominantly located in Flood Zone 1. It also demonstrates that the Sequential and Exception Tests are met for the Grid Connection Corridor, which is predominantly located within Flood Zone 3 (for fluvial and tidal sources).</p>
Paragraph 5.7.13	<p>Preference should be given to locating projects in Flood Zone 1 in England... If there is no reasonably available site in Flood Zone 1 or Zone A, then projects can be located in Flood Zone 2... If there is no reasonably available site in Flood Zones 1 or 2 or Zones A & B, then nationally significant energy infrastructure projects can be located in Flood Zone 3 or Zone C subject to the Exception Test. Consideration of alternative sites should take account of the policy on alternatives set out in Section 4.4 above</p>	<p>As stated in the Appendix 9-D FRA of the ES [EN010131/APP/3.3], the Solar and Energy Storage Park infrastructure is predominantly located within Flood Zone 1 (for fluvial and tidal sources), with the site selection being influenced by the decision to select a site predominantly outside Flood Zones 2 and 3.</p> <p>The Grid Connection Corridor is predominantly located within Flood Zone 3 (for fluvial and tidal sources), but there are no reasonable alternatives to this given that the grid connection point is located within the Flood Zone. The approach to alternatives is detailed in ES Chapter 3 [EN010131/APP/3.1].</p>
Paragraph 5.7.14	<p>If, following application of the sequential test, it is not possible, consistent with wider sustainability objectives, for the project to be located in zones of lower probability of flooding than Flood Zone 3 or Zone C, the Exception Test can be applied. The test provides a method of managing flood risk while still allowing necessary development to occur.</p>	<p>The Grid Connection Corridor is predominantly located within Flood Zone 3 (for fluvial and tidal sources). Whilst other Grid Connection Corridor options were considered, these were also located within Flood Zone 3 and there are no alternative routes at lower risk of flooding from any source. The Exception Test is therefore applied.</p> <p>Section 8 of Appendix 9-D FRA of the ES [EN010131/APP/3.3] concludes that the Scheme is considered to pass the Sequential and Exception Test. The Scheme will have both a national, and global significance, through its</p>

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decarbonisation of the nation’s electricity generation, and is clearly commensurate with national energy policy. It will also provide habitat creation and enhancement. Therefore, the Scheme will provide wider sustainability benefits that outweigh its impacts on flood risk.

In addition, embedded mitigation measures and an Outline Drainage Strategy (Appendix 9-C of the ES **[EN010131/APP/3.1]**), secured by a requirement of the draft DCO will be implemented, in order to ensure that the Scheme will not increase the risk of flooding from all sources either to, or arising from the Scheme development during the construction, operational and decommissioning phases.

Paragraph 5.7.15 The Exception Test is only appropriate for use where the sequential test alone cannot deliver an acceptable site, taking into account the need for energy infrastructure to remain operational during floods. It may also be appropriate to use it where as a result of the alternative site(s) at lower risk of flooding being subject to national designations such as landscape, heritage and nature conservation designations, for example Areas of Outstanding Natural Beauty (AONBs), Sites of Special Scientific Interest (SSSIs) and World Heritage Sites (WHS) it would not be appropriate to require the development to be located on the alternative site(s).

The Exception Test is appropriate for use on the Scheme as it is not possible to sequentially select a grid connection route that is not in an area with high flood risk.

Paragraph 5.7.16 All three elements of the test will have to be passed for development to be consented. For the Exception Test to be passed:

- it must be demonstrated that the project provides wider sustainability benefits to the community that outweigh flood risk;
- the project should be on developable, previously developed land or, if it is not on previously developed land, that there are no reasonable alternative sites on developable previously developed land subject to any exceptions set out in the technology-specific NPSs; and
- a FRA must demonstrate that the project will be safe, without increasing flood risk elsewhere subject to the exception below and, where possible, will reduce flood risk overall.

The Grid Connection Corridor is predominantly located within Flood Zone 3 (for fluvial and tidal sources). Whilst other Grid Connection Corridor options were considered, these were also located within Flood Zone 3 and there are no alternative routes at lower risk of flooding from any source. The Exception Test is therefore applied.

The Scheme will have wider sustainability benefits in terms of emission reduction; secure, affordable renewable energy generation; and biodiversity benefits.

Given that the grid connection needs to run from a site (ideally outside the flood zone) to a grid connection point (within the flood zone), with the area

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between being largely agricultural land, it is not feasible for the grid connection to utilise previously developed land.

The development within the flood zone will largely comprise an underground cable, therefore during the operational period there are limited opportunities for the development to increase flood risk elsewhere. Embedded mitigation measures and an Outline Drainage Strategy (Appendix 9-C of the ES **[EN010131/APP/3.1]**), secured by a requirement of the draft DCO will be implemented, in order to ensure that the Scheme will not increase the risk of flooding from all sources either to, or arising from the Scheme development during the construction, operational and decommissioning phases.

Paragraph 5.7.18 To satisfactorily manage flood risk, arrangements are required to manage surface water and the impact of the natural water cycle on people and property.

Chapter 9: Water Environment of the ES **[EN010131/APP/3.1]** considers the effects of a range of flooding events including extreme events on people, property, existing infrastructure assets, residential buildings, commercial buildings, and agricultural land affected by the Scheme.

Paragraph 5.7.19 In this NPS, the term Sustainable Drainage Systems (SuDS) refers to the whole range of sustainable approaches to surface water drainage management including, where appropriate: ● source control measures including rainwater recycling and drainage; ● infiltration devices to allow water to soak into the ground, that can include individual soakaways and communal facilities; ● filter strips and swales, which are vegetated features that hold and drain water downhill mimicking natural drainage patterns; ● filter drains and porous pavements to allow rainwater and run-off to infiltrate into permeable material below ground and provide storage if needed; ● basins ponds and tanks to hold excess water after rain and allow controlled discharge that avoids flooding; and ● flood routes to carry and direct excess water through developments to minimise the impact of severe rainfall flooding.

Appendix 9-C Outline Drainage Strategy of the ES **[EN010131/APP/3.1]** and Section 7.2 of Appendix 9-D of the ES **[EN010131/APP/3.1]** have been developed to manage surface water. The Outline Drainage Strategy states that the proposed surface water drainage network has been designed to accommodate runoff from all storms up to and including the 1% AEP +40% for climate change, which will be achieved through sustainable drainage systems (SuDS). All types of SuDS listed in the policy are considered in the development of the Outline Drainage Strategy.

Paragraph 5.7.20 Site layout and surface water drainage systems should cope with events that exceed the design capacity of the system, so that excess water can be safely stored on or conveyed from the site without adverse impacts.

Appendix 9-C Outline Drainage Strategy of the ES **[EN010131/APP/3.1]** and Section 7.2 of Appendix 9-D of the ES **[EN010131/APP/3.1]** states that the proposed surface water drainage network has been designed to accommodate runoff from all storms up to and including the 1% AEP +40% for climate change.

Paragraph 5.7.23	<p>The sequential approach should be applied to the layout and design of the project. More vulnerable uses should be located on parts of the site at lower probability and residual risk of flooding. Applicants should seek opportunities to use open space for multiple purposes such as amenity, wildlife habitat and flood storage uses. Opportunities should be taken to lower flood risk by reducing the built footprint of previously developed sites and using SuDS.</p>	<p>The layout of the Scheme has been shaped by the need to minimise development in the limited areas of the Solar and Energy Park around watercourses that have a higher risk of flooding. In particular, the BESS was relocated during design development to avoid areas of higher flood risk and buffers have been introduced around watercourses to avoid sensitive infrastructure being located in those areas. Opportunities to utilise areas of higher flood risk for other purposes have been taken in the design of the layout, landscaping and biodiversity mitigation.</p>
Paragraph 5.7.24	<p>Essential energy infrastructure which has to be located in flood risk areas should be designed to remain operational when floods occur. In addition, any energy projects proposed in Flood Zone 3b the Functional Floodplain (where water has to flow or be stored in times of flood), or Zone C2 in Wales, should only be permitted if the development will not result in a net loss of floodplain storage, and will not impede water flows.</p>	<p>The Grid Connection Corridor cable will be buried below ground, inherently flood protected, and protected by existing flood defences; it will therefore remain operational during times of flood. The development will therefore not result in a new loss of floodplain storage or impede water flows.</p>
Paragraph 5.7.25	<p>The receipt of and response to warnings of floods is an essential element in the management of the residual risk of flooding. Flood Warning and evacuation plans should be in place for those areas at an identified risk of flooding. The applicant should take advice from the emergency services when producing an evacuation plan for a manned energy project as part of the FRA. Any emergency planning documents, flood warning and evacuation procedures that are required should be identified in the FRA.</p>	<p>Appendix 9-D of the ES [EN010131/APP/3.3] provides details of mitigation measures to be undertaken in relation to residual risk of flooding. This includes the production of an Emergency Response Plan following the receipt of the DCO consent and prior to construction which will provide details of the response to an impending flood event.</p> <p>During construction, the Framework CEMP [EN010131/APP/7.10] sets out measures to ensure the safety of staff during construction from flood risk. This includes the appointment of at least one designated Flood Warden who is familiar with the risks and remains vigilant to news reports, Environment Agency flood warnings, relevant weather warnings and water levels of the local waterway. Health and safety plans developed for construction and decommissioning activities will also be required to account for potential climate change impacts on workers, such as flooding and heatwaves. During operation and decommissioning measures are set out in the Framework OEMP and DEMP respectively.</p>

Cultural Heritage

Paragraph 5.8.8	<p>As part of the ES (see Section 4.2) the applicant should provide a description of the significance of the heritage assets affected by the proposed development and the contribution of their setting to that significance. The level of detail should be proportionate to the importance of the heritage assets and no more than is sufficient to understand the potential impact of the proposal on the significance of the heritage asset. As a minimum the applicant should have consulted the relevant Historic Environment Record... and assessed the heritage assets themselves using expertise where necessary according to the proposed development's impact.</p>	<p>Section 7.7 of Chapter 7: Cultural Heritage of the ES [EN010131/APP/3.1] describes the designated and non-designated assets located in the study area around the Scheme (having considered the HER and through the Applicant's own assessment) and their significance, and the contribution of their setting to that significance.</p>
		<p>No significant residual effects have been identified on heritage assets.</p>
Paragraph 5.8.9	<p>Where a development site includes, or the available evidence suggests it has the potential to include, heritage assets with an archaeological interest, the applicant should carry out appropriate desk-based assessment and, where such desk-based research is insufficient to properly assess the interest, a field evaluation. Where proposed development will affect the setting of a heritage asset, representative visualisations may be necessary to explain the impact.</p>	<p>Archaeological evaluations were undertaken in addition to a desk-based assessment, including a geophysical survey (detailed magnetometry) of the whole Scheme and targeted trial trenching. The scope and specification of each field investigation have been set out in Written Scheme of Investigations (WSI), which were submitted for approval to the Archaeological Advisors for Lincolnshire County Council and Nottinghamshire County Council in December 2021 (detailed magnetometry) and August 2022 (trial trenching). The first phase of this, comprising geophysical (magnetometer) survey, was undertaken as agreed with the Archaeological Advisors for Lincolnshire and Nottinghamshire in February - October 2022 while the trial trenching survey was carried out in July - October 2022. The results of these surveys (ES Volume 3, Appendix 7-D: Geophysical Survey and Appendix 7-E: Trial Trench Evaluation [EN010131/APP/3.3]) have been incorporated into the desk-based assessment (ES Volume 3 Appendix 7-A: Cultural Heritage Desk-based Assessment [EN010131/APP/3.3]) and the assessment of impact in ES Chapter 7 [EN010131/APP/3.3].</p>
		<p>Visualisations have been produced to help assess and explain impacts on sensitive receptors, including where the Scheme could affect the setting of nearby heritage assets such as those at Gate Burton and Heynings Priory. These visualisations are presented in Figures 10-6, 10-17 and 10-18 of the ES [EN010131/APP/3.2].</p>

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Paragraph 5.8.13	<p>The IPC should take into account the desirability of sustaining and, where appropriate, enhancing the significance of heritage assets, the contribution to their settings and the positive contribution they can make to sustainable communities and economic vitality. The IPC should take into account the desirability of new development making a positive contribution to the character and local distinctiveness of the historic environment. The consideration of design should include scale, height, massing, alignment, materials and use. The IPC should have regard to any relevant local authority development plans or local impact report on the proposed development in respect of the factors set out in footnote 122.</p>	<p>Section 7.9 of Chapter 7: Cultural Heritage of the ES [EN010131/APP/3.1] outlines the avoidance and mitigation measures embedded within the Scheme design in relation to cultural heritage. This includes the provision of buffer areas between the Scheme and heritage assets in order to help to preserve their setting during the construction, operational and decommissioning periods. Appropriate and sensitive screening has also been developed and implemented to minimise the visual intrusion of the Scheme, while avoiding obscuring or intruding upon key views and relationships between heritage assets. Following decommissioning, the solar farm will be removed, and its impact on the setting of heritage assets reversed.</p>
Paragraph 5.8.14	<p>There should be a presumption in favour of the conservation of designated heritage assets and the more significant the designated heritage asset, the greater the presumption in favour of its conservation should be. Once lost heritage assets cannot be replaced and their loss has a cultural, environmental, economic and social impact. Significance can be harmed or lost through alteration or destruction of the heritage asset or development within its setting. Loss affecting any designated heritage asset should require clear and convincing justification. Substantial harm to or loss of a grade II listed building park or garden should be exceptional. Substantial harm to or loss of designated assets of the highest significance, including Scheduled Monuments; registered battlefields; grade I and II* listed buildings; grade I and II* registered parks and gardens; and World Heritage Sites, should be wholly exceptional.</p>	<p>As set out Chapter 7: Cultural Heritage of the ES [EN010131/APP/3.1] the Scheme would not lead to any loss or substantial harm to any designated heritage asset.</p>
Paragraph 5.8.15	<p>Any harmful impact on the significance of a designated heritage asset should be weighed against the public benefit of development, recognising that the greater the harm to the significance of the heritage asset the greater the justification will be needed for any loss.</p>	<p>Chapter 7: Cultural Heritage of the ES [EN010131/APP/3.1] concludes that there will be no significant effect on designated heritage assets or their setting as a result of the Scheme. Embedded mitigation measures have reduced the effects on heritage assets and ensure preservation of those assets.</p> <p>There would be minor (non-significant) adverse effects upon the following designated assets:</p>

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- Segelocum Roman Town Scheduled Monument
- Roman fort south of Littleborough Lane Scheduled Monument
- Medieval Bishops Palace, Stow Park, Scheduled Monument
- Heynings Priory, Scheduled Monument
- Gate Burton Hall (II* listed building)
- Church of St Mary in Stow (Grade I listed building)

The magnitude of effect on all the above assets is 'very low', with minor adverse effects arising due to the high value assets not due to large changes made to the setting of the assets. All other effects on designated assets would be no more than negligible.

Significant changes have been made to the layout of the Scheme to reduce the effects on the above assets to the level now predicted, including reducing the number of panels to remove development from areas close to the assets and sensitive landscaping proposals. All setting impacts will also be reversed on decommissioning of the Scheme.

The effects above are outweighed by the very significant public benefits of the Scheme when considered in isolation and cumulatively with other adverse effects of the Scheme.

Paragraph 5.8.18 When considering applications for development affecting the setting of a designated heritage asset, the IPC should treat favourably applications that preserve those elements of the setting that make a positive contribution to, or better reveal the significance of, the asset. When considering applications that do not do this, the IPC should weigh any negative effects against the wider benefits of the application. The greater the negative impact on the significance of the designated heritage asset, the greater the benefits that will be needed to justify approval.

The design of the Scheme preserves elements of the setting of designated assets that are important to their significance. There would be no significant effects on designated assets and very low magnitude of change to those assets experiencing minor adverse effects. See Chapter 7: Cultural Heritage of the ES [EN010131/APP/3.1] for more detail. All setting impacts will be reversed on decommissioning of the Scheme.

Paragraph 5.8.19 A documentary record of our past is not as valuable as retaining the heritage asset and therefore the ability to record evidence of the asset should not be a factor in deciding whether consent should be given.

Chapter 7: Cultural Heritage of the ES [EN010131/APP/3.1] concludes that there will be no significant effect on designated heritage assets or their setting as a result of the Scheme.

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It is recognised that documentary records are not as valuable as retaining the asset but given that the sensitivity of the non-designated assets is 'medium' (except for the Winter Camp of the Viking Great Arms at Torksey where the sensitivity is high but the loss is partial), the loss is justified as explored below.

Paragraph 5.8.20 Where the loss of the whole or a material part of a heritage asset's significance is justified, the IPC should require the developer to record and advance understanding of the significance of the heritage asset before it is lost. The extent of the requirement should be proportionate to the nature and level of the asset's significance. Developers should be required to publish this evidence and deposit copies of the reports with the relevant Historic Environment Record. They should also be required to deposit the archive generated in a local museum or other public depository willing to receive it.

Chapter 7: Cultural Heritage of the ES **[EN010131/APP/3.1]** states that the magnitude of impact to non-designated archaeological assets (AEC009, AEC010, AEC011, MLI125067, MLI52472; AEC013, MLI52489, MNT15983, MNT4983 and AEC014) as a result of the Scheme has been assessed as medium, resulting in a moderate adverse significance of effect, which in the absence of additional mitigation, would be significant. Additional mitigation in the form of a programme of archaeological excavation and recording is proposed, as set out in the Archaeological Mitigation Strategy **[EN010131/APP/7.6]**. Archaeological excavation and recording would not minimise the physical impact to these assets, as the archaeological evidence would still be removed, but would compensate for their loss by preserving them by record. This would reduce the magnitude of impact on individual assets, resulting in a residual minor adverse effect, which is not significant. All evidence will be published, with copies of the reports deposited with the relevant Historic Environment Record.

Paragraph 5.8.21 Where appropriate, the IPC should impose requirements [to record and advance understanding] on a consent that such work is carried out in a timely manner in accordance with a written scheme of investigation that meets the requirements of this Section and has been agreed in writing with the relevant Local Authority (where the development is in English waters, the Marine Management Organisation and English Heritage, or where it is in Welsh waters, the MMO and Cadw)) and that the completion of the exercise is properly secured.

Chapter 7: Cultural Heritage of the ES **[EN010131/APP/3.1]** sets out that archaeological evaluations were undertaken in addition to a desk-based assessment, including a geophysical survey (detailed magnetometry) of the whole Scheme and targeted trial trenching. The scope and specification of each field investigation have been set out in Written Scheme of Investigations (WSI), which were submitted for approval to the Archaeological Advisors for Lincolnshire County Council and Nottinghamshire County Council in December 2021 (detailed magnetometry) and August 2022 (trial trenching). The first phase of this, comprising geophysical (magnetometer) survey, was undertaken as agreed with the Archaeological Advisors for Lincolnshire and Nottinghamshire in February - October 2022 while the trial trenching survey was carried out in July - October 2022. The results of these surveys (ES Volume 3, Appendix 7-D: Geophysical Survey and Appendix 7-E: Trial Trench Evaluation

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[EN010131/APP/3.3] have been incorporated into the desk-based assessment (ES Volume 3 Appendix 7-A: Cultural Heritage Desk-based Assessment **[EN010131/APP/3.3]**) and the assessment of impact in this ES Chapter in Section 7.11.

Requirement 11 of the draft DCO **[EN010131/APP/6.1]** requires that the authorised development must be implemented in accordance with the Archaeological Mitigation Strategy **[EN010131/APP/7.6]**. The Archaeological Mitigation Strategy includes detail on where there should be works to record and advance understanding of the significance of the heritage asset before it is lost. This includes the archaeological excavation and recording of non-designated assets identified that would otherwise experience significant effects.

The Archaeological Mitigation Strategy **[EN010131/APP/7.6]** was shared with the archaeological advisors at Lincolnshire and Nottinghamshire in January 2023 for comment, with agreement on its contents to be progressed through the Statement of Common Ground with Lincolnshire County Council; see **[EN010131/APP/4.3H]** for a draft.

Paragraph 5.8.22 Where the IPC considers there to be a high probability that a development site may include as yet undiscovered heritage assets with archaeological interest, the IPC should consider requirements to ensure that appropriate procedures are in place for the identification and treatment of such assets discovered during construction.

Chapter 7: Cultural Heritage of the ES **[EN010131/APP/3.1]** concludes that outside the known areas of archaeological activity there is low potential for undiscovered heritage assets. Chapter 7 goes on to state that no archaeological monitoring is required to mitigate any physical effects on cultural heritage.

The Archaeological Mitigation Strategy **[EN010131/APP/7.6]** sets out how effects on archaeology will be mitigated, including on as yet undiscovered heritage assets that may be discovered during construction.

Landscape and Visual Impacts

Paragraph No.	Policy Requirement	Compliance with Policy
Paragraph 5.9.5	The applicant should carry out a landscape and visual assessment and report it in the ES. (See Section 4.2) A number of guides have been produced to assist in addressing landscape issues. The landscape and visual assessment should include reference to any landscape character assessment and associated studies as a means of assessing landscape impacts relevant to the proposed project. The applicant's assessment should also take account of any relevant policies based on these assessments in local development documents in England and local development plans in Wales.	An assessment of the potential landscape and visual impacts associated with the construction, operation and decommissioning of the Scheme has been carried out and is presented in Chapter 10: Landscape and Visual Amenity of the ES [EN010131/APP/3.1] . Chapter 10: Landscape and Visual Amenity of the ES [EN010131/APP/3.1] outlines the relevant landscape character assessments and related studies at national, regional, county and neighbourhood levels. Appendix 10-C of the ES [EN010131/APP/3.1] sets out the relevant matters of these published assessments in detail. The landscape and visual impact assessment has taken account of relevant policies in local development documents, including particularly the local Area of Great Landscape Value designation.
Paragraph 5.9.6	The applicant's assessment should include the effects during construction of the project and the effects of the completed development and its operation on landscape components and landscape character.	The assessment of the potential landscape and visual impacts includes an assessment of effects associated with the construction, operation and decommissioning of the Scheme. This is presented in Chapter 10: Landscape and Visual Amenity of the ES [EN010131/APP/3.1] .
Paragraph 5.9.7	The assessment should include the visibility and conspicuousness of the project during construction and of the presence and operation of the project and potential impacts on views and visual amenity. This should include light pollution effects, including on local amenity, and nature conservation.	The assessment contained in Chapter 10: Landscape and Visual Amenity of the ES [EN010131/APP/3.1] includes the potential landscape and visual impacts associated with the construction, operation and decommissioning of the Scheme on local amenity and nature conservation. This includes an assessment of light pollution effects.

However, it should be noted that the lighting proposed is minimal, particularly considering the scale of the Scheme, with the lighting designed to minimise impacts on local amenity and natural conservation.

During construction and operation lighting will be in the form of mobile lighting towers used where natural light is unable to reach (sheltered or confined areas) and during core working hours (Monday to Friday: 08.00-18.00, then 09.00-13.00 on Saturdays) during winter months. Lights will be fitted with downward directional fittings to minimise light spill and glare. Lights will be directed into the Order limits, not towards the boundary. The Framework CEMP **[EN010131/APP/7.3]** sets out how light will be controlled during construction and is secured by Requirement 12 on the draft DCO **[EN010131/APP/6.1]**.

During operation no visible lighting will be utilised at the Order limits perimeter. Infrared lighting will be provided by the CCTV/security system to provide night vision functionality for CCTV; and visible lighting will be installed at the Substation and BESS. This will include downward directional fittings to minimise light spill and glare.

The Outline Design Principles [EN010131/APP/2.3] specify that lighting at the BESS, Substation and external buildings and parking will be PIR operated (passive infra-red) calibrated to vehicles and personnel. The design principles are secured by Requirement 5 on the draft DCO [EN010131/APP/6.1].

Paragraph 5.9.8 Landscape effects depend on the existing character of the local landscape, its current quality, how highly it is valued and its capacity to accommodate change. All of these factors need to be considered in judging the impact of a project on landscape. Virtually all nationally significant energy infrastructure projects will have effects on the landscape. Projects need to be designed carefully, taking account of the potential impact on the landscape. Having regard to siting, operational and other relevant constraints the aim should be to minimise harm to the landscape, providing reasonable mitigation where possible and appropriate.

This policy recognises that virtually all NSIPs will have effects on the landscape and this is also the case for the Scheme. However, there are few impacts when taking into account the scale of the Scheme and its benefits.

Good design has been a key consideration from the outset. The LVIA has informed the iterative design process, which in turn has guided development of the **Outline Design Principles [EN010131/APP/2.3]** to provide confidence that the Scheme detailed design will respect local context and minimise impacts. The Scheme layout and design has been developed in response to policy requirements, published landscape character assessment guidance and fieldwork analysis. The design mitigation has been embedded in the Scheme to minimise effects on landscape character and visual amenity as shown in the **Outline Landscape and Ecological Management Plan [EN010131/APP/7.10]** secured through requirement 7 on the draft DCO [EN010131/APP/6.1].

The landscape design principles aim to achieve the following:

- To integrate the Scheme into the existing landscape pattern as far as possible by retaining and following existing features, including vegetation, where practicable;
- To replace vegetation lost because of construction of the Scheme through areas of new planting;

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- To filter and screen more prominent components of the Scheme in views from visual receptors; and
- To apply appropriate offsets to residential properties to mitigate/reduce views of the Scheme in views from visual receptors.

Paragraph 5.9.9 National Parks, the Broads and AONBs have been confirmed by the Government as having the highest status of protection in relation to landscape and scenic beauty. Each of these designated areas has specific statutory purposes which help ensure their continued protection and which the IPC should have regard to in its decision. The conservation of the natural beauty of the landscape and countryside should be given substantial weight by the IPC in deciding on applications for development consent in these areas.

There are no National Parks (or the Broads) or AONBs within or in close proximity to the Order limits.

Paragraph 5.9.14 Outside nationally designated areas, there are local landscapes that may be highly valued locally and protected by local designation. Where a local development document in England or a local development plan in Wales has policies based on landscape character assessment, these should be paid particular attention. However, local landscape designations should not be used in themselves to refuse consent, as this may unduly restrict acceptable development.

West Lindsey District Council has designated several Areas of Great Landscape Value (AGLV) within the district. An ALGV covers part of the area within and around the Scheme, extending from Marton in the south, to north of Gainsborough, covering land between the River Trent in the west and the East Midlands Railway to the east. This includes the eastern part of the Order limits, as shown on ES Volume 2: Figure 10-7 of the ES **[EN010131/APP/3.2]** and Figure 3-2 of this PDAS.

The Applicant is not aware of any evidence base documents that set out in detail the rationale behind the AGLV designation or its boundaries; nor are there any documents that specify where the most valued areas of the AGLV are located so the Applicant has made judgements on the most sensitive areas of the AGLV based on baseline research as part of the AGLV.

Particular attention has been paid to the AGLV in Chapter 10: Landscape and Visual of the ES **[EN010131/APP/3.1]** by taking the designation into account when defining the value of landscape character areas, taking it into consideration in the design and landscaping of the Scheme and assessing the impact of the Scheme on the local designation.

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The Scheme has been designed to minimise the impact on the AGLV where possible by locating the BESS and Substation to the far eastern extent of the AGLV, distant from the more sensitive areas around Gate Burton. An area of panels to the east of Gate Burton has also been removed from the Scheme to reduce the impacts on heritage assets near Gate Burton; which also reduces landscape and visual impacts from the Gate Burton area, including removing effects that were significant prior to the change. This further reduces the impact on the most sensitive areas of the AGLV. Influence of the Scheme on the wider AGLV will be limited by intervening woodland. Access through the AGLV will primarily be via the A156, an existing A road, with the internal access road route being re-designed to be further from the Gate Burton area of the AGLV.

The ES concludes that there will be no significant effects on the AGLV during construction, operation or decommissioning. Overall, the Scheme would have a minor adverse (non-significant) impact on the AGLV. Given that this is a local designation and the effect is not significant, this impact is considered acceptable. This conclusion takes into account the fact that the policy states that *'local landscape designations should not be used in themselves to refuse consent, as this may unduly restrict acceptable development.'*

The Scheme complies with this policy as particular attention has been paid to the local landscape designation in developing the design of the Scheme, the baseline for the LVIA and the assessment of impacts.

Paragraph 5.9.15 The scale of such projects means that they will often be visible within many miles of the site of the proposed infrastructure. The IPC should judge whether any adverse impact on the landscape would be so damaging that it is not offset by the benefits (including need) of the project.

This policy recognises that NSIPs are likely to be visible within many miles of the site and have adverse impacts on the landscape. The policy therefore emphasises that the factor to consider in policy compliance is not whether these impacts are present, but whether they are 'so damaging' as not to be offset by the benefits of the project.

Whilst some significant landscape impacts are unavoidable due to the scale of the Scheme and its presence within the landscape, particularly at the local level, the site selection (including topography), design and layout limits mean the visibility of the site and impacts are limited. Section 10.11 of Chapter 10 of the ES [EN010131/APP/3.1] states:

‘the LVIA indicates that:

- there are relatively few sensitive receptors nearby, few PRoW across the site, few residents with views, and no nationally designated landscapes;*
- a lot of the site is not openly visible due to the flat landscape and hedgerows/ trees screening views;*
- more extensive views from higher land are distant and encompass a wide panorama in which the Scheme would not dominate;*
- embedded mitigation and use of stand-offs to more sensitive receptors is effective in reducing and/or mitigating effects; and*
- significant residual effects are predominantly not at the highest level of significance and include only two residential locations with a moderate significant effect by Year 15.’*

Chapter 10 of the ES **[EN010131/APP/3.1]** concludes that the Scheme would some residual, temporary significant adverse effects on the landscape as a result of construction and decommissioning. Effects would be temporary and minimised where possible through measures set out in the Framework CEMP **[EN010131/APP/7.3]**, and the DEMP **[EN010131/APP/7.5]**.

A scheme of mitigation planting set out in the Outline Landscape and Ecological Management Plan **[EN010131/APP/7.10]** (which is secured by requirement 7 on the draft DCO) will reduce landscape and visual impacts as far as possible, however some significant effects will remain during the operational phase of the Scheme.

Chapter 10: Landscape and Visual of the ES **[EN010131/APP/3.1]** concludes that the operation of the Scheme will not result in significant effects to the Landscape Character Types defined at a regional level or the Landscape Character Areas and Landscape Character Parcels defined at the County or District Levels.

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For Local Landscape Character Areas (LLCA) the operation of the Scheme will result in significant effects to LLCA 02: Ancient Woodland Ridge and LLCA 06: Clay Farmlands during Year 1 and Year 15 (although impact would be reduced during later years). Given the Scheme is located across these LLCAs the large alteration in character is inevitable.

All residual significant effects are set out in Table 10-7 to 10-9 of Chapter 10: Landscape and Visual Impact of the ES **[EN010131/APP/3.1]**.

The Scheme will have both a national, and global significance, through its decarbonisation of the nation's electricity generation, and is clearly commensurate with national energy policy. It will also provide habitat creation and enhancement to achieve biodiversity net gain.

Therefore, in accordance with this policy, the level of landscape impacts are not considered to be so damaging that they are not offset by the benefits of the Scheme.

Paragraph 5.9.16 In reaching a judgment, the IPC should consider whether any adverse impact is temporary, such as during construction, and/or whether any adverse impact on the landscape will be capable of being reversed in a timescale that the IPC considers reasonable.

Construction and decommissioning stage impacts will be for a relatively short duration, and operational effects beginning at Year 1 will reduce over time as mitigation planting set out in the Outline Landscape and Ecological Management Plan establishes. The change to the landscape character, via the introduction of solar panels and associated infrastructure is considered to be localised and would be reversed following decommissioning. The reduction of effects over time and the reversibility of effects should be taken into consideration when reaching a judgement on the Application.

Paragraph 5.9.17 The IPC should consider whether the project has been designed carefully, taking account of environmental effects on the landscape and siting, operational and other relevant constraints, to minimise harm to the landscape, including by reasonable mitigation.

Good design has been a key consideration from the outset and has shaped the design, layout and landscape design. Mitigation has been embedded in the Scheme to minimise effects on landscape character and visual amenity. This includes selecting a site that is naturally not very visible in the landscape with few PRow across it; locating larger elements of the Scheme away from sensitive receptors and in locations where there are elements of natural screening from topography and existing woodland; removing panels from areas to reduce significant landscape and visual effects and incorporating landscape design.

The overall objective of the landscape design set out in the Outline Landscape and Ecological Management Plan **[EN010131/APP/7.10]** is to integrate the Scheme into its landscape setting and avoid or minimise adverse landscape and visual effects as far as practicable. Accordingly, the landscape design aims to achieve the following:

- To integrate the Scheme into the existing landscape pattern as far as possible by retaining and following existing features, including vegetation, where practicable;
- To replace vegetation lost because of construction of the Scheme through areas of new planting;
- To filter and screen more prominent components of the Scheme in views from visual receptors; and
- To apply appropriate offsets to residential properties to mitigate/reduce views of the Scheme in views from visual receptors.

Paragraph 5.9.18 All proposed energy infrastructure is likely to have visual effects for many receptors around proposed sites. The IPC will have to judge whether the visual effects on sensitive receptors, such as local residents, and other receptors, such as visitors to the local area, outweigh the benefits of the project. Coastal areas are particularly vulnerable to visual intrusion because of the potential high visibility of development on the foreshore, on the skyline and affecting views along stretches of undeveloped coast.

Similar to the policy on landscape above, the NPS is clear that all proposed energy infrastructure is likely to have visual effects for many receptors and the question is not whether these exist, but whether they outweigh the benefits of the project.

The Scheme layout has been designed to include offsets from residential properties and mitigation planting, but this will not be established at Year 1. Therefore, at Year 1 significant visual effects experienced by residents of Sandy Barr Cottage (VP17, Residential 1a & 1b), Nursery House (VP17, Residential 2a & 2c) to the south of the Order limits, Gate Burton Estate (VP15, Residential 6a -6f), Stephenson's Hill Farm to the west of the Order limits, Clay Farm in the southern centre of the Scheme but outside the Order limits, South Park Farm (Residential 3a -3c), 30 Station Road (LCC 5, Residential 4a), 2 Heynings Court (Residential 5a) along the northern side of the Order limits, and Woodside, Kexby Lane (VP 10, Residential 7a) along the eastern side of the Order limits. This will be due to the visibility of PV arrays, and due to mitigation planting not being established yet.

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Advanced Mitigation Planting has been introduced to the Scheme in order to reduce the duration for which residents experience significant adverse views west from Woodside Cottage, Kexby Lane and adjacent properties. Advanced planting is indicated in Figure 10-22 in the ES **[EN010131/APP/3.3]**.

By Year 15 however, proposed planting within and along the boundaries of the Order limits will have established which would result in no residential receptors with open views in proximity to the Order limits or set back from the Order limits in the surrounding settlements being identified as experiencing significant adverse effects at Year 15 of operation.

For road users and public transport, a range of moderate-major adverse significant effects are reported where more open views from the road network are available. By Year 15, these effects would reduce to not significant due to the establishment of tree planting, and maintenance of existing hedgerows at 3m height. The majority of views from roads and the railway would be fleeting.

Chapter 10: Landscape and Visual of the ES **[EN010131/APP/3.1]** states that during construction and in Year 1, users of sections of PRoW LL|Knai|44/2 will experience high visual effects. The magnitude of visual effects will be medium and the significance of these effects will be moderate adverse as the proposed Scheme is located adjacent to the PRoW for approximately 360m. Views from other PRoW will be screened by matured proposals landscape planting and intervening landform and effects range from moderate-minor adverse.

There will be no significant effects on visitors to Tillbridge Lane Viewpoint, Sundown Adventureland east of Treswell, and Lincoln Golf Club due to distance from the Order limits and screening in Year 1 or 15.

Whilst there are significant visual effects, the receptors experiencing effects are relatively limited for an NSIP project and both the severity of effects and the number of receptors experiencing effects have been reduced by site selection and good design. The benefits of the Scheme significantly outweigh the visual impacts.

Paragraph 5.9.21	<p>Reducing the scale of a project can help to mitigate the visual and landscape effects of a proposed project. However, reducing the scale or otherwise amending the design of a proposed energy infrastructure project may result in a significant operational constraint and reduction in function – for example, the electricity generation output. There may, however, be exceptional circumstances, where mitigation could have a very significant benefit and warrant a small reduction in function. In these circumstances, the IPC may decide that the benefits of the mitigation to reduce the landscape and/or visual effects outweigh the marginal loss of function.</p>	<p>Over time the scale of the Scheme has been reduced where the benefits in terms of reducing visual, landscape and heritage effects have justified the reduction in electricity output. This process is explained in Chapter 4 of this PDAS. In particular, panels were removed from areas around residential properties to reduce visual effects, from areas where there would be significant effects on sensitive receptors such as the heritage assets around the Gate Burton Estate and buffer areas have been introduced around Public Rights of Way. These changes did reduce electricity generation output but were considered justified to develop a well-designed Scheme.</p> <p>The Applicant considers that there are no further reductions in the scale of the Scheme that would be justified on the grounds of mitigating visual and landscape effects, given that such changes also reduce the benefits of the Scheme in terms of electricity generation and CO₂ emission reduction.</p>
Paragraph 5.9.22	<p>Within a defined site, adverse landscape and visual effects may be minimised through appropriate siting of infrastructure within that site, design including colours and materials, and landscaping schemes, depending on the size and type of the proposed project. Materials and designs of buildings should always be given careful consideration.</p>	<p>Adverse landscape and visual effects have been minimised by appropriate siting of infrastructure and landscaping within the site, with particular consideration being given to the location of the BESS, a layout that minimises vegetation removal and the landscaping Scheme. The nature of the Scheme means that there are limited buildings.</p> <p>The overall objective of the landscape design set out in the Outline Landscape and Ecological Management Plan [EN010131/APP/7.10] is to integrate the Scheme into its landscape setting and avoid or minimise adverse landscape and visual effects as far as practicable. Accordingly, the landscape design aims to achieve the following:</p> <ul style="list-style-type: none"> - To integrate the Scheme into the existing landscape pattern as far as possible by retaining and following existing features, including vegetation, where practicable; - To replace vegetation lost because of construction of the Scheme through areas of new planting;

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- To filter and screen more prominent components of the Scheme in views from visual receptors; and
- To apply appropriate offsets to residential properties to mitigate/reduce views of the Scheme in views from visual receptors.

Paragraph 5.9.23 Depending on the topography of the surrounding terrain and areas of population it may be appropriate to undertake landscaping off site. For example, filling in gaps in existing tree and hedge lines would mitigate the impact when viewed from a more distant vista.

No offsite landscaping is required or proposed.

Previously Developed Land

Paragraph 5.10.3 Although the re-use of previously developed land for new development can make a major contribution to sustainable development by reducing the amount of countryside and undeveloped greenfield land that needs to be used, it may not be possible for many forms of energy infrastructure.

This policy accepts that previously developed land may not be possible to use for many forms of infrastructure, as in the case of this Scheme, which requires a large, relatively flat open area in close proximity to Cottam Substation.

Existing and Proposed Land Uses (including Minerals)

Paragraph 5.10.5 The ES (see Section 4.2) should identify existing and proposed land uses near the project, any effects of replacing an existing development or use of the site with the proposed project or preventing a development or use on a neighbouring site from continuing. Applicants should also assess any effects of precluding a new development or use proposed in the development plan.

Chapter 12: Socio-Economics of the ES **[EN010131/APP/3.1]** identifies the existing baseline land use and socio-economic conditions for the Order limits, including the existing arable agricultural use of the majority of the site, and takes account of these in its assessment. The number of employees at the site is estimated at 3 full-time equivalents (FTEs). The Scheme will require an average of 323 FTEs during construction (2-3 years) and 14 FTEs once the Scheme is operational. In total job creation during construction is likely to be 363 jobs, including jobs created outside the site itself.

Section 3 of the PDAS sets out the planning history identified for the Order limits and surrounding area. There are no consents, pending applications or allocations within the Solar and Energy Storage Park.

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There is only one planning application currently under consideration within the Order limits, being an application for two agricultural barns at Marton located within the Grid Connection Corridor. This application was submitted in November 2022. It is considered likely that an alternative location or design can be found for the barns to enable it to proceed alongside the Scheme.

Also partially located within the Grid Connection Corridor, Cottam Power Station is identified in the Draft Bassetlaw Local Plan 2020-2038 as a Priority Regeneration Area and a broad location for future mixed-use regeneration. The site is being promoted by the land owner but has a legacy of contamination due to its historical uses associated with a coal fired power station and associated infrastructure. Policy ST6 that the Priority Regeneration Area will be safeguarded from development which would jeopardise the comprehensive remediation, reclamation and redevelopment of the whole site. The Scheme would only consist of temporary construction works to bury a cable to connect with the existing National Grid Substation, therefore will not jeopardise the ability of the site to be redeveloped.

Part of the Grid Connection Corridor is also located within a Mineral Safeguarding Area for Sand and Gravel. However it was confirmed with NCC and LCC that there is not a need for a standalone Mineral Safeguarding Assessment to accompany the DCO Application. This is on the basis that no problems are foreseen in terms of sterilisation, as there would be no permanent above ground infrastructure within previously undisturbed land in the grid connection route. It was also agreed that wherever possible, the route of the Grid Connection Corridor follow existing corridors/linear features (field boundaries), to minimise sterilisation of the MSA for sand and gravel.

Paragraph 5.10.6 Applicants will need to consult the local community on their proposals to build on open space, sports or recreational buildings and land. Taking account of the consultations, applicants should consider providing new or additional open space including green infrastructure, sport or recreation facilities, to substitute for any losses as a result of their proposal. Applicants should use any up-to-date local authority assessment or, if there is none, provide an

The Scheme does not include any proposals to build on open space, sports or recreational buildings and land.

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	independent assessment to show whether the existing open space, sports and recreational buildings and land is surplus to requirements.	
Paragraph 5.10.9	Applicants should safeguard any mineral resources on the proposed site as far as possible, taking into account the long-term potential of the land use after any future decommissioning has taken place.	Part of the Grid Connection Corridor is located within a Mineral Safeguarding Area for Sand and Gravel. However, no problems are foreseen in terms of sterilisation, as there would be no permanent above ground infrastructure within previously undisturbed land in the grid connection route. Wherever possible, the route of the Grid Connection Corridor follow existing corridors/linear features (field boundaries), to minimise sterilisation of the MSA for sand and gravel.
Paragraph 5.10.13	Where the project conflicts with a proposal in a development plan, the IPC should take account of the stage which the development plan document in England or local development plan in Wales has reached in deciding what weight to give to the plan for the purposes of determining the planning significance of what is replaced, prevented or precluded. The closer the development plan document in England or local development plan in Wales is to being adopted by the LPA, the greater weight which can be attached to it.	As illustrated in Appendix B: Local Policy Accordance table of this PDAS, the Scheme does not conflict with any proposals in a Development Plan. Cottam Power Station is identified in the Draft BLP 2020-2038 as a Priority Regeneration Area and a broad location for future mixed-use regeneration under Policy ST6, which states that the site will be safeguarded from development which would jeopardise the comprehensive remediation, reclamation and redevelopment of the whole site. The Scheme would only consist of temporary construction works to bury a cable to connect with the existing National Grid Substation, therefore will not jeopardise the sites ability to be redeveloped.

Agricultural Land

Paragraph 5.10.8	Applicants should seek to minimise impacts on the best and most versatile agricultural land (defined as land in grades 1, 2 and 3a of the Agricultural Land Classification) and preferably use land in areas of poorer quality (grades 3b, 4 and 5) except where this would be inconsistent with other sustainability considerations. Applicants should also identify any effects and seek to minimise impacts on soil quality taking into account any mitigation measures proposed. For developments on previously developed land,	There would be a permanent loss of approximately 2 ha of BMV land as a result of the Scheme. The majority of the Solar and Energy Park (approximately 88%) comprises Grade 3b agricultural land or non-agricultural land. The remaining land is Grade 3a land. Some agricultural use can continue on most BMV land following construction alongside the solar panels and the impact on almost all agricultural land is reversible when the Scheme is decommissioned. The impact on BMV land has been minimised through locating permanent
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applicants should ensure that they have considered the risk posed by land contamination.

development on lower quality land where possible. It will be further minimised through implementation of an Soils Resource Management Plan to protect soils (see **[EN010131/APP/7.12]** for the Outline Soils Resource Management Plan).

The Grid Connection Corridor is likely to contain areas of best and most versatile agricultural land. However, as agricultural uses of the land can continue following installation of the underground cable there would be no effect on the availability of best and most versatile land after construction.

The Applicant has therefore minimised the impact on agricultural land in line with this policy.

Paragraph 5.10.15 The IPC should ensure that applicants do not site their scheme on the best and most versatile agricultural land without justification. It should give little weight to the loss of poorer quality agricultural land (in grades 3b, 4 and 5), except in areas (such as uplands) where particular agricultural practices may themselves contribute to the quality and character of the environment or the local economy

The majority of the Solar and Energy Storage Park comprises Grade 3b agricultural land, and the reversible use of this land should be given little weight in line with this policy.

The area of land included that is BMV land is justified because:

- There is an urgent need for renewable energy as set out in the Statement of Need **[EN010131/APP/2.1]**
- There is capacity at Cottam Substation and only a limited radius around the power station that a new solar farm could be located.
- As shown by ES Figure 3.4 **[EN010131/APP/3.2]** within 15km of the Cottam Substation almost all land that is not part of urban areas or the area around the River Trent is mapped as Grade 3 or Grade 2. The site has been selected in an area mapped entirely in Grade 3 land, avoiding areas mapped as Grade 2. There are no alternative sites that could have been selected mapped below Grade 3.
- Within the Solar and Energy Storage Park the majority of land is mapped as Grade 3b and permanent impacts on Grade 3a land have been reduced where possible when considering other sustainability considerations.
- Some agricultural use can continue alongside the solar farm and most impacts are reversible after decommissioning of the Scheme; and

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- Within the Grid Connection Corridor impacts are limited to the presence of an underground cable and agricultural uses can continue after construction.

Paragraph 5.10.19 Although in the case of much energy infrastructure there may be little that can be done to mitigate the direct effects of an energy project on the existing use of the proposed site (assuming that some at least of that use can still be retained post project construction) applicants should nevertheless seek to minimise these effects and the effects on existing or planned uses near the site by the application of good design principles, including the layout of the project

The impact of the Scheme on agricultural uses have been minimised by considering the potential for continued agricultural use, such as sheep grazing, at the Solar and Energy Park and ensuring soils are managed to reduce risk of impacts to agricultural activities in the Grid Connection Corridor. An Application has been submitted for two agricultural barns within the Order limits; so the Applicant is engaging with the developer of the barns to look at how the two projects can proceed together. The Grid Connection Corridor also passes through the Cottam Priority Regeneration Area recognised in the Draft BLP 2020-2038. However, given the works in this area comprise an underground cable and connection to an existing substation, the works are not considered to prejudice the comprehensive redevelopment of the Priority Regeneration Area.

Planned uses near the site identified in Section 3.4 of this PDAS have also been taken into account in the design and layout of the Scheme; no adverse effects are considered to occur on adjacent uses.

Public Rights of Way

Paragraph 5.10.24 Rights of way, National Trails and other rights of access to land are important recreational facilities for example for walkers, cyclists and horse riders. The IPC should expect applicants to take appropriate mitigation measures to address adverse effects on coastal access, National Trails and other rights of way. Where this is not the case the IPC should consider what appropriate mitigation requirements might be attached to any grant of development consent.

There are no National Trails affected by the Scheme. The number of PRoW present within and adjacent to the Solar and Energy Storage Park is low considering the size of the Scheme and its rural location. PRoW are shown in Figure 2-2 of the ES [EN010131/APP/3.2].

One PRoW crosses the Solar and Energy Storage Park and this is located in the far north of the Scheme near Knaith Park. The PRoW runs alongside the Scheme for a distance and then crosses the Scheme. A buffer area has been introduced around the PRoW to minimise visual impacts.

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A number of other PRoW are located on the boundary of the Order limits or within the area affected by the Grid Connection Corridor. The location of these PRoW is shown on the Streets, Rights of Way and Access Plans **[EN010131/APP/5.3]**.

All PRoW will be kept open and on their existing alignment throughout the operational phase of the Scheme. During construction, PRoW will be kept open, and on their existing alignment as far as possible, with short, convenient, temporary diversions included where this is not possible. There will therefore be no significant adverse effects on PRoW users.

Noise

Paragraph 5.11.1	Excessive noise can have wide-ranging impacts on the quality of human life, health (for example owing to annoyance or sleep disturbance) and use and enjoyment of areas of value such as quiet places and areas with high landscape quality. The Government's policy on noise is set out in the Noise Policy Statement for England. It promotes good health and good quality of life through effective noise management. Similar considerations apply to vibration, which can also cause damage to buildings. In this section, in line with current legislation, references to "noise" below apply equally to assessment of impacts of vibration.	Chapter 11: Noise & Vibration of the ES [EN010131/APP/3.1] recognises and assesses the impacts of noise and vibration of the Scheme on health and quality of life. It is therefore considered that the Scheme is compliant with this policy.
Paragraph 5.11.2	Noise resulting from a proposed development can also have adverse impacts on wildlife and biodiversity. Noise effects of the proposed development on ecological receptors should be assessed by the IPC in accordance with the Biodiversity and Geological Conservation section of this NPS	Chapter 8: Ecology of the ES [EN010131/APP/3.1] includes an assessment of the likely impacts and effects of noise on relevant ecological features. It is therefore considered that the Scheme is compliant with this policy.
Paragraph 5.11.3	Factors that will determine the likely noise impact include: ▪ the inherent operational noise from the proposed development, and its characteristics;	Section 11.6 of Chapter 11: Noise & Vibration of the ES [EN010131/APP/3.1] and its supporting appendices explain the noise and vibration assessment methodology which has considered the factors identified by this policy.

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- the proximity of the proposed development to noise sensitive premises (including residential properties, schools and hospitals) and noise sensitive areas (including certain parks and open spaces);
- the proximity of the proposed development to quiet places and other areas that are particularly valued for their acoustic environment or landscape quality; and
- the proximity of the proposed development to designated sites where noise may have an adverse impact on protected species or other wildlife.

Section 11.6 of Chapter 11: Noise & Vibration of the ES **[EN010131/APP/3.1]** describes the noise sensitive premises and areas that have been identified. These have been determined through desktop study during the scoping process and confirmed during site visits. The locations of these receptors have been considered in both the construction and operational noise assessments.

Noise from the construction, operation and decommissioning of the Scheme is considered throughout Chapter 11 and therefore it is considered that the Scheme is compliant with this policy.

Chapter 8: Ecology of the ES **[EN010131/APP/3.1]** Includes an assessment of the likely impacts and effects of noise on designated ecological sites.

It is therefore considered that the methodology used in the ES **[EN010131/APP/3.1]** complies with this policy.

Paragraph 5.11.4 Where noise impacts are likely to arise from the proposed development, the applicant should include the following in the noise assessment:

- a description of the noise generating aspects of the development proposal leading to noise impacts, including the identification of any distinctive tonal, impulsive or low frequency characteristics of the noise;
- identification of noise sensitive premises and noise sensitive areas that may be affected;
- the characteristics of the existing noise environment;
- a prediction of how the noise environment will change with the proposed development;
- in the shorter term such as during the construction period;
- in the longer term during the operating life of the infrastructure;
- at particular times of the day, evening and night as appropriate.
- an assessment of the effect of predicted changes in the noise environment on any noise sensitive premises and noise sensitive areas; and

Chapter 11: Noise & Vibration of the ES **[EN010131/APP/3.1]** presents a noise assessment in accordance with the requirements of this policy, including a description of the noise generating aspects of the development.

Section 11.6 of Chapter 11: Noise & Vibration of the ES **[EN010131/APP/3.1]** describes the noise sensitive premises and areas that have been identified. These have been determined through desktop study during the scoping process and confirmed during site visits. The locations of these receptors have been considered in both the construction and operational noise assessments.

Section 11.7 of Chapter 11: Noise and Vibration of the ES **[EN010131/APP/3.1]** outlines the characteristics of the existing noise environment for the Scheme and surrounding areas.

Section 11.79 of Chapter 11: Noise and Vibration of the ES **[EN010131/APP/3.1]** describes the embedded design mitigation for the Scheme with respect to noise and vibration, encompassing the construction, operation and decommissioning phases.

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	<ul style="list-style-type: none"> ▪ measures to be employed in mitigating noise. <p>The nature and extent of the noise assessment should be proportionate to the likely noise impact.</p>	<p>Section 11.10 of Chapter 11: Noise and Vibration of the ES [EN010131/APP/3.1] assesses the noise generated by the Scheme during the construction period and operating life of the infrastructure (including features), including at particular times of the day and at night, on the noise sensitive premises and areas outlined in Chapter 11: Noise & Vibration of the ES [EN010131/APP/3.1].</p> <p>The noise assessment is proportionate to the likely noise impact, which would be managed through the Framework CEMP [EN010131/APP/7.3] during construction and would be limited by the nature of the Scheme and very small amount of traffic generated during operation.</p>
Paragraph 5.11.5	<p>The noise impact of ancillary activities associated with the development, such as increased road and rail traffic movements, or other forms of transportation, should also be considered.</p>	<p>The construction noise assessments presented in Section 11.10 of Chapter 11: Noise and Vibration of the ES [EN010131/APP/3.1] include the assessment of noise resulting from road and rail traffic movements generated during construction. Traffic during the operational period will be negligible. It concludes that no significant noise or vibration effects are predicted during the construction phase or the operational phase.</p>
Paragraph 5.11.6	<p>Operational noise, with respect to human receptors, should be assessed using the principles of the relevant British Standards and other guidance. Further information on assessment of particular noise sources may be contained in the technology-specific NPSs. In particular, for renewables (EN-3) and electricity networks (EN-5) there is assessment guidance for specific features of those technologies. For the prediction, assessment and management of construction noise, reference should be made to any relevant British Standards and other guidance which also give examples of mitigation strategies.</p>	<p>Chapter 11: Noise & Vibration of the ES [EN010131/APP/3.1], assessed operational plant noise at sensitive receptors (including human receptors) following BS 4142 guidance, BS8233:2014 and World Health Organization guidance. Assessment of construction and decommissioning noise has been assessed in line with Annex E of British Standards 5228-1.</p>
Paragraph 5.11.7	<p>The applicant should consult EA and Natural England (NE), or the Countryside Council for Wales (CCW), as necessary and in particular with regard to assessment of noise on protected species or other wildlife. The results of any noise surveys and predictions</p>	<p>The Applicant has taken account of advice from the EA and Natural England throughout the preparation of the Environmental Statement (see Statements of Common Ground with the Environment Agency [EN010131/APP/4.3E] and Natural England [EN010131/APP/4.3C]).</p>

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	<p>may inform the ecological assessment. The seasonality of potentially affected species in nearby sites may also need to be taken into account.</p>	<p>Chapter 8: Ecology of the ES [EN010131/APP/3.1] takes account of noise in its assessment of the impact of the Scheme on protected species and other wildlife.</p>
Paragraph 5.11.8	<p>The project should demonstrate good design through selection of the quietest cost-effective plant available; containment of noise within buildings wherever possible; optimisation of plant layout to minimise noise emissions; and, where possible, the use of landscaping, bunds or noise barriers to reduce noise transmission.</p>	<p>As detailed in Section 11.9 of Chapter 11: Noise & Vibration of the ES [EN010131/APP/3.1], embedded mitigation measures for the operational phase have been considered with reference to this policy. Embedded mitigation measures that will be applied include</p> <ul style="list-style-type: none"> - Consideration of plant selection; - Locating the BESS compound in an area away from large concentrations of receptors such that noise emissions from the BESS are less impactful; - Location and orientation of inverters and transformers; - Transformers may be standalone units or pre-assembled with inverters and switchgear to form a single contained unit (i.e. enclosed). - Locating inverters as far as possible from sensitive receptors where the highest levels of noise were predicted.
Paragraph 5.11.9	<p>The IPC should not grant development consent unless it is satisfied that the proposals will meet the following aims:</p> <ul style="list-style-type: none"> ▪ avoid significant adverse impacts on health and quality of life from noise; ▪ mitigate and minimise other adverse impacts on health and quality of life from noise; and ▪ where possible, contribute to improvements to health and quality of life through the effective management and control of noise 	<p>Section 11.12 of Chapter 11: Noise & Vibration of the ES [EN010131/APP/3.1] concludes that there no significant noise or vibration effects are predicted during the construction phase or the operational phase of the Scheme. This will avoid significant adverse impacts on health and quality of life. It also sets out mitigation measures to be incorporated into the Scheme to mitigate and minimise noise impacts. No existing noise issues have been identified that the Scheme could contribute to improving.</p>
Paragraph 5.11.11-5.11.12	<p>The IPC should consider whether mitigation measures are needed both for operational and construction noise over and above any which may form part of the project application. In doing so the IPC may wish to impose requirements. Any such requirements should take account of the guidance set out in Circular 11/95 (see Section 4.1) or any successor to it.</p>	<p>Given the outcome of the noise and vibration assessment for the Scheme and the proposed mitigation it is not anticipated that the Secretary of State will need to consider additional mitigation measures above those already embedded in the design of the Scheme and those set out within the Framework CEMP [EN010131/APP/7.3], the Framework OEMP [EN010131/APP/7.4] and the Framework DEMP [EN010131/APP/7.5]. All</p>

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Mitigation measures may include one or more of the following:

- engineering: reduction of noise at point of generation and containment of noise generated;
- lay-out: adequate distance between source and noise-sensitive receptors; incorporating good design to minimise noise transmission through screening by natural barriers, or other buildings; and
- administrative: restricting activities allowed on the site; specifying acceptable noise limits; and taking into account seasonality of wildlife in nearby designated sites.

mitigation measures listed were considered in the development of the approaches set out in these documents.

Socio-Economic Impacts

Paragraph 5.12.2 Where the project is likely to have socio-economic impacts at local or regional levels, the applicant should undertake and include in their application an assessment of these impacts as part of the ES (see Section 4.2).

Section 12.8 of Chapter 12: Socio-Economics and Land Use of the ES **[EN010131/APP/3.1]** includes an assessment of socio-economic impacts at local and regional levels, including employment, the local economy, users of Public Rights of Way (PRoW), residential properties, business properties and community facilities.

Paragraph 5.12.3 This assessment should consider all relevant socio-economic impacts, which may include:

- the creation of jobs and training opportunities;
- the provision of additional local services and improvements to local infrastructure, including the provision of educational and visitor facilities;
- effects on tourism;
- the impact of a changing influx of workers during the different construction, operation and decommissioning phases of the energy infrastructure. This could change the local population dynamics and could alter the demand for services and facilities in the settlements nearest to the construction work (including community facilities and physical infrastructure such as energy, water, transport and waste).

Chapter 12: Socio-Economics and Land Use of the ES **[EN010131/APP/3.1]** includes an assessment of socio-economic impacts that fulfils the requirements of this policy.

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There could also be effects on social cohesion depending on how populations and service provision change as a result of the development; and

- cumulative effects – if development consent were to be granted to for a number of projects within a region and these were developed in a similar timeframe, there could be some short-term negative effects, for example a potential shortage of construction workers to meet the needs of other industries and major projects within the region.

Paragraph 5.12.4 Applicants should describe the existing socio-economic conditions in the areas surrounding the proposed development and should also refer to how the development’s socio-economic impacts correlate with local planning policies.

The current socio-economic baseline conditions of the study area has been described in Chapter 12: Socio-Economics and Land Use of the ES **[EN010131/APP/3.1]**.

The Scheme’s compliance with local planning policies is considered in Appendix 2 of the PDAS.

Paragraph 5.12.8 The IPC should consider any relevant positive provisions the developer has made or is proposing to make to mitigate impacts (for example through planning obligations) and any legacy benefits that may arise as well as any options for phasing development in relation to the socio-economic impacts.

Chapter 12: Socio-Economic and Land Use of the ES **[EN010131/APP/3.1]** states that prior to the decommissioning of the Scheme, an assessment will be made of the soil, and a programme of remedial action will be agreed and during decommissioning undertaken to return land to arable agricultural use as set out in the Framework DEMP **[EN010131/APP/7.5]**, secured by requirement 19 of the draft DCO. A programme may include subsoiling and installation of a field drainage scheme. An increase in soil organic matter content may occur during the lifetime of the Solar and Energy Storage Park. It is therefore expected that the land will be in the same or better condition than it is currently as a result of the expected natural enhancement through approximately 60 years of being set-aside.

In addition, mitigation measures are embedded within the Scheme, and are set out in the respective chapters of the ES **[EN010131/APP/3.1]**, to reduce other construction and operational effects (such as noise, air quality, transport and landscape) which in turn will mitigate the effects on the local community and existing facilities from a socio-economic and land use perspective.

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Chapter 12: Socio-Economics and Land Use of the ES **[EN010131/APP/3.1]** identifies that the Scheme will result in beneficial effects that are significant on the local economy as a result of employment generation during the construction and decommissioning periods. During the construction phase, an Outline Skills, Supply Chain and Employment Plan ('OSSCEP') **[EN010131/APP/7.7]** will be implemented. The purpose of this is to promote employment and training opportunities associated with the construction and operation of the Scheme. The implementation of this Plan will help to maximise the positive gain for the local economy from the beneficial effect arising from employment generation. The OSSCEP also analyses community benefits regarding skills training, with a proposal to investigate the potential for a programme of activities which promote STEM education and careers. Given the Scheme's timescale and phases, some of these target individuals could ultimately become part of the Scheme's workforce, presenting legacy opportunities also.

Benefits of the Scheme to the local community (other than the generation of a substantial amount of renewable energy) include:

- Biodiversity net gain
- Employment during the construction phase. It is expected that an average of 363 FTE jobs will be created during the construction period, of which 323 would be at the Gate Burton site.
- During the operational phase, 14 FTE staff would be employed on the site.
- A local skills and employment plan will be prepared prior to the commencement of construction. This will set out measures that the Applicant will implement in order to advertise and promote employment opportunities associated with the Scheme in construction and operation locally.

Paragraph 5.12.9 The IPC should consider whether mitigation measures are necessary to mitigate any adverse socio-economic impacts of the development. For example, high quality design can improve the visual and environmental experience for visitors and the local community alike. No significant adverse socio-economic effects are predicted as a result of the Scheme. Embedded and additional mitigation measures have been incorporated as set out throughout this PDAS and the ES **[EN010131/APP/3.1]**.

Transport and Traffic

<p>Paragraph 5.13.3 If a project is likely to have significant transport implications, the applicant's ES (see Section 4.2) should include a transport assessment, using the NATA/WebTAG139 methodology stipulated in Department for Transport guidance, or any successor to such methodology. Applicants should consult the Highways Agency and Highways Authorities as appropriate on the assessment and mitigation.</p>	<p>Appendix 13-D of the ES [EN010131/APP/3.3] contains a transport Assessment, prepared in accordance with the appropriate guidance which includes the Government's Planning Practice Guidance; Travel Plans, TAs and Transport Statements in Decision Taking (2014).</p> <p>The Applicant has consulted with the relevant Highways Authorities and National Highways regarding the assessment and mitigation. Comments from these stakeholders are presented in Section 13.2 of Chapter 13: Transport and Access of the ES [EN010131/APP/3.1]. Further detail on consultation with Local Highway Authorities is provided in the Statements of Common Ground with Lincolnshire County Council [EN010131/APP/4.3H] and Nottinghamshire County Council [EN010131/APP/4.3B] respectively.</p>
<p>Paragraph 5.13.4 Where appropriate, the applicant should prepare a travel plan including demand management measures to mitigate transport impacts. The applicant should also provide details of proposed measures to improve access by public transport, walking and cycling, to reduce the need for parking associated with the proposal and to mitigate transport impacts.</p>	<p>A Framework Construction Traffic Management Plan (CTMP) is included as Appendix 13-E of the ES [EN010131/APP/3.3] and is secured by requirement 14 of the draft DCO. It outlines measures that will be included in the final CTMP to mitigate transport impact, manage demand, and improve and encourage construction staff to access the Order limits by public transport, cycling and reduce car transport to, and parking at, the Order Limits.</p> <p>A Travel Plan is not required for the operation period because the traffic to the site would be minimal.</p>
<p>Paragraph 5.13.6 A new energy NSIP may give rise to substantial impacts on the surrounding transport infrastructure and the IPC should therefore ensure that the applicant has sought to mitigate these impacts, including during the construction phase of the development.</p>	<p>Chapter 13: Transport and Access of the ES [EN010131/APP/3.1] outlines the embedded design mitigation measures in relation to traffic and transport, including HGV deliveries and staff vehicles. Chapter 13: Transport and Access of the ES [EN010131/APP/3.1] states that there will be no significant effects as a result of the Scheme on transport and access during any phase.</p>

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Paragraph 5.13.10	Water-borne or rail transport is preferred over road transport at all stages of the project, where cost-effective.	Given the context of the Order limits and the requirements for construction deliveries, and the fact that the railway line running through the Order limits is for passenger travel and would not facilitate construction deliveries, rail and water borne transports are not considered to be appropriate methods of transport to and from the Scheme.
Paragraph 5.13.11	The IPC may attach requirements to a consent where there is likely to be substantial HGV traffic that: <ul style="list-style-type: none">▪ control numbers of HGV movements to and from the site in a specified period during its construction and possibly on the routing of such movements;▪ make sufficient provision for HGV parking, either on the site or at dedicated facilities elsewhere, to avoid 'overspill' parking on public roads, prolonged queuing on approach roads and uncontrolled on street HGV parking in normal operating conditions; and▪ ensure satisfactory arrangements for reasonably foreseeable abnormal disruption, in consultation with network providers and the responsible police force	During operation there will not be significant HGV traffic to the Scheme and there will be no significant effects as a result of the Scheme on transport and access during any phase. Requirement 14 of the draft DCO [EN010131/APP/3.1] requires the development of a Construction Traffic Management Plan prior to the commencement of development, to be substantially in accordance with the Framework Construction Traffic Management Plan submitted with the Application in Appendix 13E of the ES [EN010131/APP/3.3] . The design of accesses at the site has taken into account the number and type of vehicles that will use them to avoid queuing on surrounding roads during construction. Parking will also be provided on site. The Applicant has also considered the routing of Abnormal Indivisible Load vehicles to the site to ensure safe, low impact routes are identified.

Waste

Paragraph 5.14.2	Sustainable waste management is implemented through the “waste hierarchy”, which sets out the priorities that must be applied when managing waste: <ul style="list-style-type: none">a) prevention;b) preparing for reuse;c) recycling;d) other recovery, including energy recovery; ande) disposal.	As detailed in Section 15.8 Waste and Recycling of Chapter 16: Other Environmental Topics of the ES [EN010131/APP/3.1] , waste arisings will be prevented where possible. Opportunities to re-use material resources will be sought where practicable. Where re-use and prevention are not possible, waste arisings will be managed and detailed in a Waste Management Plan (WMP). Requirement 12 on the draft DCO [EN010131/APP/6.1] secures production of a Waste Management Plan, which would be an appendix to the Construction Environmental Management Plan.
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Paragraph No.	Policy Requirement	Compliance with Policy
Paragraph 5.14.3	Disposal of waste should only be considered where other waste management options are not available or where it is the best overall environmental outcome.	As detailed in Section 15.8 Waste and Recycling of Chapter 16: Other Environmental Topics of the ES [EN010131/APP/3.1] , waste arisings will be prevented where possible. Opportunities to re-use material resources will be sought where practicable. Where re-use and prevention are not possible, waste arisings will be managed and detailed in a Waste Management Plan (WMP), secured by Requirement 12 on the draft DCO [EN010131/APP/6.1] .
Paragraph 5.14.4	All large infrastructure projects are likely to generate hazardous and non-hazardous waste. The EA's Environmental Permitting (EP) regime incorporates operational waste management requirements for certain activities. When an applicant applies to the EA for an Environmental Permit, the EA will require the application to demonstrate that processes are in place to meet all relevant EP requirements.	Potential sources of waste associated with the Scheme are set out by Section 15.8 of Chapter 15: Other Environmental Topics of the ES [EN010131/APP/3.1] . Should an EP relating to hazardous or non-hazardous waste be required, the Applicant would demonstrate that processes are in place to meet the relevant EP requirements. The Consents and Agreements Position Statement [EN010131/APP/6.3] sets out information on the additional consents and licences that are or may be required to construct and operate the Scheme.
Paragraph 5.14.6	The applicant should set out the arrangements that are proposed for managing any waste produced and prepare a Site Waste Management Plan. The arrangements described and Management Plan should include information on the proposed waste recovery and disposal system for all waste generated by the development, and an assessment of the impact of the waste arising from development on the capacity of waste management facilities to deal with other waste arising in the area for at least five years of operation. The applicant should seek to minimise the volume of waste produced and the volume of waste sent for disposal unless it can be demonstrated that this is the best overall environmental outcome.	As detailed in Section 15.8 of Chapter 15: Other Environmental Topics of the ES [EN010131/APP/3.1] it is proposed that a WMP will be prepared to ensure recycling and reuse of materials is maximised. The WMP will be finalised with specific measures to be implemented prior to the start of construction. The WMP is secured by Requirement 12 on the draft DCO [EN010131/APP/6.1] . It is not anticipated that there would be a significant effect on waste during the construction operation or decommissioning of the Scheme.
Paragraph 5.14.7	The IPC should consider the extent to which the applicant has proposed an effective system for managing hazardous and non-hazardous waste arising from the construction, operation and decommissioning of the proposed development. It should be satisfied that: ▪ any such waste will be properly managed, both on-site and offsite;	During the construction, operation and decommissioning of the Scheme, the re-use or recycling of materials will be explored before resorting to landfill options. As detailed in Section 15.8 of Chapter 15: Other Environmental Topics of the ES [EN010131/APP/3.1] it is proposed that a WMP will be

Paragraph No.	Policy Requirement	Compliance with Policy
	<ul style="list-style-type: none"> ▪ the waste from the proposed facility can be dealt with appropriately by the waste infrastructure which is, or is likely to be, available. Such waste arisings should not have an adverse effect on the capacity of existing waste management facilities to deal with other waste arisings in the area; and ▪ adequate steps have been taken to minimise the volume of waste arisings, and of the volume of waste arisings sent to disposal, except where that is the best overall environmental outcome. 	<p>prepared to ensure recycling and reuse of materials is maximised. The WMP will be finalised with specific measures to be implemented prior to the start of construction.</p> <p>It is not anticipated that there would be a significant effect on waste during the construction operation or decommissioning of the Scheme.</p>

Water Environment

Paragraph 5.15.2	<p>Where the project is likely to have effects on the water environment, the applicant should undertake an assessment of the existing status of, and impacts of the proposed project on, water quality, water resources and physical characteristics of the water environment as part of the ES or equivalent. (See Section 4.2.)</p>	<p>Chapter 9: Water Environment of the ES [EN010131/APP/3.1] presents the existing status of the water environment and the likely effects of the Scheme upon it. This concludes that with appropriate mitigation there are considered to be no significant residual effects for surface water, groundwater or flood risk during the construction, operation and decommissioning phases of the Scheme, leading to no significant adverse effects on water quality, water resources or physical characteristics of the water environment.</p>
Paragraph 5.15.3	<p>The ES should in particular describe:</p> <ul style="list-style-type: none"> ▪ the existing quality of waters affected by the proposed project and the impacts of the proposed project on water quality, noting any relevant existing discharges, proposed new discharges and proposed changes to discharges; ▪ existing water resources affected by the proposed project and the impacts of the proposed project on water resources, noting any relevant existing abstraction rates, proposed new abstraction rates and proposed changes to abstraction rates (including any impact on or use of mains supplies and reference to Catchment Abstraction Management Strategies); ▪ existing physical characteristics of the water environment (including quantity and dynamics of flow) affected by the proposed project and any impact of physical modifications to these characteristics; and 	<p>Section 9.7 of Chapter 9: Water Environment of the ES [EN010131/APP/3.1] provides an assessment of the baseline that complies with this policy.</p> <p>Appendix 9-A of the ES [EN010131/APP/3.3] includes a Water Framework Directive (WFD) Assessment, which assesses impacts on water bodies or protected areas under the WFD and SPZs.</p>

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	<ul style="list-style-type: none"> any impacts of the proposed project on water bodies or protected areas under the Water Framework Directive and source protection zones (SPZs) around potable groundwater abstractions. 	
Paragraph 5.15.5	The IPC will generally need to give impacts on the water environment more weight where a project would have an adverse effect on the achievement of the environmental objectives established under the Water Framework Directive	Appendix 9-A of the ES [EN010131/APP/3.3] provides a WFD Assessment. This concludes that the Scheme is compliant with the objectives of the WFD: it would not cause deterioration in status of the water bodies and would not prevent the water bodies achieving Good Ecological Status. The Scheme also contributes to the delivery of WFD objectives.
Paragraph 5.15.6	<p>The IPC should satisfy itself that a proposal has regard to the River Basin Management Plans and meets the requirements of the Water Framework Directive (including Article 4.7) and its daughter directives, including those on priority substances and groundwater.</p> <p>The specific objectives for particular river basins are set out in River Basin Management Plans. The IPC should also consider the interactions of the proposed project with other plans such as Water Resources Management Plans and Shoreline/Estuary management Plans.</p>	Chapter 9: Water Environment of the ES [EN010131/APP/3.1] takes into account the Anglian River Basin District River Basin Management Plan and Humber River Basin District River Basin Management Plan.
Paragraph 5.15.8	The IPC should consider whether mitigation measures are needed over and above any which may form part of the project application. (See Sections 4.2 and 5.1.) A construction management plan may help codify mitigation at that stage.	Mitigation measures during the construction of the Scheme will be according to best practice that are included within the Framework CEMP [EN010131/APP/7.3] , which is secured through the draft DCO.

National Policy Statement for Renewable Energy Infrastructure (EN-3), July 2011

The Energy National Policy Statements were designated on 19 July 2011. EN-3 provides policies specific to renewable energy technologies over 50MW so the document as a whole is likely to be an important and relevant matter when making a decision on the Gate Burton Energy Park DCO. However, given that the document did not cover solar, only a small number of policies are considered sufficiently relevant to mention here.

The table below considers the extent to which the Scheme complies with policies in EN-3. **The ‘compliance with policy’ column demonstrates that the Scheme complies with all relevant policies in EN-3**, with the Scheme supporting the delivery of renewable, affordable, predictable electricity generation in line with the main aims of the document.

Paragraph No.	Policy Requirement	Compliance with Policy
Paragraph 1.1.1	Electricity generation from renewable sources of energy is an important element in the Government’s development of a low carbon economy. There are ambitious renewable energy targets in place and a significant increase in generation from large-scale renewable energy infrastructure is necessary to meet the 15% renewable energy target (see Section 3.4 of EN-1).	<p>As explained in the Statement of Need [EN010131/APP/2.1], the Scheme is a substantial infrastructure asset, capable of delivering large amounts of low-carbon electricity to help meet the UK’s urgent need to decarbonise with solar technology supported by recent government policy. Its proposed National Electricity Transmission System (NETS) connection means that it would play its part in helping National Grid ESO (NGESO) manage the national electricity system to ensure security of supply and bring cost benefits to electricity consumers, both of which are identified in government policy as being required for resilient energy supplies in the future.</p> <p>Given the age of the policy, the targets set in EN-3 are now out of date and do not reflect the high targets set in more recent energy policy. Nevertheless, the meaningful and timely contributions offered by the Scheme to UK decarbonisation and security of supply, while helping lower bills for consumers throughout its operational life, support delivery of targets set in EN-3.</p>
Paragraph 2.4.2	Proposals for renewable energy infrastructure should demonstrate good design in respect of landscape and visual amenity, and in the design of the project to mitigate impacts such as noise and effects on ecology.	As detailed in Section 4 of the PDAS, the Scheme has been subject to a detailed and sensitive iterative design process. This has taken account of the context and features of the land within the Order limits, nearby sensitive receptors and assets, information emerging from environmental surveys, feedback from stakeholders, and opportunities and constraints in order to develop a good design that balances the need to maximise the energy

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generation capacity of the Scheme, with the avoidance and mitigation of impacts, and provision of environmental and other enhancements, where practicable. The design process and principles are described in Section 4 of this PDAS, with the design principles set out in the Outline Design Principles [EN010131/APP/2.3], which are secured by Requirement 5 on the draft DCO [EN010131/APP/6.1].

National Policy Statement for Electricity Networks Infrastructure (EN-5), July 2011

The Energy National Policy Statements were designated on 19 July 2011. EN-5 was written to provide a primary basis for decisions on NSIP applications for electricity networks infrastructure. The policies within the document are considered important and relevant to the Grid Connection Corridor element of the Gate Burton Energy Park, which comprises an underground grid connection of approximately 7.5km in length.

The table below considers the extent to which the Scheme complies with policies in EN-5. **The ‘compliance with policy’ section demonstrates that the Scheme complies with all relevant policies in EN-5.**

Paragraph No.	Policy Requirement	Compliance with Policy
Paragraph 2.2.5	There will usually be some flexibility around the location of the associated substations and applicants will give consideration to how they are placed in the local landscape taking account of such things as local topography and the possibility of screening. See Section 2.8 below and Section 5.9 in EN-1.	<p>There are two substations associated with the Gate Burton Scheme, the Cottam Substation located at the Cottam Power Station site and the on-site Substation. The Substation at Cottam Power Station is existing and the need to locate the Scheme close to this grid connection point was a key aspect of site selection. The Cottam National Grid Substation is existing and in an area of existing electricity infrastructure so there was no flexibility to move this Substation. The need for an additional entirely new substation in the landscape has been avoided by connecting to the NETS at the existing Cottam Substation.</p> <p>Careful consideration was given to the location of the on-site Substation given that it, alongside the BESS, comprise the taller, more industrial elements of the Scheme. The Substation and BESS are co-located because:</p> <ol style="list-style-type: none"> 1/ co-location can reduce the overall landscape and visual impacts by locating all larger scale development in one location; and 2/ there are practical reasons that co-location is preferable (e.g. colocation reduces the length of grid connections between the two elements of the Scheme and is logical because similar security and access requirements are required for both elements of the Scheme). <p>The railway across the site creates a linear barrier and whilst access under the railway is available, it is not suitable for large abnormal load vehicles</p>

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or appropriate for large amounts of traffic. During construction a significant number of deliveries will be required to the BESS and Substation to carry components, including a large vehicle of over 60 metres in length to take the transformer to the site. During operation, there is a requirement for good access for emergency service vehicles in the event of a fire and access for vehicles for maintenance and, if necessary, component replacement. Access to the west of the site is easier and would have a lesser impact on the surrounding area because it can be taken directly from the A156. A location to the west of the site is also preferred because it reduces the number of grid connections that need to be taken under the railway line.

The eastern side of the site is located in the Area of Great Landscape Value designated in the Central Lincolnshire Local Plan 2012-2036 and there are a number of heritage assets in the vicinity, particularly those to the west of the Scheme around Gate Burton Estate and the Heynings Priory Scheduled Monument located close to the Order limits to the north of the Scheme. A location close to the railway line was selected because it increases the distance between the Gate Burton Estate and the Substation, reducing the potential for visual and heritage impacts on designated assets. This location is also in a less sensitive area of the AGLV than areas further west, reducing landscape and visual impacts on the AGLV. A location between the woodland blocks maximises existing screening, reducing the visibility of this element of the Scheme from, for example, Heynings Priory. However, these Scheme elements needed to be sufficiently distant from the woodland to avoid impacting the roots of trees and areas of Ancient Woodland. Effects on ancient woodland can have arboricultural and ecology impacts but can also have landscape and visual impacts by reducing screening.

Finally, a, the Gate Burton Substation has been sited in a section of the Order limits that is not in Flood Zone 2 or 3.

In line with this policy the location of the Substation was selected following optioneering exercises to select a location that is screened by existing

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woodland, topography and existing vegetation; thereby reducing the landscape impacts of the Scheme.

Paragraph 2.3.5

The IPC should also take into account that National Grid, as the owner of the electricity transmission system in England and Wales, as well as Distribution Network Operators (DNOs), are required under section 9 of the Electricity Act 1989 to bring forward efficient and economical proposals in terms of network design, taking into account current and reasonably anticipated future generation demand. National Grid is also required to facilitate competition in the supply and generation of electricity and so has a statutory duty to provide a connection whenever or wherever one is required.

The Applicant has secured a connection to the National Grid via a new below ground grid connection cable located within the Grid Connection Route. This will connect the new Gate Burton Substation with the existing Cottam Substation. Further details of this are included in the Grid Connection Statement [EN010131/APP/7.11].

Paragraph 2.4.1

Part 2 of EN-1 provides information regarding the Government's energy and climate change strategy including policies for mitigating climate change. Section 4.8 of EN-1 sets out the generic considerations that applicants and the IPC should take into account to help ensure that electricity networks infrastructure is resilient to climate change. As climate change is likely to increase risks to the resilience of some of this infrastructure, from flooding for example, or in situations where it is located near the coast or an estuary or is underground, applicants should in particular set out to what extent the proposed development is expected to be vulnerable, and, as appropriate, how it would be resilient to: ▪ flooding, particularly for substations that are vital for the electricity transmission and distribution network; ▪ effects of wind and storms on overhead lines; ▪ higher average temperatures leading to increased transmission losses; and ▪ earth movement or subsidence caused by flooding or drought (for underground cables).

The majority of the electricity networks infrastructure associated with the Scheme is underground and is consequently highly unlikely to be affected by flooding or any similar effects of climate change.

As outlined in Chapter 6: Climate Change of the ES [EN010131/APP/3.1], account of the effects of climate change have been taken in the design of the Scheme, and its construction and decommissioning. This includes:

- The design of drainage systems will ensure that there will be no significant increases in flood risk downstream during storms up to and including the 1 in 100 (1%) annual probability design flood, with an allowance of 40% for climate change;
- Health and safety plans developed for construction and decommissioning activities will be required to account for potential climate change impacts on workers, such as flooding and heatwaves
- Location of the on-site Substation outside areas of elevated flood risk

A Decommissioning Environmental Management Plan (DEMP) (taking account of climate change risks at the time) will be prepared prior to decommissioning. A Framework DEMP [EN010131/APP/7.5] is provided as part of the Application.

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		An FRA is provided at Appendix 9-D of the ES [EN010131/APP/3.1]. The FRA provides a detailed assessment of the risk of flooding to the Scheme, taking account of climate change, and concludes that the Scheme is resilient to flood risk. This includes consideration of the Grid Connection Corridor, including evidence of how the Scheme passes the Sequential and Exception Test given that the grid connection is located in an area of elevated flood risk.
Paragraph 2.4.2	Section 4.8 of EN-1 advises that the resilience of the project to climate change should be assessed in the Environmental Statement (ES) accompanying an application. For example, future increased risk of flooding would be covered in any flood risk assessment (see Section 5.7 in EN-1).	Chapter 6: Climate Change of the ES [EN010131/APP/3.1] and Appendix 9-D of the ES [EN010131/APP/3.3] assess the resilience of the Scheme to climate change, including increased risk of flooding, as required by this policy.
Paragraph 2.9.7	Audible noise effects can also arise from substation equipment such as transformers, quadrature boosters and mechanically switched capacitors. Transformers are installed at many substations, and generate low frequency hum. Whether the noise can be heard outside a substation depends on a number of factors, including transformer type and the level of noise attenuation present (either engineered intentionally or provided by other structures).	Chapter 11: Noise & Vibration of the ES [EN010131/APP/3.1] has assessed the impacts of all aspects of the Scheme including substations in accordance with this policy.

Draft Overarching National Policy Statement for Energy (EN-1), March 2023

Revised Draft Energy NPSs were published by the Department for Business, Energy and Industrial Strategy following consultation in 2021, with further Revised Drafts published for consultation in March 2023. The Draft EN-1, unlike its predecessor, considers solar development so was written specifically to guide decision making on NSIPs such as the Scheme. The policies below were published in March 2023 so are more up to date than policies within the existing NPSs and reflect more recent legislation and policies on energy and carbon emissions. For all these reasons, Draft EN-1 is considered likely to be an important and relevant matter in decision-making on the Gate Burton Energy Park DCO, although the weight applied to policies will be reduced due to the fact that they are currently in draft.

The table below considers the extent to which the Scheme complies with policies in Draft EN-1. **The ‘compliance with policy’ column demonstrates that the Scheme complies with all relevant policies in Draft EN-1**, with the Scheme supporting the delivery of renewable, affordable, predictable electricity generation in line with the main aims of the document.

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Need for the Development

Paragraph 2.2.1	<p>In June 2019, the UK became the first major economy to legislate for a 2050 net zero Greenhouse Gases (“GHG”) emissions target through the Climate Change Act 2008 (2050 Target Amendment) Order 2019. In December 2020, the UK communicated its Nationally Determined Contributions to reduce GHG emissions by at least 68 per cent from 1990 levels by 2030. In April 2021, the Government legislated for the sixth carbon budget (CB6), which requires the UK to reduce GHG emissions by 78% by 2035 compared to 1990 levels.</p>	<p>As explained in the Statement of Need [EN010131/APP/2.1] and summarised in Section 2 of the PDAS the Scheme would generate significant amounts of low carbon electricity to contribute to meeting the government's objectives in respect of carbon reduction and climate change. This includes including the 2050 net zero GHG emissions target and 68% and 78% reduction on 1990 levels by 2030 and 2035 that are set out by this policy.</p> <p>Chapter 6: Climate Change of the ES [EN010131/PPP/3.1] presents a lifecycle greenhouse gas (GHG) impact assessment which considers the impact of GHG emissions arising over the lifetime of the Scheme on the climate. This concludes that over its 60 year operational lifetime the Scheme will produce approximately 26.99 TWh of electricity, with an average operational carbon intensity value of 17.98 grams of carbon dioxide equivalent per kWh (gCO_{2e}/kWh). This demonstrates the Scheme’s very low carbon attributes compared to other non-renewable forms of electricity generation, providing an overall major beneficial impact</p>
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		in relation to the UK meeting its carbon reduction targets and therefore represents a major beneficial effect on the climate.
Paragraph 2.3.3	Our objectives for the energy system are to ensure our supply of energy always remains secure, reliable, affordable, and consistent with meeting our target to cut GHG emissions to net zero by 2050, including through delivery of our carbon budgets and Nationally Determined Contribution. This will require a step change in the decarbonisation of our energy system.	As explained in the Statement of Need [EN010131/APP/2.1] , and summarised in Section 2 of the PDAS [EN010131/APP/2.2] , the Scheme is a substantial infrastructure asset, capable of delivering large amounts of secure, affordable, low carbon electricity to assist in meeting these objectives.
Paragraph 2.3.4	Meeting these objectives necessitates a significant amount of energy infrastructure, both large and small-scale. This includes the infrastructure needed to convert primary sources of energy (e.g. wind) into energy carriers (e.g. electricity or hydrogen), and to store and transport these energy carriers into and around the country.... The requirement for new energy infrastructure will present opportunities for the UK and contributes towards our ambition to support jobs in the UK's clean energy industry and local supply chains.	This policy recognises the need for significant energy infrastructure, including technologies to convert primary sources of energy to electricity, (i.e. as the proposed solar panels will do), and store electricity (as the proposed BESS will).
Paragraphs 2.3.5	The sources of energy we use will also need to change. Today, our energy system is dominated by fossil fuels. Although representing a record low, fossil fuels still accounted for just over 76 per cent of energy supply in 2020. We will need to dramatically increase the volume of energy supplied from low carbon sources and reduce the amount provided by fossil fuels.	This policy notes the need to dramatically increase the volume of energy supplied from low carbon sources, requiring a large amount of low carbon electricity generation as proposed as part of the Scheme.
Paragraph 2.3.7	...Using electrification to reduce emissions in large parts of transport, heating and industry could lead to more than half of final energy demand being met by electricity in 2050, up from 17 per cent in 2019, representing a doubling in demand for electricity. Low carbon hydrogen is also likely to play an increasingly significant role.	This policy emphasises that in addition to the need to decarbonise existing electricity supplies, a dramatic increase is needed in the total electricity generated to enable decarbonisation across all sectors. This again emphasises the scale of low carbon electricity generation necessary to meet these targets. The Scheme will generate a large amount of low carbon electricity to contribute to meeting this need.
Paragraph 3.1.1 and 3.1.2	This Part of the NPS explains why the government sees a need for significant amounts of new large-scale energy infrastructure to meet its energy objectives and why the government considers that the need for such infrastructure is urgent.	This policy recognises that there are expected to be significant residual adverse impacts associated with large scale energy infrastructure. ES Chapter 17 provides a Summary of Significant Environmental Effects [EN010131/APP/3.1] . Overall, with appropriate mitigation implemented, this identifies the residual significant adverse effects of the Scheme. When

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	<p>However, as noted in Section 1.7, it will not be possible to develop the necessary amounts of such infrastructure without some significant residual adverse impacts. These effects will be minimised by the application of policy set out in Parts 4 and 5 of this NPS. See also Part 2 of each technology specific NPS.</p>	<p>considered relative to the large scale nature of the Scheme these effects are considered to be relatively limited and outweighed by the significant national benefits that the Scheme will provide by providing much needed large scale renewable energy generation.</p>
		<p>The Applicant notes that, in accordance with this policy, the need for infrastructure such as the Scheme is urgent and the SoS should give substantial weight to this need in decision-making on the Application.</p>
<p>Paragraph 3.2.4</p>	<p>... the government does not consider it appropriate for planning policy to set limits on different technologies but planning policy can be used to support the government's ambitions in energy policy and other policy areas.</p>	<p>It should be noted that Draft NPS EN-1 emphasises that there are no policy limits set for different technologies. Presence of additional low carbon Schemes in the area or elsewhere should not, therefore, affect the demonstrable need for the Scheme.</p>
<p>Paragraph 3.2.5</p>	<p>The Secretary of State should therefore assess all applications for development consent for the types of infrastructure covered by this NPS on the basis that the government has demonstrated that there is a need for those types of infrastructure which is urgent, as described for each of them in this Part.</p>	<p>The Applicant notes that, in accordance with this policy, the need for infrastructure such as the Scheme is acknowledged and is urgent. Given that this policy is not yet designated, a Statement of Need [EN010131/APP/2.1] is submitted with the Application clearly setting out the need for the project. However, it is considered to be an important and relevant matter that emerging policy considers this need to be demonstrated.</p>
<p>Paragraph 3.2.6</p>	<p>In addition, the Secretary of State has determined that substantial weight should be given to this need when considering applications for development consent under the Planning Act 2008.</p>	<p>This policy further emphasises that the SoS should give substantial weight to the need for new energy infrastructure when determining applications for development consent.</p>
<p>Paragraph 3.2.7</p>	<p>The Secretary of State is not required to consider separately the specific contribution of any individual project to satisfying the need established in this NPS.</p>	<p>Given that this policy is not yet designated, a Statement of Need is submitted with the Application clearly setting out the need for the project. However, it is considered to be an important and relevant matter that emerging policy considers this need to be demonstrated.</p>

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Paragraph 3.3.3	To ensure that there is sufficient electricity to meet demand, new electricity infrastructure will have to be built to replace output from retiring plants and to ensure we can meet increased demand. Our analysis suggests that even with major improvements in overall energy efficiency, and increased flexibility in the energy system, demand for electricity is likely to increase significantly over the coming years and could more than double by 2050 as large parts of transport, heating and industry decarbonise by switching from fossil fuels to low carbon electricity. The Impact Assessment for CB6 shows an illustrative range of 465-515TWh in 2035 and 610- 800TWh in 2050.	As explained in the Statement of Need [EN010131/APP/2.1] , and summarised in Section 6 of the Planning, Design and Access Statement [EN010131/APP/2.2] , the Scheme will help meet the demand for energy which is expected to rise substantially in the future.
Paragraph 3.3.12	Decentralised and community energy systems such as micro-generation contribute to our targets on reducing carbon emissions and increasing energy security. These technologies could also lead to some reduction in demand on the main generation and transmission system. However, the government does not believe they will replace the need for new large-scale electricity infrastructure to meet our energy objectives. This is because connection of large-scale, centralised electricity generating facilities via a high voltage transmission system enables the pooling of both generation and demand, which in turn offers a number of economic and other benefits, such as more efficient bulk transfer of power and enabling surplus generation capacity in one area to be used to cover shortfalls elsewhere.	This policy clearly sets out that while decentralised and community energy schemes such as rooftop solar, can contribute to targets, it will not replace the need for new large-scale electricity infrastructure. As also explained in the Statement of Need [EN010131/APP/2.1] , this policy acknowledges that large scale electricity generation facilities are needed. The Scheme would connect directly to the NETS, to enable the transfer of the electricity it generates over a wide geographical area, as per this policy. The Scheme should be considered on the basis that its need is established and this established and urgent need should be given substantial weight in the decision.
Paragraph 3.3.19	Given the changing nature of the energy landscape, we need a diverse mix of electricity infrastructure to come forward, so that we can deliver a secure, reliable, affordable, and net zero consistent system in 2050 for a wide range of demand, decarbonisation, and technology scenarios.	As explained in the Statement of Need [EN010131/APP/2.1] , large scale solar is expected to be an important part of the diverse energy mix that this policy sets out is needed.
Paragraph 3.3.20	Wind and solar are the lowest cost ways of generating electricity, helping reduce costs and providing a clean and secure source of electricity supply (as they are not reliant on fuel for generation). Our analysis shows that a secure, reliable, affordable, net zero consistent system in 2050 is likely to be composed predominantly of wind and solar.	This policy emphasises that solar is also one of the lowest cost ways of generating electricity and that solar is one of the predominant technologies anticipated to produce electricity by 2050. The Scheme is therefore strongly supported by both the need for decarbonised grid and affordable energy supplies.

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		<p>The cost of solar generation is already super-competitive against the cost of other forms of conventional and low-carbon generation, both in Gate Burton and more widely. Internationally there is the ongoing trend of solar generation assets becoming larger and more affordable, each subsequent project providing a real-life demonstration that solar schemes of similar size and scale as the Scheme can be developed in Gate Burton. The development of such schemes will provide decarbonisation and commercial benefits to consumers. Single large-scale solar schemes deliver more quickly and at a lower unit cost than multiple independent schemes which make up the same total capacity, bringing forward carbon reductions and more affordable electricity, in line with government policy.</p>
Paragraph 3.3.25	<p>Storage has a key role to play in achieving net zero and providing flexibility to the energy system, so that high volumes of low carbon power, heat and transport can be integrated.</p>	<p>This paragraph explains the need for energy storage systems to compliment generation. In accordance with this need, the Scheme includes a BESS to control the release of energy to the NETS, enabling it to be released when it is most needed. The need for the BESS is therefore supported by this paragraph.</p>
Paragraph 3.3.26	<p>Storage is needed to reduce the costs of the electricity system and increase reliability by storing surplus electricity in times of low demand to provide electricity when demand is higher. There is currently around 4GW of electricity storage operational in GB, around 3GW of which is pumped hydro storage and around 1GW is battery storage.</p>	<p>This paragraph explains the need for energy storage systems to compliment generation. In accordance with this need, the Scheme includes a BESS to control the release of energy to the NETS, enabling it to be released when it is most needed. The need for the BESS is further supported by this paragraph.</p>
Paragraph 3.3.27	<p>Storage can provide various services, locally and at the national level. These include maximising the usable output from intermittent low carbon generation (e.g. solar and wind), reducing the total amount of generation capacity needed on the system; providing a range of balancing services to the NETSO and Distribution Network Operators (DNOs) to help operate the system; and reducing constraints on the networks, helping to defer or avoid the need for costly network upgrades as demand increases.</p>	<p>This paragraph explains the need for energy storage systems to compliment generation. In accordance with this need, the Scheme includes a BESS to control the release of energy to the NETS, enabling it to be released when it is most needed. The need for the BESS is further supported by this paragraph.</p>
Paragraph 3.3.56	<p>All the generating technologies mentioned above are urgently needed to meet the Government's energy objectives by:</p>	<p>The technologies mentioned above in the Draft NPS EN-1 include solar development so this paragraph further reconfirms the need for solar projects, including the Scheme.</p>

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	<ul style="list-style-type: none"> - providing security of supply (by reducing reliance on imported oil and gas, avoiding concentration risk and not relying on one fuel or generation type) - providing an affordable, reliable system (through the deployment of technologies with complementary characteristics) - ensuring the system is net zero consistent (by remaining in line with our carbon budgets and maintaining the options required to deliver for a wide range of demand, decarbonisation and technology scenarios, including where there are difficulties with delivering any technology) 	<p>The Scheme is a substantial infrastructure asset, capable of delivering large amounts of low-carbon electricity to help meet the UK’s urgent need to develop a secure, affordable electricity generation system which is sufficient to meet future demand and contribute to meeting the government’s objectives in respect of carbon reduction and climate change.</p> <p>As part of a diverse generation mix, solar generation contributes to improve the stability of capacity utilisations among renewable generators. When developed alongside other renewable technologies, large-scale solar will smooth out seasonal variations in total GB renewable generation, more closely matching anticipated seasonal levels of demand. Other conventional low-carbon generation (e.g. tidal, nuclear or conventional carbon with CCUS) remain important contributors to achieving the 2050 Net Zero obligation, but their contributions in the important 2020s will be very low.</p> <p>As per paragraph 3.2.6, the Scheme should be considered on the basis that its need is established and this established and urgent need should be given substantial weight in the decision.</p>
<p>Paragraph 3.3.57 and 3.3.58</p>	<p>Known generation technologies that are included within the scope of this NPS are: ... Solar PV... The need for all these types of infrastructure is established by this NPS and is urgent.</p>	<p>This confirms that solar PV generation facilities, such as the Scheme, are covered by the emerging suite of draft Energy NPSs and are urgently required.</p> <p>As per paragraph 3.2.6, the Scheme should be considered on the basis that its need is established and this urgent need should be given substantial weight in the decision on the Application.</p>
<p>Paragraph 3.3.63</p>	<p>There is an urgent need for new electricity generating capacity to meet our energy objectives.</p>	<p>Solar technology is one of the quickest and cheapest technologies to deploy. In line with paragraph 3.3.20 the Scheme can directly respond to the urgent need to deliver a large amount of renewable generation capacity quickly. Subject to obtaining the necessary consents, construction is anticipated to commence in Q1 2025 and be completed ready for operation in Q1 2028.</p>

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Paragraph 3.3.80	Given this need for new electricity infrastructure and the time it takes for electricity NSIPs to move from design conception to operation, there is an urgent need for new (and particularly low carbon) electricity NSIPs to be brought forward as soon as possible, given the crucial role of electricity as the UK decarbonises its economy.	The Scheme has great potential to deliver a substantial amount of low carbon electricity in a short timescale, with the potential to be operational by 2028. Therefore, consent on low carbon schemes, like that proposed at Gate Burton, that are compliant with policy and can be delivered urgently should be granted without delay.
Paragraph 3.3.81	It is not the Government's intention in presenting any of the figures or targets in this NPS to propose limits on any new electricity infrastructure that can be consented in accordance with the energy NPSs.	This policy again emphasises that there is no limit on new electricity infrastructure that can be consented in accordance with the energy NPSs and that a large number of projects can be consented and deliver an affordable electricity system.
Paragraph 3.3.82	It is not the role of the planning system to deliver specific amounts or limit any form of electricity infrastructure covered by this NPS.	This policy again emphasises that there is no limit on new electricity infrastructure that can be consented in accordance with the energy NPSs and that a large number of projects can be consented and deliver an affordable electricity system.
Paragraph 3.3.83	A large number of consented projects can help deliver an affordable electricity system, by driving competition and reducing costs within and amongst different technology and infrastructure types. Consenting new projects also enables projects utilising more advanced technology and greater efficiency to come forward.	This policy again emphasises that there is no limit on new electricity infrastructure that can be consented in accordance with the energy NPSs and that a large number of projects can be consented and deliver an affordable electricity system.

Alternatives

Paragraph 4.2.17	Where there is a policy or legal requirement to consider alternatives, the applicant should describe the alternatives considered in compliance with these requirements.	There is no general requirement from a policy perspective to consider alternatives or to establish whether the Scheme represents the 'best option'. The PDAS sets out how the Scheme accords with policies and legislation where consideration of alternatives may be relevant, such as flood risk, and explains how the Scheme has taken account of the locational criteria for solar farms that is set out in relevant policies (further details provided below).
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4.2.21 to Given the level and urgency of need for new energy infrastructure, the Secretary of State should, subject to any relevant legal requirements (e.g. under the Habitats Regulations) which indicate otherwise, be guided by the following principles when deciding what weight should be given to alternatives:

- the consideration of alternatives in order to comply with policy requirements should be carried out in a proportionate manner
- only alternatives that can meet the objectives of the proposed development need be considered

The Secretary of State should be guided in considering alternative proposals by whether there is a realistic prospect of the alternative delivering the same infrastructure capacity (including energy security, climate change, and other environmental benefits) in the same timescale as the proposed development.

The Secretary of State should not refuse an application for development on one site simply because fewer adverse impacts would result from developing similar infrastructure on another suitable site, and it should have regard as appropriate to the possibility that all suitable sites for energy infrastructure of the type proposed may be needed for future proposals.

Alternatives not among the main alternatives studied by the applicant (as reflected in the ES) should only be considered to the extent that the Secretary of State thinks they are both important and relevant to the decision.

As the Secretary of State must assess an application in accordance with the relevant NPS (subject to the exceptions set out in the Planning Act 2008), if the Secretary of State concludes that a decision to grant consent to a hypothetical alternative proposal would not be in accordance with the policies set out in the relevant NPS, the existence of that alternative is unlikely to be important and relevant to the Secretary of State's decision.

Chapter 3: Alternatives and Design Evolution of the ES **[EN010131/APP/3.1]** sets out information in relation to alternatives that is required by the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 and, as a matter of fact, includes information about the main alternatives studied.

Due to the location of the development and limited impacts, there is no requirement to consider alternatives due to biodiversity effects (there are no likely significant adverse effects on biodiversity) or development within nationally designated landscapes (the Scheme is not within or in close proximity to any nationally designated landscapes).

On flood risk, the grid connection point is in the flood zone and a key aspect of site selection was selecting a site close to the grid connection but outside Flood Zones 2 and 3. Alternatives closer to the grid connection point would have been in areas of higher flood risk. Given that the grid connection point is in the flood zone, the Grid Connection Corridor also crosses it and there are no alternatives that would avoid this. On the site itself areas around small watercourses have elevated flood risk so a sequential approach has been applied at the site level to minimise risk by directing the most vulnerable uses to areas of lowest flood risk. A Flood Risk Assessment is provided with the Application in Appendix 9D of the Environmental Statement **[EN010131/APP/3.3]** and provides further information on how flood risk is managed. Therefore, the Application satisfies all requirements to consider alternatives related to flood risk.

With reference to the principles to be applied when weight is given to alternatives, no alternatives have been identified by the Applicant or other parties that are considered likely to be given weight by the Secretary of State. Detail on design evolution and alternatives considered in the design and layout of the site, as well as the route of the grid connection corridor are set out in Chapter 3: Alternatives and Design Evolution of the ES **[EN010131/APP/3.1]** and Chapter 4 of this PDAS.

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Alternative proposals which mean the necessary development could not proceed, for example because the alternative proposals are not commercially viable or alternative proposals for sites would not be physically suitable, can be excluded on the grounds that they are not important and relevant to the Secretary of State's decision.

Alternative proposals which are vague or inchoate can be excluded on the grounds that they are not important and relevant to the Secretary of State's decision.

It is intended that potential alternatives to a proposed development should, wherever possible, be identified before an application is made to the Secretary of State (so as to allow appropriate consultation and the development of a suitable evidence base in relation to any alternatives which are particularly relevant) Therefore, where an alternative is first put forward by a third party after an application has been made, the Secretary of State may place the onus on the person proposing the alternative to provide the evidence for its suitability as such and the Secretary of State should not necessarily expect the applicant to have assessed it.

Health

Paragraph 4.3.6 Opportunities should be taken to mitigate indirect impacts, by promoting local improvements to encourage health and wellbeing, this includes potential impacts on vulnerable groups within society i.e. those groups within society which may be differentially impacted by a development compared to wider society as a whole.

The impacts of the Scheme on health is addressed in the Assessment of Likely Impacts and Effects, Chapter 14: Human Health of the ES **[EN010131/APP/3.1]** which includes a Health Impact Assessment that has followed the 'HUDU Rapid Health Impact Assessment Matrix' and has assessed the principal health benefits and disbenefits to residents of the local community.

Primary mitigation measures are embedded within the Scheme, as set out in the respective ES chapters, to reduce other operational effects (such as noise, air quality and landscape) which in turn will mitigate the effects on the local community and existing facilities from a human health

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perspective. As a result of the site selection and design, no significant adverse effects are predicted on health as a result of the Scheme.

Paragraph 4.3.7 and 4.3.8 Generally, those aspects of energy infrastructure which are most likely to have a significantly detrimental impact on health are subject to separate regulation (for example for air pollution) which will constitute effective mitigation of them, so that it is unlikely that health concerns will either by themselves constitute a reason to refuse consent or require specific mitigation under the Planning Act 2008.

The impacts of the Scheme on health is addressed in the Assessment of Likely Impacts and Effects, Chapter 14: Human Health of the ES [EN010131/APP/3.1] which includes a Health Impact Assessment that has followed the 'HUDU Rapid Health Impact Assessment Matrix' and has assessed the principal health benefits and disbenefits to residents of the local community.

However, not all potential sources of health impacts will be mitigated in this way and the Secretary of State will want to take account of health concerns when setting requirements relating to a range of impacts such as noise.

Primary mitigation measures are embedded within the Scheme, as set out in the respective ES chapters, to reduce other operational effects (such as noise, air quality and landscape) which in turn will mitigate the effects on the local community and existing facilities from a human health perspective. As a result of the site selection and design, no significant adverse effects are predicted on health as a result of the Scheme.

Biodiversity Net Gain

Paragraph 4.5.1 and 4.5.2 Environmental net gain is an approach to development that aims to leave the natural environment in a measurably better state than beforehand. Projects should therefore not only mitigate harms, following mitigation hierarchy, but also consider whether there are opportunities for enhancements.

Biodiversity net gain is an essential component of environmental net gain. Projects in England should consider and seek to incorporate improvements in natural capital, ecosystem services and the benefits they deliver when planning how to deliver biodiversity net gain.

Opportunities for biodiversity enhancement and securing biodiversity net gain have been sought throughout the Scheme development and led to a Scheme that will have significant positive ecological effects. This includes delivering moderate beneficial significant effects on broad leaved woodland, hedgerows and breeding birds. These measures are shown in the Outline Landscape and Ecological Management Plan (LEMP) [EN010131/APP/7.10]. Requirement 7 of the draft DCO [EN010131/APP/6.1] requires that a LEMP should be submitted and approved by the local planning authority before commencement of development and this plan should be substantially in accordance with the Outline LEMP, securing the measures proposed.

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Paragraph 4.5.4	Energy NSIP proposals, whether onshore or offshore, should seek opportunities to contribute to and enhance the natural environment by providing net gains for biodiversity, or the wider environment.	The Biodiversity Net Gain Assessment provides an assessment of how effective measures have been incorporated into the Scheme to increase biodiversity and the resulting increase that would result for the Scheme layout presented in Figure 2-4 of the ES [EN010131/APP/3.2] .
Paragraphs 4.5.5 and 4.5.6	<p>In England applicants for onshore elements of any development are encouraged to use the most current version of the Defra biodiversity metric to calculate their biodiversity baseline and present biodiversity net gain outcomes. This calculation should be presented in full as part of their application.</p> <p>Where possible, this data should be shared with the Local Authority and Natural England for discussion at the pre-application stage as it can help to highlight biodiversity and wider environmental issues which may later cause delays if not addressed.</p>	A Biodiversity Net Gain (BNG) assessment, using Defra's Metric 3.1, has been provided with the DCO application [EN010131/APP/7.9] . The final percentage of net gain achieved will depend on the detailed design of the Scheme, which cannot be determined with certainty at this stage. However the BNG Assessment demonstrates that the Scheme can achieve far in excess of 10% biodiversity net gain.
Paragraph 4.5.8	Biodiversity net gain should be applied after compliance with the mitigation hierarchy and does not change or replace existing environmental obligations.	<p>The Biodiversity Net Gain Assessment provides an assessment of how effective measures have been incorporated into the Scheme to increase biodiversity and the resulting increase that would result for the Scheme layout presented in Figure 2-4 of the ES [EN010131/APP/3.2].</p> <p>Opportunities to enhance other environmental gains are outlined by topic in the relevant sections of the ES [EN010131/APP/3.1].</p>
Paragraph 4.5.11	<p>In addition to delivering biodiversity net gain, developments may also deliver wider environmental gains and benefits to communities relevant to the local area, and to national policy priorities, such as:</p> <ul style="list-style-type: none"> - reductions in GHG emissions; - reduced flood risk; - improvements to air or water quality; - climate adaptation; - landscape enhancement; or 	<p>The Scheme will deliver a substantial reduction in greenhouse gas emissions over its lifetime, as explained by Chapter 6: Climate Change, of the ES [EN010131/APP/3.1]. In addition, it has taken other opportunities to provide enhancements, including by providing substantial BNG and habitat creation.</p> <p>The Biodiversity Net Gain Assessment provides an assessment of how effective measures have been incorporated into the Scheme to increase biodiversity and the resulting increase that would result for the Scheme layout presented in Figure 2-4 of the ES [EN010131/APP/3.2].</p>

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- increased access to natural greenspaces including trees and woodlands.

The scope of potential gains will be dependent on the type, scale and location of specific projects. Applications should look for a holistic approach to delivering wider environmental gains and benefits through the use of nature-based solutions and green infrastructure.

Opportunities to enhance other environmental gains are outlined by topic in the relevant sections of the ES [EN010131/APP/3.1].

Paragraph 4.5.13 Applications for development consent should be accompanied by a statement demonstrating how opportunities for delivering wider environmental net gains have been considered, and where appropriate, incorporated into proposals as part of good design (including any relevant operational aspects) of the project.

The Biodiversity Net Gain Assessment provides an assessment of how effective measures have been incorporated into the Scheme to increase biodiversity and the resulting increase that would result for the Scheme layout presented in Figure 2-4 of the ES [EN010131/APP/3.2].

Opportunities to enhance other environmental gains are outlined by topic in the relevant sections of the ES [EN010131/APP/3.1].

Paragraph 4.5.17 Although achieving biodiversity net gain is not currently an obligation on applicants, Schedule 15 of the Environment Act 2021 contains provisions which, when commenced, mean the Secretary of State may not grant an application for a Development Consent Order unless satisfied that a biodiversity gain objective is met in relation to the onshore development in England to which the application relates.

A Biodiversity Net Gain (BNG) assessment, using Defra's Metric 3.1, has been provided with the DCO application [EN010131/APP/7.9]. The final percentage of net gain achieved will depend on the detailed design of the Scheme, which cannot be determined with certainty at this stage. However the BNG Assessment demonstrates that the Scheme can achieve far in excess of 10% biodiversity net gain.

Design

Paragraph 4.6.4 Given the benefits of "good design" in mitigating the adverse impacts of a project, applicants should consider how "good design" can be applied to a project during the early stages of the project lifecycle.

As detailed in Section 4 of the PDAS, the Scheme has been subject to a detailed and sensitive iterative design process. This has taken account of the context and features of the land within the Order limits, nearby sensitive

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receptors and assets, information emerging from environmental surveys, feedback from stakeholders, and opportunities and constraints in order to develop a good design that balances the need to maximise the energy generation capacity of the Scheme, with the avoidance and mitigation of impacts, and provision of environmental and other enhancements, where practicable.

The design process and basis of design decisions taken are described in the Chapter 3: Alternatives and Design Evolution of the ES **[EN010131/APP/3.1]**. The Outline Design Principles **[EN010131/APP/2.3]** set out the design principles that are secured by Requirement 5 of the draft DCO **[EN010131/APP/6.1]**, ensuring the detailed design proceeds in line within principles that secure the predicted low impacts and environmental enhancements.

Paragraph 4.6.5 To ensure good design is embedded within the project development, a project board level design champion should be appointed, and a representative design panel used to maximise the value provided by the infrastructure. Design principles should be established from the outset of the project to guide the development from conception to operation.

As detailed in Section 4 of the PDAS, the Scheme has been subject to a detailed and sensitive iterative design process. This has taken account of the context and features of the land within the Order limits, nearby sensitive receptors and assets, information emerging from environmental surveys, feedback from stakeholders, and opportunities and constraints in order to develop a good design that balances the need to maximise the energy generation capacity of the Scheme, with the avoidance and mitigation of impacts, and provision of environmental and other enhancements, where practicable.

The design process and basis of design decisions taken are described in the Chapter 3: Alternatives and Design Evolution of the ES **[EN010131/APP/3.1]**. The Outline Design Principles **[EN010131/APP/2.3]** set out the design principles that are secured by Requirement 5 of the draft DCO **[EN010131/APP/6.1]**, ensuring the detailed design proceeds in line within principles that secure the predicted low impacts and environmental enhancements.

The Gate Burton team had a design champion who led the multi-disciplinary approach to the design of the scheme from initial stages to

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present. This person led the development of plans showing key constraints to development, plans showing exclusion zones and the site layout. He organised and led multi-disciplinary workshops to review site layouts and drove forward the design, taking into account the views of planners, technical design team, Low Carbon, transport professionals, consultation, the lands team and all disciplines contributing to the ES. He led development of Chapter 2: The Scheme of the ES and reviewed the design sections of the PDAS. He also led development of the Outline Design Principles, in collaboration with Low Carbon, to ensure firm commitments were made to key principles of design.

The design champion was considered a key member of the team and became the 'go to person' when queries were raised around scheme changes, design iterations and layout. He had sufficient influence to ensure multi-disciplinary approaches were taken and the ability to listen to all perspectives and recommend a way forward.

The design process was iterative and continuous, but with particular focuses at Design Freezes and following the key non-statutory and statutory consultation processes. The design champion was a member of the core team, not remote from it, enabling dynamic decision making where opportunities were identified to enhance design, deliver additional benefits, reduce environmental impacts or respond to requests for changes to the design from landowners, residents, local authorities and consultees. He was supported by a collaborative team (including Low Carbon) working towards the best outcomes.

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Paragraphs 4.9.5 to 4.9.7 In certain circumstances, measures implemented to ensure a scheme can adapt to climate change may give rise to additional impacts, for example as a result of protecting against flood risk, there may be consequential impacts on coastal change. In preparing measures to support climate change adaptation applicants should take reasonable steps to maximise the use of nature-based solutions alongside other conventional techniques.

Integrated approaches, such as looking across the water cycle, considering coordinated management or water storage, supply, demand, wastewater, and flood risk can provide further benefits to address multiple infrastructure needs, as well as carbon sequestration benefits.

In addition to avoiding further GHG emissions when compared with more traditional adaption approaches, nature-based solutions can also result in biodiversity benefits and net gain, as well as increasing absorption of carbon dioxide from the atmosphere.

Consideration has been given to incorporating nature-based climate change adaption into the Scheme, and proposals for SuDS have been included.

Paragraphs 4.9.9 and 4.9.11 The ES should set out how the proposal will take account of the projected impacts of climate change, using government guidance and industry standard benchmarks such as the Climate Change Allowances for Flood Risk Assessments, 142 Climate Impacts Tool, 143 and British Standards for climate change adaptation, 144 in accordance with the EIA Regulations. This information will be needed by the Secretary of State.

Applicants should assess the impacts on and from their proposed energy project across a range of climate change scenarios, in line with appropriate expert advice and guidance available at the time.

Applicants should demonstrate that proposals have a high level of climate resilience built-in from the outset and should also demonstrate how proposals can be adapted over their predicted lifetimes to remain resilient to a credible maximum climate change scenario. These results should be considered alongside relevant research which is based on the climate change projections.

As outlined in Chapter 6: Climate Change of the ES [EN010131/APP/3.1], account of the effects of climate change have been taken in the design of the Scheme, and its construction and decommissioning. This includes:

- The design of drainage systems will ensure that there will be no significant increases in flood risk downstream during storms up to and including the 1 in 100 (1%) annual probability design flood, with an allowance of 40% for climate change;
- Health and safety plans developed for construction and decommissioning activities will be required to account for potential climate change impacts on workers, such as flooding and heatwaves
- Adaptation measures to reduce the effect of projected temperature increases on electrical equipment over the course of the Scheme's design life have been taken into account. Inverters (PV and BESS) will have a cooling system installed to control the temperature and allow the inverters to operate efficiently in warmer conditions. The PV modules and transformers have a wide range of acceptable

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operating temperatures, and it has been determined that increasing temperatures will not adversely affect their operation.

A Decommissioning Environmental Management Plan (DEMP) (taking account of climate change risks at the time) will be prepared prior to decommissioning. A Framework DEMP [EN010131/APP/7.5] is provided as part of the Application.

An FRA is provided at Appendix 9-D of the ES [EN010131/APP/3.3]. The FRA provides a detailed assessment of the risk of flooding to the Scheme, taking account of climate change, and concludes that the Scheme is resilient to flood risk. It is therefore considered that the Scheme is compliant with this policy.

Chapter 6: Climate change of the ES [EN010131/APP/3.1] presents a lifecycle greenhouse gas (GHG) impact assessment which considers the impact of GHG emissions arising over the lifetime of the Scheme on the climate. This concludes that over its 60 year operational lifetime the Scheme will produce approximately 26.99 TWh of electricity, with an average operational carbon intensity value of 17.98 grams of carbon dioxide equivalent per kWh (gCO_{2e}/kWh). This demonstrates the Scheme's very low carbon attributes compared to other non-renewable forms of electricity generation, providing an overall major beneficial impact in relation to the UK meeting its carbon reduction targets and therefore represents a major beneficial effect on the climate.

Paragraph 5.2.17	In all cases, the Secretary of State must take account of any relevant statutory air quality limits and statutory air quality objectives. . If a project will lead to non-compliance with a statutory limit the Secretary of State should refuse consent.	The Scheme is not located in or near to an Air Quality Management Area or CAZ, and air quality limits are not in danger of being exceeded. Therefore, mitigation measures are not required.
Paragraph 5.3.4	All proposals for energy infrastructure projects should include a GHG assessment as part of their ES (See Section 4.2). This should include: - A whole life GHG assessment showing construction, operational and decommissioning carbon impacts	Chapter 6: Climate change of the ES [EN010131/APP/3.1] presents a lifecycle greenhouse gas (GHG) impact assessment which considers the impact of GHG emissions arising over the lifetime of the Scheme on the climate. This concludes that over its 60 year operational lifetime the Scheme will produce approximately 26.99 TWh of electricity, with an

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- An explanation of the steps that have been taken to drive down the climate change impacts at each of those stages
- Measurement of embodied GHG impact from the construction stage
- How reduction in energy demand and consumption during operation has been prioritised in comparison with other measures
- How operational emissions have been reduced as much as possible through the application of best available technology for that type of technology
- Calculation of operational energy consumption and associated carbon emissions
- Whether and how any residual GHG emissions will be (voluntarily) offset or removed using a recognised framework
- Where there are residual emissions, the level of emissions and the impact of those on national and international efforts to limit climate change, both alone and where relevant in combination with other developments at a regional or national level, or sector level, if sectoral targets are developed

average operational carbon intensity value of 17.98 grams of carbon dioxide equivalent per kWh (gCO₂e/kWh). This demonstrates the Scheme's very low carbon attributes compared to other non-renewable forms of electricity generation, providing an overall major beneficial impact in relation to the UK meeting its carbon reduction targets and therefore represents a major beneficial effect on the climate.

Tables 3-1 of the Framework CEMP **[EN010131/APP/7.3]** and the Framework OEMP **[EN010131/APP/7.4]** set out measures to control and drive down carbon emissions during construction and operation of the Scheme.

Ecology

Paragraph 5.4.4 and 5.4.5 The highest level of biodiversity protection is afforded to sites identified through international conventions. The Habitats Regulations set out sites for which an HRA will assess the implications of a plan or project, including Special Areas of Conservation and Special Protection Areas.

As a matter of policy, the following should be given the same protection as sites covered by the Habitat's Regulations and an HRA will also be required: (a) potential Special Protection Areas and possible Special Areas of Conservation; (b) listed or proposed Ramsar sites; and (c) sites identified, or required, as compensatory measures for adverse effects on other HRA sites.

Section 8.11 of Chapter 8: Ecology of the ES **[EN010131/APP/3.1]** sets out that no such sites are present within the study area. A Habitats Regulation Assessment: No Significant Effects Report **[EN010131/APP/7.2]** is submitted with the application. This concludes that the Scheme will not result in a likely significant effect on any European Sites either alone or in combination with other plans or projects.

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Paragraph 5.4.8	Development on land within or outside a SSSI, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits (including need) of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of SSSIs.	There are no SSSIs located within or adjacent to the Order limits. The assessment in Section 8.11 of Chapter 8: Ecology of the ES [EN010131/APP/3.1] considers the impacts of the Scheme on designated sites and concludes that would be no potential significant adverse effects as a result of the construction or operation of the Scheme. The Scheme therefore accords with this policy.
Paragraph 5.4.12 and 5.4.13	Sites of regional and local biodiversity and geological interest, which include Regionally Important Geological Sites, Local Nature Reserves and Local Wildlife Sites, are areas of substantive nature conservation value and make an important contribution to ecological networks and nature's recovery. They can also provide wider benefits including public access (where agreed), climate mitigation and helping to tackle air pollution. National planning policy expects plans to identify and map Local Wildlife sites, and to include policies that not only secure their protection from harm or loss but also help to enhance them and their connection to wider ecological networks.	The assessment in Section 8.11 of Chapter 8: Ecology of the ES [EN010131/APP/3.1] of the likely significant impacts of the Scheme on designated sites and concludes that there are no potential significant adverse effects as a result of the construction or operation of the Scheme on any sites of regional and local biodiversity and geological interest.
Paragraphs 5.4.17 and 5.4.18	Where the development is subject to EIA the applicant should ensure that the ES clearly sets out any effects on internationally, nationally, and locally designated sites of ecological or geological conservation importance (including those outside England), on protected species and on habitats and other species identified as being of principal importance for the conservation of biodiversity, including irreplaceable habitats. The applicant should provide environmental information proportionate to the infrastructure where EIA is not required to help the Secretary of State consider thoroughly the potential effects of a proposed project.	Section 8.7 of Chapter 8: Ecology of the ES [EN010131/APP/3.1] sets out all the designated sites of ecological or geological conservation importance; protected species; and habitats and other species identified as being of principal importance for the conservation of biodiversity within the study area for the Scheme. Sections 8.10 and 8.12 of ES Chapter 8 [EN010131/APP/3.1] go on to set out the expected effects on the above receptors during the construction, operation and decommissioning phases of the Scheme. This concludes that with the application of mitigation measures set out in Chapter 8: Ecology of the ES [EN010131/APP/3.1] no significant adverse effects have been identified on any internationally, nationally or locally designated sites during construction, operation or

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<p>Paragraph 5.4.19 to 5.4.21</p> <p>The applicant should show how the project has taken advantage of opportunities to conserve and enhance biodiversity and geological conservation interests.</p> <p>Applicants should consider wider ecosystem services and benefits of natural capital when designating enhancement measures.</p> <p>As set out in Section 4.6, the design process should embed opportunities for nature inclusive design. Energy infrastructure projects have the potential to deliver significant benefits and enhancements beyond Biodiversity Net Gain, which result in wider environmental gains. The scope of potential gains will be dependent on the type, scale, and location of each project.</p>	<p>decommissioning of the Scheme. The scope of the ES [EN010131/APP/3.1] accords with this policy</p> <hr/> <p>Chapter 9: Ecology of the ES [EN010131/APP/3.1] explains how opportunities to protect and enhance biodiversity have been incorporated into the Scheme. A Biodiversity Net Gain (BNG) assessment, using Defra's Metric 3.1, has been provided with the DCO application [EN010131/APP/7.9]. For the purposes of BNG, the Scheme will result in an overall significant net gain. The Scheme has therefore incorporated improvements in biodiversity and accords with this policy.</p>
<p>Paragraph 5.4.22</p> <p>The design of Energy NSIP proposals will need to consider the movement of mobile / migratory species such as birds, fish and marine and terrestrial mammals and their potential to interact with infrastructure. As energy infrastructure could occur anywhere within England and Wales, both inland and onshore and offshore, the potential to affect mobile and migratory species across the UK and more widely across Europe (transboundary effects) requires consideration, depending on the location of development.</p>	<p>Section 8.7 of Chapter 8: Ecology of the ES [EN010131/APP/3.1] sets out all the protected species, habitats and other species identified as being of principal importance for the conservation of biodiversity within the study area for the Scheme. Chapter 8: Ecology of the ES [EN010131/APP/3.1] clearly set out the expected effects on the above receptors during the construction, operation and decommissioning phases of the Scheme. This concludes that there are anticipated to be no significant adverse effects on any of these protected species as a result of the Scheme following mitigation. There are predicted to be significant beneficial effects on breeding birds as a result of habitat enhancements.</p>
<p>Paragraph 5.4.32</p> <p>Applicants should include measures to mitigate the direct and indirect effects of development on ancient woodland, veteran trees or other irreplaceable habitats during both construction and operational phase.</p>	<p>There will be no loss of ancient woodland or veteran trees as a result of the Scheme.</p> <p>As outlined in Chapter 8: Ecology of the ES [EN010131/APP/3.1], the Scheme has been designed to avoid key nature conservation and ecological features with buffers introduced between solar panels/ BESS elements and:</p>

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- All woodlands, including ancient woodland – at least 15m;
- All trees within hedgerows and individual trees – protected by clearly defined root protection areas, concordant with the requirements for each individual tree;
- All hedgerows – at least 5m

Within some of these buffers, particularly around the ancient woodland, natural regeneration of woodland will create additional scrub and woodland habitat. Other areas will be managed as grassland. Tree Root Protection fencing will be erected around retained trees, in line with British Standard BS 5837: Trees in relation to design, demolition and construction – Recommendations

Paragraphs 5.4.33 and 5.4.34 Applicants should consider any reasonable opportunities to maximise the restoration, creation, and enhancement of wider biodiversity, and the protection and restoration of the ability of habitats to store or sequester carbon as set out under Section 4.5.

Chapter 9: Ecology of the ES [EN010131/APP/3.1] explains how opportunities to protect and enhance biodiversity have been incorporated into the Scheme.

Consideration should be given to improvements to, and impacts on, habitats and species in, around and beyond developments, for wider ecosystem services and natural capital benefits, beyond those under protection and identified as being of principal importance. This may include considerations and opportunities identified through Local Nature Recovery Strategies, and national goals and targets set through the government’s strategy for nature for example.

A Biodiversity Net Gain (BNG) assessment, using Defra’s Metric 3.1, has been provided with the DCO application [EN010131/APP/7.9]. For the purposes of BNG, the Scheme will result in a significant overall biodiversity net gain.

Paragraph 5.4.35 Applicants should include appropriate avoidance, mitigation, compensation and enhancement measures as an integral part of the proposed development. In particular, the applicant should demonstrate that:

- during construction, they will seek to ensure that activities will be confined to the minimum areas required for the works
- the timing of construction has been planned to avoid or limit disturbance

Embedded design mitigation measures such as those set out in this policy are outlined in Section 8.9 of Chapter 8: Ecology of the ES [EN010131/APP/3.1] and are illustrated within the Framework CEMP [EN010131/APP/7.3], Framework OEMP [EN010131/APP/7.4] and Framework DEMP [EN010131/APP/7.5]. These include habitat avoidance, creation and replacement measures; mitigation relating to protected and notable species; and standard mitigation measures that comply with industry good practice and environmental legislation.

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- during construction and operation best practice will be followed to ensure that risk of disturbance or damage to species or habitats is minimised, including as a consequence of transport access arrangements
- habitats will, where practicable, be restored after construction works have finished
- opportunities will be taken to enhance existing habitats, rather than replace them, and where practicable, create new habitats of value within the site landscaping proposals. Where habitat creation is required as mitigation, compensation or enhancement, the location and quality will be of key importance. In this regard habitat creation should be focussed on areas where the most ecological and ecosystems benefits can be realised.

Production of a final CEMP, OEMP and DEMP are secured by way of a requirement in the draft DCO. The Framework CEMP [EN010131/APP/7.3] includes best practice measures to ensure that activities will be confined to the minimum areas required for the works during construction, in accordance with this part of the policy.

Section 8.9 of Chapter 8: Ecology of the ES [EN010131/APP/3.1] outlines mitigation measures pertaining to habitat avoidance, creation and replacement measures that comply with this part of the policy.

Paragraph 5.4.36 Applicants should produce and implement a Biodiversity Management Strategy as part of their development proposals. This could include provision for biodiversity awareness training to employees and contractors so as to avoid unnecessary adverse impacts on biodiversity during the construction and operation stages.

The management of biodiversity throughout the life of the Scheme is covered by the Framework CEMP [EN010131/APP/7.3], Framework OEMP [EN010131/APP/7.4] and DEMP [EN010131/APP/7.5].

The Framework CEMP [EN010131/APP/7.3], sets out that an Environmental Clerk of Works (ECoW) will provide advice about environmental and ecological issues during construction including for example, management of protected species, surface water management, pollution, air quality and noise.

Paragraph 5.4.39 The government's 25 Year Environment Plan and the Environment Act 2021 mark a step change in ambition for wildlife and the natural environment. The Secretary of State should have regard to the aims and goals of the government's Environmental Improvements Plan and any relevant measures and targets, including statutory targets set out in the Environment Act or elsewhere.

Chapter 8: Ecology of the ES [EN010131/APP/3.1] has been produced with regard to the aims and goals of the 25 Year Environment Plan, as evidenced by the extensive habitat to be provided pursuant to the Outline LEMP [EN010131/APP/3.1]. The Applicant has also considered the Environment Act 2021, as evidenced by the Biodiversity Net Gain Assessment [EN010131/APP/7.9]. It is therefore considered that the Scheme is compliant with this policy.

As a nationally significant NSIP, the Scheme also contributes to climate change mitigation, which in turn is beneficial for biodiversity and geological conservation interests.

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<p>Paragraph 5.4.41</p>	<p>The benefits of nationally significant low carbon energy infrastructure development may include benefits for biodiversity and geological conservation interests and these benefits may outweigh harm to these interests. The Secretary of State may take account of any such net benefit where it can be demonstrated.</p>	<p>A BNG Assessment, using Defra’s Metric 3.1, has been provided with the DCO application [EN010131/APP/7.9]. This report demonstrates that the project has the potential to deliver significant biodiversity net gain on site that will significantly exceed the 10% target.</p>
<p>Paragraphs 5.4.42 and 5.4.43</p>	<p>As a general principle, and subject to the specific policies below, development should, in line with mitigation hierarchy, aim to avoid significant harm to biodiversity and geological conservation interests, including through consideration of reasonable alternatives (as set out in Section 4.2 above). Where significant harm cannot be avoided, impacts should be mitigated and as a last resort, appropriate compensation measures should be sought.</p> <p>If significant harm to biodiversity resulting from a development cannot be avoided (for example through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then the Secretary of State will give significant weight to any residual harm and consent may be refused.</p>	<p>As outlined in Chapter 8: Ecology of the ES [EN010131/APP/3.1], with the application of mitigation measures no significant adverse effects have been identified on designated ecological sites, habitats or protected species during construction, operation or decommissioning of the Scheme.</p> <p>Embedded design mitigation measures are outlined in Section 8.9 of Chapter 8: Ecology of the ES [EN010131/APP/3.1], and are illustrated within the Framework CEMP [EN010131/APP/7.3], Framework OEMP [EN010131/APP/7.4] and Framework DEMP [EN010131/APP/7.5].</p> <p>These include habitat avoidance, creation and replacement measures; mitigation relating to protected and notable species; and standard mitigation measures that comply with industry good practice and environmental legislation.</p> <p>Production of a final CEMP, OEMP and DEMP are secured by way of a requirement in the draft DCO.</p>
<p>Paragraph 5.4.44</p>	<p>The Secretary of State should consider what appropriate requirements should be attached to any consent and/or in any planning obligations entered into, in order to ensure that any mitigation or biodiversity net gain measures, if offered, are delivered and maintained. Any habitat creation or enhancement delivered for biodiversity net gain should generally be maintained for a minimum period of 30 years, or for the lifetime of the project, if longer.</p>	<p>Mitigation and biodiversity net gain measures are secured in several ways through the draft DCO [EN010131/APP/6.1] including:</p> <ul style="list-style-type: none"> - Outline Design Principles [EN010131/APP/2.3] incorporate design principles that secure elements of embedded mitigation essential for mitigation; for example this includes maintaining buffer areas from areas of Ancient Woodland. Requirement 5 states that the detailed design must accord with the Outline Design Principles.

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- Outline Landscape and Ecological Management Plan [EN010131/APP/7.10] has been submitted with the Application detailing landscape and ecological mitigation and enhancement measures. Requirement 7 on the draft DCO states that the final LEMP must be submitted and approved by the relevant local planning authority prior to construction and that this document must be substantially in accordance with the Outline LEMP.
- Requirement 8 on the draft DCO states that no development must commence until a biodiversity net gain strategy has been submitted and approved by the relevant planning authority; and that this must also be substantially in accordance with the LEMP. This ensures that the extent and nature of ecological measures in the Outline LEMP are implemented.
- Requirements 12, 13 and 19 require the development of a CEMP, OEMP and DEMP; developed to be substantially in accordance with the Framework documents submitted with the Application. This secures measures detailed in these documents, including, for example, protection of ecological features during construction and decommissioning.

Paragraph 5.4.46 and 5.4.47 Development proposals provide many opportunities for building-in beneficial biodiversity or geological features as part of good design. The Secretary of State should give appropriate weight to environmental and biodiversity enhancements, although any weight given to gains provided to meet a legal requirement (for example under the Environment Act 2021) is likely to be limited.

A Biodiversity Net Gain (BNG) assessment, using Defra's Metric 3.1, has been provided with the DCO application [EN010131/APP/7.9]. For the purposes of BNG, the Scheme will result in a significant overall biodiversity net gain.

When considering proposals, the Secretary of State should maximise such reasonable opportunities in and around developments, using requirements or planning obligations where appropriate. This can help towards delivering biodiversity net gain as part of or in addition to the approach set out in Section 4.5.

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Paragraph 5.4.53	The Secretary of State should give due consideration to such regional or local designations. However, given the need for new nationally significant infrastructure, these designations should not be used in themselves to refuse development consent. Development will still be expected to comply with the biodiversity and geological conservation requirements set out in this NPS.	The assessment in Section 8.11 of Chapter 8: Ecology of the ES [EN010131/APP/3.1] of the likely significant impacts of the Scheme on designated sites and concludes that there are no potential significant adverse effects as a result of the construction or operation of the Scheme on any sites of regional and local biodiversity and geological interest.
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Flood Risk

Paragraph 5.8.9	If, following application of the Sequential Test, it is not possible, (taking into account wider sustainable development objectives), for the project to be located in areas of lower flood risk the Exception Test can be applied, as required by Annex 3 of the Planning Practice Guidance. The test provides a method of allowing necessary development to go ahead in situations where suitable sites at lower risk of flooding are not available.	As stated in the Appendix 9-D FRA of the ES [EN010131/APP/3.3] , the Solar and Energy Storage Park infrastructure is predominantly located within Flood Zone 1 (for fluvial and tidal sources) and is considered to be predominantly at low risk from other sources of flooding (surface water, groundwater, sewer and artificial). This element of the Scheme is therefore considered to pass the Sequential Test and application of the Exception Test is not required. In addition, the FRA demonstrates that reasonable steps have been taken to sequentially located infrastructure within the Solar and Energy Storage Park to areas of lower risk from all sources of flooding and away from the small watercourses on this area of the Scheme. The Grid Connection Corridor is predominantly located within Flood Zone 3 (for fluvial and tidal sources). Whilst other Grid Connection Corridor options were considered, these were also located within Flood Zone 3 and there are no alternative routes at lower risk of flooding from any source. The Exception Test is therefore applied. Section 8 of Appendix 9-D FRA of the ES [EN010131/APP/3.3] concludes that the Scheme is considered to pass the Sequential and Exception Tests.
Paragraphs 5.8.10 and 5.8.11	The Exception Test is only appropriate for use where the Sequential Test alone cannot deliver an acceptable site. It would only be appropriate to move onto the Exception Test when the Sequential Test has identified reasonably available, lower risk sites appropriate for the proposed development where, accounting for wider sustainable development objectives, application of relevant policies would provide a clear reason for refusing development in any	The Solar and Energy Storage Park is predominantly located within Flood Zone 1 (for fluvial and tidal sources) and passes the Sequential Test so no Exception Test is required for this element of the Scheme. Cottam Substation is located in an area of high flood risk so any project that utilises the capacity at the Substation would require electricity

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alternative locations identified. Examples could include alternative site(s) that are subject to national designations such as landscape, heritage and nature conservation designations, for example Areas of Outstanding Natural Beauty (AONBs), SSSIs and World Heritage Sites (WHS) which would not usually be considered appropriate

Both elements of the Exception Test will have to be satisfied for development to be consented. To pass the Exception Test it should be demonstrated that:

- the project provides wider sustainability benefits to the community that outweigh flood risk
- the project will be safe for its lifetime taking account of the vulnerability of its users, without increasing flood risk elsewhere, and where possible, will reduce flood risk overall.

connections through Flood Zone 3. In this scenario the sequential approach cannot deliver an alternative outside Flood Zone 3. The Grid Connection Corridor is predominantly located within Flood Zone 3 (for fluvial and tidal sources). Whilst other Grid Connection Corridor options were considered, these were also located within Flood Zone 3 and there are no alternative routes at lower risk of flooding from any source. The Exception Test is therefore applied. The nature of the development in Flood Zones 2 and 3, being predominantly an underground cable, means it will not significantly increase flood risk elsewhere or be susceptible to risk when the area is flooded.

Section 8 of Appendix 9-D FRA of the ES **[EN010131/APP/3.3]** concludes that the Scheme passes the Sequential and Exception Test. The Scheme will have both a national, and global significance, through its decarbonisation of the nation's electricity generation, and is clearly commensurate with national energy policy. It will also provide habitat creation and biodiversity net gain. Therefore, the Scheme will provide wider sustainability benefits that outweigh its impacts on flood risk.

In addition, embedded mitigation measures and an Outline Drainage Strategy (Appendix 9-C of the ES **[EN010131/APP/3.1]**), secured by Requirement 10 of the draft DCO **[EN010131/APP/6.1]** will be implemented, in order to ensure that the Scheme will not increase the risk of flooding from all sources either to, or arising from the Scheme development during the construction, operational and decommissioning phases.

The Scheme therefore passes the Exception Test.

Paragraph 5.8.12

Development should be designed to ensure there is no increase in flood risk elsewhere, accounting for the predicted impacts of climate change throughout the lifetime of the development. There should be no net loss of floodplain storage and any deflection or constriction of flood flow routes should be safely managed within the site. Mitigation measures should make as much use as possible of natural flood management techniques.

A site-specific Flood Risk Assessment (FRA) is provided at Appendix 9-D of the ES **[EN010131/APP/3.3]**. The FRA provides a detailed assessment of the risk of flooding to and from the Scheme (taking account of climate change) and concludes that the risk of flooding elsewhere will not be increased as a result of the construction, operation or decommissioning of

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		<p>the Scheme. It also concludes that there will be no loss of floodplain storage as a result of the Scheme.</p>
<p>Paragraph 5.8.13</p>	<p>A site-specific flood risk assessment should be provided for all energy projects in Flood Zones 2 and 3 in England or Zones B and C in Wales. In Flood Zone 1 in England or Zone A in Wales, an assessment should accompany all proposals involving: sites of 1 hectare or more...</p>	<p>A site-specific Flood Risk Assessment (FRA) is provided at Appendix 9-D of the ES [EN010131/APP/3.3]. The FRA provides a detailed assessment of the risk of flooding to and from the Scheme (taking account of climate change) and concludes that the risk of flooding will not be increased as a result of the construction, operation or decommissioning of the Scheme.</p>
<p>Paragraph 5.8.14</p>	<p>This assessment should identify and assess the risks of all forms of flooding to and from the project and demonstrate how these flood risks will be managed, taking climate change into account.</p>	<p>A site-specific Flood Risk Assessment (FRA) is provided at Appendix 9-D of the ES [EN010131/APP/3.3]. The FRA considers the risks from all forms of flooding (fluvial, total, surface water, groundwater, sewers and artificial sources) and provides a detailed assessment of the risk of flooding to and from the Scheme (taking account of climate change). It concludes that the risk of flooding will not be increased as a result of the construction, operation or decommissioning of the Scheme.</p>
<p>Paragraph 5.8.15</p>	<p>The minimum requirements for Flood Risk Assessments (FRA) are that they should:</p> <ul style="list-style-type: none"> - be proportionate to the risk and appropriate to the scale, nature and location of the project - consider the risk of flooding arising from the project in addition to the risk of flooding to the project - take the impacts of climate change into account, across a range of climate scenarios, clearly stating the development lifetime over which the assessment has been made - be undertaken by competent people, as early as possible in the process of preparing the proposal - consider both the potential adverse and beneficial effects of flood risk management infrastructure, including raised defences, flow channels, flood storage areas and other artificial features, together with the consequences of their failure and exceedance - consider the vulnerability of those using the site, including arrangements for safe access and escape 	<p>An FRA is provided at Appendix 9-D of the ES [EN010131/APP/3.3] and meets all requirements set in paragraph 5.8.7. Section 1.2 of the FRA outlines the objectives of the FRA as stipulated by the NPS, and these requirements are addressed throughout the FRA.</p>

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- consider and quantify the different types of flooding (whether from natural and human sources and including joint and cumulative effects) and include information on flood likelihood, speed-of-onset, depth, velocity, hazard and duration
 - identify and secure opportunities to reduce the causes and impacts of flooding overall, making as much use as possible of natural flood management techniques as part of an integrated approach to flood risk management
 - consider the effects of a range of flooding events including extreme events on people, property, the natural and historic environment and river and coastal processes
 - include the assessment of the remaining (known as 'residual') risk after risk reduction measures have been taken into account and demonstrate that these risks can be safely managed, ensuring people will not be exposed to hazardous flooding
 - consider how the ability of water to soak into the ground may change with development, along with how the proposed layout of the project may affect drainage systems. Information should include:
 - i. Describe the existing surface water drainage arrangements for the site
 - ii. Set out (approximately) the existing rates and volumes of surface water run-off generated by the site. Detail the proposals for restricting discharge rates
 - iii. Set out proposals for managing and discharging surface water from the site using sustainable drainage systems and accounting for the predicted impacts of climate change. If sustainable drainage systems have been rejected, present clear evidence of why their inclusion would be inappropriate
 - iv. Demonstrate how the hierarchy of drainage options (has been followed.
 - v. Explain and justify why the types of SUDs and method of discharge have been selected and why they are considered appropriate. Where cost is a reason for not including SUDs, provide information to enable
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- comparison with the lifetime costs of a conventional public sewer connection
- vi. Explain how sustainable drainage systems have been integrated with other aspects of the development such as open space or green infrastructure, so as to ensure an efficient use of the site
- vii. Describe the multifunctional benefits the sustainable drainage system will provide
- viii. Set out which opportunities to reduce the causes and impacts of flooding have been identified and included as part of the proposed sustainable drainage system
- ix. Explain how run-off from the completed development will be prevented from causing an impact elsewhere
- x. Explain how the sustainable drainage system been designed to facilitate maintenance and, where relevant, adoption. Set out plans for ensuring an acceptable standard of operation and maintenance throughout the lifetime of the development
- detail those measures that will be included to ensure the development will be safe and remain operational during a flooding event throughout the development's lifetime without increasing flood risk elsewhere
- identify and secure opportunities to reduce the causes and impacts of flooding overall during the period of construction
- be supported by appropriate data and information, including historical information on previous events.

Paragraph 5.8.17

Development (including construction works) will need to account for any existing watercourses and flood and coastal erosion risk management structures or features, or any land likely to be needed for future structures or features so as to ensure:

- Access, clearances and sufficient land are retained to enable their maintenance, repair, operation, and replacement, as necessary
- Their standard of protection is not reduced
- Their condition or structural integrity is not reduced

Chapter 9 of the ES: Water Environment **[EN010131/APP/3.1]** provides that the majority of construction works across the Order Limits are buffered from watercourses and on relatively flat topography. As such, the risk to watercourses within the study area from construction activities is considered generally low.

Chapter 9 provides further details of how existing watercourses and flood risk management structures have been considered. This includes a set of avoidance areas which have been assigned within the Grid Connection Corridor where watercourses would be crossed using horizontal directional

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drilling instead of intrusive, open cut techniques. The launch and exit pits for the drilling will be sited outside of the avoidance areas, a minimum of 10m from watercourse and a minimum of 16m from the toe of flood defences. Open cut techniques are confined to smaller watercourses, and ditches.

Aside from direct works for watercourse crossings, the Scheme design includes a 10m buffer around all watercourses and ponds. With the exception of the Grid Connection Corridor cable crossings and access track crossings, there should be no further requirement to work in immediate proximity to watercourses or ponds.

Paragraphs 5.8.21 to 5.8.23 The Sequential Test ensures that a sequential, risk-based approach is followed to street new development to areas with the lowest risk of flooding, taking all sources of flood risk and climate change into account. Where it is not possible to locate development in low-risk areas, the Sequential Test should go on to compare reasonably available sites with medium risk areas and then, only where there are no reasonably available sites in low and medium risk areas, within high-risk areas.

The technology specific NPSs set out some exceptions to the application of the Sequential Test. However, when seeking development consent on a site allocated in a development plan through the application of the Sequential Test, informed by a strategic flood risk assessment, applicants need not apply the Sequential Test, provided the proposed development is consistent with the use for which the site was allocated and there is no new flood risk information that would have affected the outcome of the test.

Consideration of alternative sites should take account of the policy on alternatives set out in Section 4.2 above. All projects should apply the Sequential Test to locating development within the site.

As stated in the Appendix 9-D FRA of the ES **[EN010131/APP/3.3]**, the Solar and Energy Storage Park infrastructure is predominantly located within Flood Zone 1 (for fluvial and tidal sources) and is considered to be predominantly at low risk from other sources of flooding (surface water, groundwater, sewer and artificial). This element of the Scheme is therefore considered to pass the Sequential Test and application of the Exception Test is not required. In addition, the FRA demonstrates that reasonable steps have been taken to sequentially located infrastructure within the Solar and Energy Storage Park to areas of lower risk from all sources of flooding and away from the small watercourses on this area of the Scheme.

The Grid Connection Corridor is predominantly located within Flood Zone 3 (for fluvial and tidal sources). Whilst other Grid Connection Corridor options were considered, these were also located within Flood Zone 3 and there are no alternative routes at lower risk of flooding from any source. The Exception Test is therefore applied. Section 8 of Appendix 9-D FRA of the ES **[EN010131/APP/3.3]** concludes that the Scheme is considered to pass the Sequential and Exception Tests.

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Cultural Heritage

Paragraph 5.9.9	The applicant should undertake an assessment of any likely significant heritage impacts of the proposed development as part of the EIA and describe these in the ES (see Section 4.2). This should include consideration of heritage assets above, at, and below the surface of the ground. Consideration will also need to be given to the possible impacts, including cumulative, on the wider historic environment. The assessment should include reference to any historic landscape or seascape character assessment and associated studies as a means of assessing impacts relevant to the proposed project.	Chapter 7: Cultural Heritage of the ES [EN010131/APP/3.1] contains a clear and detailed assessment of likely impacts and effects of the Scheme on cultural heritage including cumulative effects at section 7.13
Paragraph 5.9.12	The applicant should ensure that the extent of the impact of the proposed development on the significance of any heritage assets affected can be adequately understood from the application and supporting documents. Studies will be required on those heritage assets affected by noise, vibration, light and indirect impacts, the extent and detail of these studies will be proportionate to the significance of the heritage asset affected.	Chapter 7: Cultural Heritage of the ES [EN010131/APP/3.1] describes the heritage assets within the study area for the Scheme and their significance. and the contribution of their setting to that significance. Section 7.8 and 7.10 of Chapter 7: Cultural Heritage of the ES [EN010131/APP/3.1] contains a clear assessment of likely impacts and effects of the Scheme on cultural heritage. All effects are considered, including noise, vibration, light and indirect impacts, although given that after construction the Scheme would generate little noise, vibration or light, the majority of impacts are as a result of direct impacts (for non-designated archaeological assets) or impacts on the setting of heritage assets due to the Scheme being visible from or present within the setting.
Paragraph 5.9.13	The applicant is encouraged, where opportunities exist, to prepare proposals which can make a positive contribution to the historic environment, and to consider how their scheme takes account of the significance of heritage assets affected. This can include, where possible: a. enhancing, through a range of measures such a sensitive design, the significance of heritage assets or setting affected b. considering where required the development of archive capacity which could deliver significant public benefits c. considering how visual or noise impacts can affect heritage assets, and whether there may be opportunities to enhance access to, or interpretation, understanding and appreciation of, the heritage assets affected by the scheme.	Section 7.9 of Chapter 7: Cultural Heritage of the ES [EN010131/APP/3.1] outlines the avoidance and mitigation measures embedded within the Scheme design in relation to cultural heritage. This includes the provision of stand-offs between the Scheme and heritage assets in order to help to preserve their setting during the construction, operational and decommissioning periods. Appropriate and sensitive screening has also been developed and implemented to minimise the visual intrusion of the Scheme, while avoiding obscuring or intruding upon key views and relationships between heritage assets. Following decommissioning, the solar farm will be removed, and its impact on the setting of heritage assets reversed.

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Paragraph 5.9.14	Careful consideration in preparing the scheme will be required on whether the impacts on the historic environment will be direct or indirect, temporary or permanent.	Chapter 7: Cultural Heritage of the ES [EN010131/APP/3.1] contains a clear assessment of likely impacts and effects of the Scheme on cultural heritage, including whether such effects are likely to be direct or indirect, temporary or permanent. There would be no significant effects on designated heritage assets. Generally, impacts of the Scheme on non-designated heritage assets would be indirect, on their setting, and assessed to be not significant after additional mitigation. Setting impacts would also be reversed following decommissioning.
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Paragraph 5.9.25	When considering the impact of a proposed development on the significance of a designated heritage asset, the Secretary of State should give great weight to the asset's conservation. The more important the asset, the greater the weight should be. This is irrespective of whether any potential harm amounts to substantial harm, total loss, or less than substantial harm to its significance.	Chapter 7: Cultural Heritage of the ES [EN010131/APP/3.1] concludes that there will be no significant effects on designated heritage assets or their setting as a result of the Scheme. The effects on designated assets, which are non-significant, would nevertheless be given great weight in decision-making.
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There would be minor (non-significant) adverse effects upon the following designated assets:

- Segelocum Roman Town Scheduled Monument
- Roman fort south of Littleborough Lane Scheduled Monument
- Medieval Bishops Palace, Stow Park, Scheduled Monument
- Heynings Priory, Scheduled Monument
- Gate Burton Hall (II* listed building)
- Church of St Mary in Stow (Grade I listed building)

The magnitude of effect on all the above assets is 'very low', with minor adverse effects arising due to the high value assets not due to large changes made to the setting of the assets. All other effects on designated assets would be no more than negligible.

Significant changes have been made to the layout of the Scheme to reduce the effects on the above assets to the level now predicted, including reducing the number of panels to remove development from areas close to the assets and sensitive landscaping proposals.

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The effects above are outweighed by the very significant public benefits of the Scheme when considered in isolation and cumulatively with other adverse effects of the Scheme.

Paragraphs 5.9.26 to 5.9.28 The Secretary of State should give considerable importance and weight to the desirability of preserving all heritage assets. Any harm or loss of significance of a designated heritage asset (from its alteration or destruction, or from development within its setting) should require clear and convincing justification.

Chapter 7: Cultural Heritage of the ES **[EN010131/APP/3.1]** concludes that there would be no substantial harm to any designated heritage assets, and no significant effects on designated heritage assets or their setting as a result of the Scheme. The minor adverse effects are justified because they are minor in nature, have been reduced significantly by the Scheme design and are outweighed by the benefits of the Scheme.

Substantial harm to or loss of significance of a grade II listed building park or garden should be exceptional.

Substantial harm to or loss of significance of assets of the highest significance, including Scheduled Monuments; Protected Wreck Sites; Registered Battlefields; grade I and II* Listed Buildings; grade I and II* Registered Parks and Gardens; and World Heritage Sites, should be wholly exceptional.

Paragraph 5.9.30 Where the proposed development will lead to less than substantial harm to the significance of the designated heritage asset, this harm should be weighted against the public benefits of the proposal, including, where appropriate, securing its optimum viable use.

Chapter 7: Cultural Heritage of the ES **[EN010131/APP/3.1]** concludes that there will be no significant effect on designated heritage assets or their setting as a result of the Scheme. Given that residual effects on designated heritage assets are all minor or negligible effects, whilst considerable weight is given to the desirability of preserving the assets the limited level of harm means the level of justification is reduced. The minor adverse effects are justified because they are minor in nature, have been reduced significantly by the Scheme design and are outweighed by the benefits of the Scheme

Paragraph 5.9.31 In weighing applications that directly or indirectly affect non-designated heritage assets, a balanced judgement will be required having regard to the scale of any harm or loss and the significance of the heritage asset.

The assessment in section 7.10 of Chapter 7: Cultural Heritage of the ES **[EN010131/APP/3.1]** concludes that the magnitude of impact to non-designated archaeological assets (AEC009, AEC010, AEC011, MLI125067, MLI52472;AEC013, MLI52489, MNT15983, MNT4983 and AEC014) as a result of the Scheme has been assessed as medium, resulting in a moderate adverse significance of effect, which in the absence of additional mitigation, would be significant. Additional mitigation in the

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form of a programme of archaeological excavation and recording is proposed, as set out in the Archaeological Mitigation Strategy **[EN010131/APP/7.6]**. Archaeological excavation and recording would not minimise the physical impact to these assets, as the archaeological evidence would still be removed, but would compensate for their loss by preserving them by record. This would reduce the magnitude of impact on individual assets, resulting in a residual minor adverse effects, which are not significant.

Landscape and Visual Impacts

Paragraph 5.10.11 Outside nationally designated areas, there are local landscapes that may be highly valued locally. Where a local development document in England or a local development plan in Wales has policies based on landscape character assessment, these should be paid particular attention. However, locally valued landscapes should not be used in themselves to refuse consent, as this may unduly restrict acceptable development.

West Lindsey District Council has designated several Areas of Great Landscape Value (AGLV) within the district. An AGLV covers part of the area within and around the Scheme, extending from Marton in the south, to north of Gainsborough, covering land between the River Trent in the west and the East Midlands Railway to the east. This includes the eastern part of the Order limits, as shown on ES Volume 2: Figure 10-7 of the ES **[EN010131/APP/3.2]** and Figure 3-2 of this PDAS.

The Applicant is not aware of any evidence base documents that set out in detail the rationale behind the AGLV designation or its boundaries; nor are there any documents that specify where the most valued areas of the AGLV are located so the Applicant has made judgements on the most sensitive areas of the AGLV based on baseline research as part of the AGLV.

Particular attention has been paid to the AGLV in Chapter 10: Landscape and Visual of the ES **[EN010131/APP/3.1]** by taking the designation into account when defining the value of landscape character areas, taking it into consideration in the design and landscaping of the Scheme and assessing the impact of the Scheme on the local designation.

The Scheme has been designed to minimise the impact on the AGLV where possible by locating the BESS and Substation to the far eastern

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extent of the AGLV, distant from the more sensitive areas around Gate Burton. An area of panels to the east of Gate Burton has also been removed from the Scheme to reduce the impacts on heritage assets near Gate Burton; which also reduces landscape and visual impacts from the Gate Burton area, including removing effects that were significant prior to the change. This further reduces the impact on the most sensitive areas of the AGLV. Influence of the Scheme on the wider AGLV will be limited by intervening woodland. Access through the AGLV will primarily be via the A156, an existing A road, with the internal access road route being re-designed to be further from the Gate Burton area of the AGLV.

The ES concludes that there will be no significant effects on the AGLV during construction, operation or decommissioning. Overall, the Scheme would have a minor adverse (non-significant) impact on the AGLV. Given that this is a local designation and the effect is not significant, this impact is considered acceptable. This conclusion takes into account the fact that the policy states that *'local landscape designations should not be used in themselves to refuse consent, as this may unduly restrict acceptable development.'*

The Scheme complies with this policy as particular attention has been paid to the local landscape designation in developing the design of the Scheme, the baseline for the LVIA and the assessment of impacts.

Paragraph 5.10.12 and 5.10.13 All proposed energy infrastructure is likely to have visual effects for many receptors around proposed sites.

The Secretary of State will have to judge whether the visual effects on sensitive receptors, such as local residents, and other receptors, such as visitors to the local area, outweigh the benefits of the project.

Similar to the policy on landscape above, the NPS is clear that all proposed energy infrastructure is likely to have visual effects for many receptors and the question is not whether these exist, but whether they outweigh the benefits of the project.

The Scheme layout has been designed to include offsets from residential properties and mitigation planting, but this will not be established at Year 1. Therefore, at Year 1 significant visual effects experienced by residents of Sandy Barr Cottage (VP17, Residential 1a & 1b), Nursery House (VP17, Residential 2a & 2c) to the south of the Order limits, Gate Burton Estate (VP15, Residential 6a -6f), Stephenson's Hill Farm to the west of the Order

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limits, Clay Farm in the southern centre of the Scheme but outside the Order limits, South Park Farm (Residential 3a -3c), 30 Station Road (LCC 5, Residential 4a), 2 Heynings Court (Residential 5a) along the northern side of the Order limits, and Woodside, Kexby Lane (VP 10, Residential 7a) along the eastern side of the Order limits. This will be due to the visibility of PV arrays, and due to mitigation planting not being established yet.

Advanced Mitigation Planting has been introduced to the Scheme in order to reduce the duration for which residents experience significant adverse views west from Woodside Cottage, Kexby Lane and adjacent properties. Advanced planting is indicated in Figure 10-22 in the ES **[EN010131/APP/3.3]**.

By Year 15 however, proposed planting within and along the boundaries of the Order limits will have established which would result in no residential receptors with open views in proximity to the Order limits or set back from the Order limits in the surrounding settlements being identified as experiencing significant adverse effects at Year 15 of operation.

For road users and public transport, a range of moderate-major adverse significant effects are reported where more open views from the road network are available. By Year 15, these effects would reduce to not significant due to the establishment of tree planting, and maintenance of existing hedgerows at 3m height. The majority of views from roads and the railway would be fleeting.

Chapter 10: Landscape and Visual of the ES **[EN010131/APP/3.1]** states that during construction and in Year 1, users of sections of P_{RoW} LL|Knai|44/2 will experience high visual effects. The magnitude of visual effects will be medium and the significance of these effects will be moderate adverse as the proposed Scheme is located adjacent to the P_{RoW} for approximately 360m. Views from other P_{RoW} will be screened

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by matured proposals landscape planting and intervening landform and effects range from moderate-minor adverse.

There will be no significant effects on visitors to Tillbridge Lane Viewpoint, Sundown Adventureland east of Treswell, and Lincoln Golf Club due to distance from the Order limits and screening in Year 1 or 15.

Whilst there are significant visual effects, the receptors experiencing are relatively limited for an NSIP project and both the severity of effects and the number of receptors experiencing effects have been reduced by site selection and good design. The benefits of the Scheme significantly outweigh the visual impacts.

Paragraph 5.10.21 The assessment should also demonstrate how noise and light pollution from construction and operational activities on residential amenity and on sensitive locations, receptors and views, will be minimised.

Noise and light pollution have been minimised through good design and measures to reduce pollution during all stages of the Scheme. The BESS and Substation have been located away from residential properties to reduce noise impacts and lighting has been minimised across the Scheme.

During construction in winter months, mobile lighting towers with a power output of 8kVA may be used during construction in isolated work areas. There will also be lighting at the main construction compounds while construction is underway. All construction lighting will be deployed in accordance with the recommendations set out in the Framework CEMP **[EN010131/APP/3.1]**.

Details of operational lighting are set out in Chapter 2: The Scheme, of the ES **[EN010131/APP/3.1]**. This explains that lighting sensors for security purposes will be deployed around the electrical infrastructure and potentially at other pieces of critical infrastructure. No areas are proposed to be continuously lit. It is anticipated that the lighting will be controlled via infrared. Chapter 10: Landscape and Visual of the ES **[EN010131/APP/3.1]** considers light pollution from construction in its assessment scenarios.

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Chapter 11: Noise & Vibration of the ES [EN010131/APP/3.1] concludes that there would be no significant noise or vibration effects during the construction or the operational phase of the Scheme. Therefore, there would be no significant adverse impacts on health and quality of life. It also sets out mitigation measures to be incorporated into the Scheme to mitigate and minimise noise impacts. No existing noise issues have been identified that the Scheme could contribute to improving.

Paragraph 5.10.23 Applicants should consider how landscapes can be enhanced using landscape management plans, as this will help to enhance environmental assets where they contribute to landscape and townscape quality.

Good design has been a key consideration from the outset. The LVIA has informed the iterative design process in response to policy requirements, published landscape character assessment guidance and fieldwork analysis. Design mitigation has been embedded in the Scheme to minimise effects on landscape character and visual amenity, with measures set out in the **Outline Landscape and Ecological Management Plan [EN010131/APP/7.10]** and **Figure 10-23: Outline Landscape Masterplan** of the ES [EN010131/APP/3.2].

The overall objective of the landscape design is to integrate the Scheme into its landscape setting and avoid or minimise adverse landscape and visual effects as far as practicable. The design has been developed in collaboration with the wider design team and other specialists to achieve a solution that achieves this objective whilst maximising opportunities to deliver net gains in biodiversity. Accordingly, the landscape design aims to achieve the following:

- To integrate the Scheme into the existing landscape pattern as far as possible by retaining and following existing features, including vegetation, where practicable;
 - To replace vegetation lost because of construction of the Scheme through areas of new planting;
 - To filter and screen more prominent components of the Scheme in views from visual receptors; and
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		<ul style="list-style-type: none">• To apply appropriate offsets to residential properties to mitigate/reduce views of the Scheme in views from visual receptors <p>Details of the landscape measures embedded into the Scheme design, including a summary of their environmental functions, are presented in the Outline Landscape and Ecological Management Plan (OLEMP) [EN010131/APP/7.10].</p>
Paragraph 5.10.34	The scale of energy projects means that they will often be visible within many miles of the site of the proposed infrastructure. The Secretary of State should judge whether any adverse impact on the landscape would be so damaging that it is not offset by the benefits (including need) of the project.	<p>This policy recognises that NSIPs are likely to be visible within many miles of the site and have adverse impacts on the landscape. The policy therefore emphasises that the factor to consider in policy compliance is not whether these impacts are present, but whether they are 'so damaging' as not to be offset by the benefits of the project.</p> <p>Whilst some significant landscape impacts are unavoidable due to the scale of the Scheme and its presence within the landscape, particularly at the local level, the site selection (including topography), design and layout limits mean the visibility of the site and impacts are limited. Section 10.11 of Chapter 10 of the ES [EN010131/APP/3.1] states:</p> <p><i>the LVIA indicates that:</i></p> <ul style="list-style-type: none">• <i>there are relatively few sensitive receptors nearby, few PRow across the site, few residents with views, and no nationally designated landscapes;</i>• <i>a lot of the site is not openly visible due to the flat landscape and hedgerows/ trees screening views;</i>• <i>more extensive views from higher land are distant and encompass a wide panorama in which the Scheme would not dominate;</i>• <i>embedded mitigation and use of stand-offs to more sensitive receptors is effective in reducing and/or mitigating effects; and</i>• <i>significant residual effects are predominantly not at the highest level of significance and include only two residential locations with a moderate significant effect by Year 15.'</i>

Chapter 10 of the ES **[EN010131/APP/3.1]** concludes that the Scheme would have some residual, temporary significant adverse effects on the landscape as a result of construction and decommissioning. Effects would be temporary and minimised where possible through measures set out in the Framework CEMP **[EN010131/APP/7.3]**, and the DEMP **[EN010131/APP/7.5]**.

A scheme of mitigation planting will reduce landscape and visual impacts as far as possible, however some significant effects will remain during the operational phase of the Scheme.

Chapter 10: Landscape and Visual of the ES **[EN010131/APP/3.1]** concludes that the operation of the Scheme will not result in significant effects to the Landscape Character Types defined at a regional level or the Landscape Character Areas and Landscape Character Parcels defined at the County or District Levels.

For Local Landscape Character Areas (LLCA) the operation of the Scheme will result in significant effects to LLCA 02: Ancient Woodland Ridge and LLCA 06: Clay Farmlands during Year 1 and Year 15 (although impact would be reduced during later years). Given the Scheme is located across these LLCAs the large alteration in character is inevitable.

All residual significant effects are set out in Table 10-7 to 10-9 of Chapter 10: Landscape and Visual Impact of the ES **[EN010131/APP/3.1]**.

The Scheme will have both a national, and global significance, through its decarbonisation of the nation's electricity generation, and is clearly commensurate with national energy policy. It will also provide habitat creation and enhancement to achieve biodiversity net gain.

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		Therefore, in accordance with this policy, the level of landscape impacts are not considered to be so damaging that they are not offset by the benefits of the Scheme.
Paragraph 5.10.35	In reaching a judgment, the Secretary of State should consider whether any adverse impact is temporary, such as during construction, and/or whether any adverse impact on the landscape will be capable of being reversed in a timescale that the Secretary of State considers reasonable.	Construction and decommissioning stage impacts will be for a relatively short duration, and operational effects beginning at Year 1 will reduce over time as mitigation planting establishes. The change to the landscape character, via the introduction of solar panels and associated infrastructure is considered to be localised and would be reversed following decommissioning. The reduction of effects over time and the reversibility of effects should be taken into consideration when reaching a judgement on the Application.

Noise

Paragraph 5.12.6	Where noise impacts are likely to arise from the proposed development, the applicant should include the following in the noise assessment: <ul style="list-style-type: none">- a description of the noise generating aspects of the development proposal leading to noise impacts, including the identification of any distinctive tonal, impulsive, low frequency or temporal characteristics of the noise- identification of noise sensitive receptors and noise sensitive areas that may be affected- the characteristics of the existing noise environment- a prediction of how the noise environment will change with the proposed development- in the shorter term, such as during the construction period- in the longer term, during the operating life of the infrastructure- at particular times of the day, evening and night (and weekends) as appropriate, and at different times of year- an assessment of the effect of predicted changes in the noise environment on any noise-sensitive receptors, including an	Chapter 11: Noise & Vibration of the ES [EN010131/APP/3.1] presents a noise assessment in accordance with the requirements of this policy. Section 11.6 of Chapter 11: Noise & Vibration of the ES [EN010131/APP/3.1] describes the noise sensitive premises and areas that have been identified. These have been determined through desktop study during the scoping process and confirmed during site visits. The locations of these receptors have been considered in both the construction and operational noise assessments. Section 11.7 of Chapter 11: Noise and Vibration of the ES [EN010131/APP/3.1] outlines the characteristics of the existing noise environment for the Scheme and surrounding areas. Section 11.79 of Chapter 11: Noise and Vibration of the ES [EN010131/APP/3.1] describes the embedded design mitigation for the
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- assessment of any likely impact on health and well-being where appropriate, and noise-sensitive areas
- if likely to cause disturbance, an assessment of the effect of underwater or subterranean noise
 - measures to be employed in mitigating the effects of noise - applicants should consider using best available techniques to reduce noise impacts

Scheme with respect to noise and vibration, encompassing the construction, operation and decommissioning phases.

Section 11.10 of Chapter 11: Noise and Vibration of the ES **[EN010131/APP/3.1]** assesses the noise generated by the Scheme during the construction period and operating life of the infrastructure (including features), including at particular times of the day and at night, on the noise sensitive premises and areas outlined in Chapter 11: Noise & Vibration of the ES **[EN010131/APP/3.1]**.

Socio-economic

- Paragraph 5.13.4 The applicant's assessment should consider all relevant socio-economic impacts, which may include:
- the creation of jobs and training opportunities. Applicants may wish to provide information on the sustainability of the jobs created, including where they will help to develop the skills needed for the UK's transition to Net Zero.
 - the contribution to the development of low-carbon industries at the local and regional level as well as nationally
 - the provision of additional local services and improvements to local infrastructure, including the provision of educational and visitor facilities
 - any indirect beneficial impacts for the region hosting the infrastructure, in particular in relation to use of local support services and supply chains
 - effects on tourism
 - the impact of a changing influx of workers during the different construction, operation and decommissioning phases of the energy infrastructure. This could change the local population dynamics and could alter the demand for services and facilities in the settlements nearest to the construction work (including community facilities and physical infrastructure such as energy, water, transport and waste).

Chapter 12: Socio-Economics and Land Use of the ES **[EN010131/APP/3.1]** includes an assessment of socio-economic impacts that fulfils the requirements of this policy.

Paragraph No. Policy Requirement

Compliance with Policy

There could also be effects on social cohesion depending on how populations and service provision change as a result of the development

- cumulative effects - if development consent were to be granted to for a number of projects within a region and these were developed in a similar timeframe, there could be some short-term negative effects, for example a potential shortage of construction workers to meet the needs of other industries and major projects within the region

Paragraph 5.13.6 Socio-economic impacts may be linked to other impacts, for example the visual impact of a development is considered in Section 5.10 but may also have an impact on tourism and local businesses.

Applicants are encouraged, where possible, to ensure local suppliers are considered in any supply chain.

Chapter 12: Socio-Economics and Land Use of the ES **[EN010131/APP/3.1]** considers the socio-economic impact of the Scheme. Chapter 10: Landscape and Visual Amenity considers the effects on various receptors, including local tourism facilities such as Sundown Adventure Land. No significant adverse visual or socio-economic effects are predicted to tourism facilities.

Chapter 12: Socio-Economics and Land Use of the ES **[EN010131/APP/3.1]** identifies that the Scheme will result in beneficial effects (that are not significant) on the local economy as a result of employment generation during the construction and decommissioning periods.

During the construction phase, an Outline Skills, Supply Chain and Employment Plan ('OSSCEP') **[EN010131/APP/7.7]** will be implemented. The purpose of this is to promote employment and training opportunities associated with the construction and operation of the Scheme. The implementation of this Plan will help to maximise the positive gain for the local economy from the beneficial effect arising from employment generation. The OSSCEP also analyses community benefits regarding skills training, with a proposal to investigate the potential for a programme of activities which promote STEM education and careers. Given the Scheme's timescale and phases, some of these target individuals could ultimately become part of the Scheme's workforce, presenting legacy opportunities also.

Paragraph No. Policy Requirement

Compliance with Policy

Paragraphs 5.13.11 and 5.13.12 The Secretary of State should consider any relevant positive provisions the applicant has made or is proposing to make to mitigate impacts (for example through planning obligations) and any legacy benefits that may arise as well as any options for phasing development in relation to the socio-economic impacts.

The Secretary of State may wish to include a requirement that specifies the approval by the local authority of an employment and skills plan detailing arrangements to promote local employment and skills development opportunities, including apprenticeships, education, engagement with local schools and colleges and training programmes to be enacted.

Chapter 12: Socio-Economics and Land Use of the ES **[EN010131/APP/3.1]** identifies that the Scheme will result in beneficial effects (that are not significant) on the local economy as a result of employment generation during the construction and decommissioning periods. During the construction phase, an Outline Skills, Supply Chain and Employment Plan ('OSSCEP') **[EN010131/APP/7.7]** will be implemented. The purpose of this is to promote employment and training opportunities associated with the construction and operation of the Scheme. The implementation of this Plan will help to maximise the positive gain for the local economy from the beneficial effect arising from employment generation. The OSSCEP also analyses community benefits regarding skills training, with a proposal to investigate the potential for a programme of activities which promote STEM education and careers. Given the Scheme's timescale and phases, some of these target individuals could ultimately become part of the Scheme's workforce, presenting legacy opportunities also.

Traffic and Transport

Paragraphs 5.14.7 and 5.14.8 The applicant should prepare a travel plan including demand management and monitoring measures to mitigate transport impacts. The applicant should also provide details of proposed measures to improve access by active, public and shared transport to:

- reduce the need for parking associated with the proposal
- contribute to decarbonisation of the transport network
- reduce the need to travel, and
- secure behavioural change and modal shift through an offer of genuine modal choice and to mitigate transport impacts.

A Framework Construction Traffic Management Plan (CTMP) is included as Appendix 13-E of the ES **[EN010131/APP/3.3]**. It outlines measures that will be included in the final CTMP to mitigate transport impact, manage demand, and improve and encourage construction staff to access the Order limits by public transport, cycling and reduce car transport to, and parking at, the Order Limits.

A Travel Plan is not required for the operation period because the traffic to the Site would be minimal.

The assessment should also consider any possible disruption to services and infrastructure (such as road, rail and airports)

**Paragraph Policy Requirement
No.**

Compliance with Policy

Paragraph 5.14.11 Where mitigation is needed, possible demand management measures must be considered. This could include identifying opportunities to:

- reduce the need to travel by consolidating trips,
- locate development in areas already accessible by active travel and public transport,
- provide opportunities for shared mobility,
- re-mode by shifting travel to a sustainable mode that is more beneficial to the network,
- retime travel outside of the known peak times,
- reroute to use parts of the network that are less busy.

Construction and decommissioning mitigation measures include (but are not limited to) the implementation of the Framework CTMP, effective access points and construction routes, maintaining access to PRoW, restricting HGV movements to certain routes and certain times of the day and developing a communications strategy to review and address any issues associated with travel. Details of all construction and decommissioning mitigation measures are set out in **section 13.9.3 of Chapter 13: Transport and Access of the ES [EN010131/APP/3.1]**.

Sustainable travel will be promoted for construction staff travelling to/ from the Solar and Energy Storage Park with further details set out within the Framework CTMP in **ES Volume 3: Appendix 13-E [EN010131/APP/3.3]**. Shuttle services would be provided for construction workers from nearby settlements such as Gainsborough and Lincoln to the site to reduce the traffic generated and provide access for workers without their own transport. Temporary car parks will also be provided within the proposed compound areas, with 100 spaces at the main compound and 18 spaces at each of the smaller compounds, meeting peak parking demand. Construction workers will then be transported around site via minibus, or similar.

Paragraph 5.14.21 The Secretary of State should only consider preventing or refusing development on highways grounds if there would be an unacceptable impact on highway safety, residual cumulative impacts on the road network would be severe, or it does not show how consideration has been given to the provision of adequate active public or shared transport access and provision.

Section 13.10 of Chapter 13: Transport and Access of the ES **[EN010131/APP/3.1]** states that there will be no significant effects as a result of the Scheme on transport and access during any phase when considered for the Scheme alone or cumulatively with other proposed projects in the area. The Framework Construction Traffic Management Plan (CTMP) is included as Appendix 13-E of the ES **[EN010131/APP/3.3]** and details the consideration given to improve and encourage construction staff to access the Order limits by public transport, cycling and reduce car transport to, and parking at, the Order Limits.

Water Quality and Resources

Paragraph No. Policy Requirement

Compliance with Policy

Paragraph 5.16.5	Where possible, applicants are encouraged to manage surface water during construction by treating surface water runoff from exposed topsoil prior to discharging and to limit the discharge of suspended solids e.g. from car parks or other areas of hard standing, during operation.	The Framework CEMP [EN010131/APP/7.3] includes measures to manage surface water during construction, including pollution control measures to treat and limit discharge of particular materials from the site. Appendix 9-C Outline Drainage Strategy of the ES [EN010131/APP/3.1] and Section 7.2 of Appendix 9-D of the ES [EN010131/APP/3.1] states that the proposed surface water drainage network has been designed to accommodate runoff from all storms up to and including the 1% AEP +40% for climate change, which will be achieved through sustainable drainage systems (SuDs), as set out by the Appendix 9-C: Outline Drainage Strategy [EN010131/APP/3.1].
Paragraph 5.16.6	Applicants are encouraged to consider protective measures to control the risk of pollution to groundwater beyond those outlined in River Basin Management Plans and Groundwater Protection Zones - this could include, for example, the use of protective barriers.	The Framework CEMP [EN010131/APP/7.3] and Framework DEMP [EN010131/APP/7.5] detail the measures that would be undertaken during construction and decommissioning to mitigate the temporary effects on the water environment. This includes good practice methods which would also focus on managing the risk of pollution to surface waters and the groundwater environment. It is therefore considered that the Scheme is compliant with this policy. During operation risks of pollution to groundwater are significantly lower than during construction and decommissioning. Protective measures to manage pollution to groundwater are included within the Framework OEMP [EN010131/APP/7.4].
Paragraph 5.16.7	The ES should in particular describe: <ul style="list-style-type: none">- the existing quality of waters affected by the proposed project and the impacts of the proposed project on water quality, noting any relevant existing discharges, proposed new discharges and proposed changes to discharges- existing water resources affected by the proposed project and the impacts of the proposed project on water resources, noting any relevant existing abstraction rates, proposed new abstraction rates and proposed changes to abstraction rates (including any impact on or use of mains supplies and reference to Catchment Abstraction	Section 9.7 of Chapter 9: Water Environment of the ES [EN010131/APP/3.1] provides an assessment of the baseline of water receptors for all the sites and surrounding areas with regards to water quality, including the existing quality and physical characteristics of waters nearby and potentially affected by the Scheme. Chapter 9 also considers the impacts of climate change and cumulative effects. Appendix 9-A of the ES [EN010131/APP/3.3] includes a Water Framework Directive (WFD) Assessment, which assesses impacts on water bodies or protected areas under the WFD and SPZs.

Paragraph No. **Policy Requirement**

Compliance with Policy

Management Strategies) and also demonstrate how proposals minimise the use of water resources and water consumption in the first instance

- existing physical characteristics of the water environment (including quantity and dynamics of flow) affected by the proposed project and any impact of physical modifications to these characteristics
 - any impacts of the proposed project on water bodies or protected areas (including shellfish protected areas) under the Water Environment (Water Framework Directive) (England and Wales) Regulations 2017 and source protection zones (SPZs) around potable groundwater abstractions
 - how climate change could impact any of the above in the future
 - any cumulative effects
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Draft National Policy Statement for Renewable Energy Infrastructure (EN-3), March 2023

The Government’s Nationally Significant Infrastructure Projects (NSIP) reforms: action plan, published 23 February 2023, sets out that the suite of updated energy NPSs (including updated versions of NPS EN-1, NPS EN-3 and NPS EN-5) will be designated in Q2 of 2023. Designation has not occurred prior to the Scheme being accepted for examination and therefore section 104(2) of the Planning Act 2008 will not apply to the Scheme. However, the Draft NPSs are still considered important and relevant to the decision making on this application. The Draft EN-3 considers solar development, with section 3.10 written specifically to guide decision making on solar NSIPs. Given that there are no adopted policies at a national or local level written specifically to guide this type of development, the policies are considered highly important and relevant in decision making on the Gate Burton Energy Park DCO. The policies are also more up to date than policies within the existing NPSs and reflect more recent legislation and policies on energy and carbon emissions. However, the weight applied to policies will be reduced due to the fact that policies are currently in draft.

The table below considers the extent to which the Scheme complies with policies in Draft EN-3. The ‘compliance with policy’ column demonstrates that the Scheme complies with all relevant policies in Draft EN-3.

Relevant Paragraph	Policy Requirement	Compliance with Policy
Location and Design		
Paragraph 3.4.10	Solar photovoltaic PV sites may also be proposed in low lying exposed sites. For these proposals, applicants should consider, in particular, how plant will be resilient to: <ul style="list-style-type: none"> - increased risk of flooding - impact of higher temperatures 	As outlined in Chapter 6: Climate Change of the ES [EN010131/APP/3.1] , account of the effects of climate change have been taken in the design of the Scheme, and its construction and decommissioning. This includes: <ul style="list-style-type: none"> - The design of drainage systems will ensure that there will be no significant increases in flood risk downstream during storms up to and including the 1 in 100 (1%) annual probability design flood, with an allowance of 40% for climate change; - Health and safety plans developed for construction and decommissioning activities will be required to account for potential climate change impacts on workers, such as flooding and heatwaves - Adaptation measures to reduce the effect of projected temperature increases on electrical equipment over the course of the Scheme’s design life have been taken into account. Inverters (PV and BESS)

Relevant Paragraph

Policy Requirement

Compliance with Policy

will have a cooling system installed to control the temperature and allow the inverters to operate efficiently in warmer conditions. The PV modules and transformers have a wide range of acceptable operating temperatures, and it has been determined that increasing temperatures will not adversely affect their operation.

A Decommissioning Environmental Management Plan (DEMP) (taking account of climate change risks at the time) will be prepared prior to decommissioning. A Framework DEMP [EN010131/APP/7.5] is provided as part of the Application.

Paragraph 3.5.2

Proposals for renewable energy infrastructure should demonstrate good design, particularly in respect of landscape and visual amenity, opportunities for co-existence/co-location with other marine uses, and in the design of the project to mitigate impacts such as noise and effects on ecology and heritage.

Good design has been a key consideration from the outset, with measures taken throughout design development to minimise landscape and visual impacts through introducing buffer areas around sensitive visual receptors (e.g. PRow and residential properties); removing panels from areas to reduce landscape and visual impacts (e.g. the areas near Gate Burton Estate); locating higher impact elements of development in locations that are screened by vegetation and topography and in areas further from sensitive receptors (e.g. location of the BESS and Substation). Measures to reduce noise and ecological impacts have also been incorporated into the design, by locating noise generating sources away from residents and avoiding impacts on habitats as far as possible.

The LVIA has informed the iterative design process in response to policy requirements, published landscape character assessment guidance and fieldwork analysis. The Outline Landscape and Ecological Management Plan [EN010131/APP/7.10] and Figure 10-23: Outline Landscape Masterplan of the ES [EN010131/APP/3.2] show how the design mitigation has been embedded in the Scheme to minimise effects on landscape character and visual amenity.

The overall objective of the landscape design is to integrate the Scheme into its landscape setting and avoid or minimise adverse landscape and visual effects as far as practicable. The design has been developed in collaboration with the wider design team and other specialists to achieve a solution that achieves this objective whilst maximising opportunities to deliver net gains

Relevant Paragraph

Policy Requirement

Compliance with Policy

in biodiversity. Accordingly, the landscape design aims to achieve the following:

- To integrate the Scheme into the existing landscape pattern as far as possible by retaining and following existing features, including vegetation, where practicable;
- To replace vegetation lost because of construction of the Scheme through areas of new planting;
- To filter and screen more prominent components of the Scheme in views from visual receptors; and
- To apply appropriate offsets to residential properties to mitigate/reduce views of the Scheme in views from visual receptors

Details of the landscape measures embedded into the Scheme design, including a summary of their environmental functions, is presented in the Outline Landscape and Ecological Management Plan **(OLEMP)** [EN010131/APP/7.10].

Need for the Development

Paragraphs
3.10.1 and 3.10.2

The government has committed to sustained growth in solar capacity to ensure that we are on a pathway that allows us to meet net zero emissions. As such solar is a key part of the government's strategy for low-cost decarbonisation of the energy sector.

Solar also has an important role in delivering the government's goals for greater energy independence and the British Energy Security Strategy states that government expects a five-fold increase in solar deployment by 2035 (up to 70GW). It sets out that government is supportive of solar that is co-located with other functions (for example, agriculture, onshore wind generation, or storage) to maximise the efficiency of land use.

This policy confirms the government's commitment to sustained growth in solar capacity and the key role of solar in the government's decarbonisation strategy. The Gate Burton Energy Park is a large scale solar project that will deliver affordable low carbon electricity to be operational by 2028 to meet the identified need.

Relevant Paragraph

Policy Requirement

Compliance with Policy

Paragraph 3.10.4 to 3.10.5	<p>Solar farms are one of the most established renewable electricity technologies in the UK and the cheapest form of electricity generation.</p> <p>Solar farms can be built quickly and, coupled with consistent reductions in the cost of materials and improvements in the efficiency of panels, large-scale solar is now viable in some cases to deploy subsidy-free.</p>	<p>Draft NPS EN-3 explicitly recognises that solar projects can be deployed quickly so can meet the urgent need for renewable energy projects identified in Draft NPS EN-1, NPS EN-1 and other national policies and strategies. It also recognises that solar projects generate electricity affordably. The Gate Burton Energy Park is a large scale solar project that will deliver affordable low carbon electricity to be operational by 2028 to meet the identified need.</p>
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Principles of Solar Development

Paragraphs 3.10.6 to 3.10.8	<p>Solar farm proposals are currently likely to consist of solar panel arrays, mounting structures, piles, inverters, transformers and cables.</p> <p>Associated infrastructure may also be proposed such as energy storage, electrolysers associated with the production of low carbon hydrogen, or security arrangements (which may encompass flood defences, fencing, lighting and surveillance).</p> <p>Along with associated infrastructure, a solar farm requires between 2 to 4 acres for each MW of output. A typical 50MW solar farm will consist of around 100,000 to 150,000 panels and cover between 125 to 200 acres. However, this will vary significantly depending on the site, with some being larger and some being smaller. This is also expected to change over time as the technology continues to evolve to become more efficient. Nevertheless, this scale of development will inevitably have impacts, particularly if sited in rural areas.</p>	<p>The Scheme as proposed delivers a large-scale solar generation asset which is consistent with this range. The total area of the Solar and Energy Storage Park is 1,611 acres, and the estimated MW of the site is currently 531 MW. This results in a range of 3MW per acre, well within the range suggested in this section of Draft EN-3. However, this area includes solar exclusion zones, areas of existing and proposed landscaping and ecological mitigation so in reality the use of land is more efficient than this calculation would suggest.</p>
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Irradiance and site topography

Relevant Paragraph

Policy Requirement

Compliance with Policy

Paragraphs 3.10.10 to 3.10.11

Irradiance will be a key consideration for the applicant in identifying a potential site as the amount of electricity generated on site is directly affected by irradiance levels. Irradiance of a site will in turn be affected by surrounding topography, with an uncovered or exposed site of good elevation and favourable south-facing aspect more likely to increase year-round irradiance levels. This in turn affects the carbon emission savings and the commercial viability of the site.

In order to maximise irradiance, applicants may choose a site and design its layout with variable and diverse panel types and aspects, and panel arrays may also follow the movement of the sun in order to further maximise the solar resource.

The suitability of the proposed location in respect of the incident irradiation is illustrated in Figure 7-4 of the Statement of Need **[EN010131/APP/2.1]**. The Statement of Need **[EN010131/APP/2.1]** also concludes that the site has sufficient irradiation, is of a size and has topography which meets the requirements of the Scheme to generate significant amounts of electricity.

Agricultural Land and Soils

Paragraph 3.10.13

Solar is a highly flexible technology and as such can be deployed on a wide variety of land types.

While land type should not be a predominating factor in determining the suitability of site location applicants should, where possible utilise previously developed land, brownfield land, contaminated land, and industrial land. Where the proposed use of any agricultural land has been shown to be necessary, poorer quality land should be preferred to higher quality land (avoiding the use of “Best and Most Versatile” cropland where possible).

The majority of the Solar and Energy Park (approximately 88%) comprises Grade 3b agricultural land or non-agricultural land. The remaining land is Grade 3a land. As shown in Figure 3-4 of the ES **[EN010131/APP/3.1]**, the majority of land within 15km of the Cottam Substation is Grade 3 agricultural land, with it not being possible to determine as desktop level between grade 3a and 3b agricultural land. The only areas of lower quality agricultural land are located along the River Trent (comprising the river and adjacent flood plain), and small areas more than 8km from the grid connection point. There are areas of Grade 2 land located approximately 8km to the south west of the grid connection point. Overall, the Grade 3 land identified for the Solar and Energy Storage Park is the lowest grade agricultural land large enough to site the Scheme within 8km of the grid connection point. Overall, lower quality land has been used where possible in site selection.

Some agricultural use can continue on most BMV land following construction alongside the solar panels and the impact on almost all agricultural land is reversible when the Scheme is decommissioned. The impact on BMV land

Relevant Paragraph

Policy Requirement

Compliance with Policy

has been minimised through locating permanent development on lower quality land where possible. It will be further minimised through implementation of an Soils Resource Management Plan to protect soils (see [EN010131/APP/7.12] for the Outline Soils Resource Management Plan). There would be a permanent loss of approximately 2 ha of BMV land as a result of the Scheme.

The Grid Connection Corridor is likely to contain areas of BMV land. However, as agricultural uses of the land can continue following installation of the underground cable there would be little effect on the availability of best and most versatile land after construction.

The policy emphasises that land type should not be a predominating factor in determining the suitability of the site location. Given this statement, the limited effects on BMV land described above are considered acceptable and outweighed by the benefits of the Scheme.

Paragraphs
3.10.15 to 3.10.17

Whilst the development of ground mounted solar arrays is not prohibited on sites of agricultural land classified 1, 2 and 3a, or designated for their natural beauty, or recognised for ecological or archaeological importance, the impacts of such are expected to be considered and are discussed under paragraphs[3.10.66 – 3.10.83].

It is recognised that at this scale, it is likely that applicants' developments may use some agricultural land. Applicants should explain their choice of site, noting the preference for development to be on brownfield and non-agricultural land.

Where sited on agricultural land, consideration may be given as to whether the proposal allows for continued agricultural use and/or can be co-located with other functions (for example onshore wind generation, or storage) to maximise efficiency of land use.

Given the need for a large, flat site with good solar irradiation near Cottam Substation, no previously developed sites were available and development on agricultural land is necessary. However, the majority of the Solar and Energy Park comprises Grade 3b agricultural land so effects on BMV land have been limited. Use of the areas of Grade 3a BMV land are justified by the nature of impacts on these areas (given that some agricultural use can continue and impacts are reversible), the small % of the Solar and Energy Park that comprises BMV land and the very significant benefits of the Scheme.

The site is not nationally designated for ecology, archaeology or natural beauty. The Grid Connection Corridor passes under a Local Wildlife Site, with no significant adverse effects predicted given the nature of development in the area. The Scheme is also located in a locally designated Area of Great Landscape Value, although again, the Scheme has been designed so that it is not anticipated to have a significant adverse effect on the AGLV. The impacts on these areas have been considered throughout the design

Relevant Paragraph

Policy Requirement

Compliance with Policy

process as set out in Chapter 4 of this PDAS in line with this policy. Chapter 4 also explains the choice of site in the context of site requirements.

Consideration has also been given to continued agricultural use and sheep grazing has been identified as a viable agricultural use during the life of the Scheme. The Scheme also incorporates battery storage to maximise the efficiency of the land use.

Paragraphs 3.10.18 and 3.10.19
The Agricultural Land Classification (ALC) is the only approved system for grading agricultural quality in England and Wales and should be used to establish the ALC grades in accordance with the current, or any successor to it, grading criteria and identify the soil types to inform soil management at the construction, operation and decommissioning phases in line with the Defra Construction Code.

Soil surveys have been undertaken to identify the ALC grade of land within the Solar and Energy Storage Park and a desktop study has been undertaken to estimate the ALC grade of land within the Grid Connection Corridor. The ALC survey is provided in Appendix 12-C: ALC Report of the ES **[EN010131/APP/3.3]**.

Applicants are encouraged to develop and implement a Soil Resources and Management Plan which could help to use and manage soils sustainably and minimise adverse impacts on soil health and potential land contamination. This should be in line with the ambition set out in the Environmental Improvement Plan to bring 60% of England's agricultural soils into sustainable management by 2030.

An Outline Soils Resource Management Plan is provided with the Application **[EN010131/APP/7.12]**. This sets out principles for how soils will be managed and protected during construction, operation and decommissioning of the Scheme. A detailed soil management plan will be prepared prior to the commencement of construction, prior to operation, and prior to decommissioning, as set out by the requirements of the draft DCO **[EN010131/APP/6.1]**

Paragraph 3.10.136 [Factors influencing site selection and design]

The Secretary of State should take into account the economic and other benefits of the best and most versatile agricultural land. The Secretary of State should ensure that the applicant has put forward appropriate mitigation measures to minimise impacts on soils or soil resources.

The Outline Soil Management Plan **[EN010131/APP/7.12]** sets out mitigation measures to ensure the impact on soils is minimised.

Relevant Paragraph

Policy Requirement

Compliance with Policy

Access and PRow

Paragraphs to 3.10.24

3.10.20 Applicants will need to consider the suitability of the access routes to the proposed site for both the construction and operation of the solar farm with the former likely to raise more issues.

Given that potential solar farm sites are largely in rural areas, access for the delivery of solar arrays and associated infrastructure during construction can be a significant consideration for solar farm siting.

Developers will usually need to construct on-site access routes for operation and maintenance activities, such as footpaths, earthworks or landscaping.

In addition, sometimes access routes will need to be constructed to connect solar farms to the public road network.

Applications should include the full extent of the access routes necessary for operation and maintenance and an assessment of their effects.

The suitability of the access routes to the proposed site has been considered in the Transport Assessment presented in Appendix 13-D of the ES [EN010131/APP/3.3], with the accesses to the Solar and Energy Storage Park and Grid Connection Corridor being selected and designed to provide safe access whilst minimising the impacts on the local area. Chapter 13: Transport and Access of the ES [EN010131/APP/3.1] states that there will be no significant effects as a result of the Scheme on transport and access during any phase and is considered to be in accordance with relevant national and local policy and that it avoids any adverse impacts on highway safety or any severe residual cumulative impacts on the road network.

A Framework Construction Traffic Management Plan has also been provided with the Application in ES Appendix 13-E [EN010131/APP/3.3] setting out how construction traffic will be managed to minimise local impacts.

Paragraphs to 3.10.29

3.10.25 Proposed developments may affect the provision of public rights of way networks.

Public rights of way may need to be temporarily stopped up to enable construction, however applicants should keep as far as practicable and safe, all public rights of way that cross the proposed development site open during construction and to protect users where a public right of way borders or crosses the site.

No PRow will be permanently stopped or diverted as a result of the Scheme.

Only one PRow crosses the Solar and Energy Park and this route crosses only a small portion of the northern extent of the site. Buffers have been introduced around the PRow to minimise the visual impact of the Scheme on users of the PRow. There are several other PRow adjacent to the Solar and Energy Storage Park or that are crossed by the Grid Connection Corridor. All PRow are shown in Figure 2-2 of the ES [EN010131/APP/3.2].

Relevant Paragraph

Policy Requirement

Compliance with Policy

	<p>Applicants are encouraged to design the layout and appearance of the site to ensure continued recreational use of public rights of way, where possible during construction, and in particular during operation of the site.</p> <p>Applicants are encouraged where possible to minimise the visual outlook from existing public rights of way, considering the impacts this may have on any visual amenities in the surrounding landscape.</p> <p>Applicants should consider and maximise opportunities to facilitate enhancements to the public rights of way and the adoption of new public rights of way through site layout and design of access.</p>	<p>and detailed in Chapter 12: Socio-Economics and Land Use of the ES [EN010131/APP/3.1].</p> <p>All PRow will be kept open and on their existing alignment throughout the operational phase of the Scheme. During construction, PRow will be kept open, and on their existing alignment as far as possible, with short, convenient, temporary diversions included where this is not possible.</p> <p>The Scheme therefore results in fewer impacts on PRow than is anticipated by this policy.</p>
Paragraph 3.10.30	<p>Applicants should set out detail on how public rights of way would be managed to ensure they are safe to use as set out in an outline Public Rights of Way Management Plan.</p>	<p>A Public Rights of Way Management Plan is provided with the Application [EN010131APP/7.8].</p>

Underground cables, security and lighting

Paragraph 3.10.31 to 3.10.33	<p>Security of the site is likely to be a key consideration for developers. Applicants may wish to consider not only the availability of natural defences such as steep gradients, hedging and rivers, but also perimeter security measures such as fencing, electronic security, CCTV and lighting, with the measures proposed on a site-specific basis.</p> <p>Applicants should assess the visual impact of these security measures, as well as the impacts on local residents, including for example issues relating to intrusion from CCTV and light pollution in the vicinity of the site.</p> <p>Applicants should consider the need to minimise the impact on the landscape and the visual impact of security measures.</p>	<p>Security measures, including fencing and CCTV are described Chapter 2: The Scheme of the ES [EN010131/APP/3.1] and are taken into account in the assessment presented in the ES [EN010131/APP/3.1]. Efforts have been made to reduce the impact of security fencing and lighting in design as described in Chapter 4 of this PDAS.</p>
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Relevant Paragraph

Policy Requirement

Compliance with Policy

Paragraphs 3.10.54 and 3.10.55

3.10.54 It is likely that underground and overhead cabling will be required to connect the electrical assets of the site, such as from the substation to the panel arrays or storage facilities.

In the case of underground cabling, developers are expected to provide a method statement describing cable trench design, installation methodology, as well as details of the operation and maintenance regime.

Details of cables, cable trenches, construction methodology and details of the operation and management regime are provided in Chapter 2: The Scheme of the ES [EN010131/APP/3.1] and the Grid Connection Construction Method Statement presented in Appendix 2-B [EN010131/APP/3.3]. The Grid Connection Access Locations and Construction Compounds are shown on Figure 2-5 of the ES [EN010131/APP/3.2].

Network Connection

Paragraphs 3.10.35 to 3.10.39

Many solar farms are connected into the local distribution network. The capacity of the local grid network to accept the likely output from a proposed solar farm is critical to the technical and commercial feasibility of a development proposal.

Larger developments may seek connection to the transmission network if there is available network capacity and/or supportive infrastructure.

In either case the connection voltage, availability of network capacity, and the distance from the solar farm to the existing network can have a significant effect on the commercial feasibility of a development proposal.

To maximise existing grid infrastructure, minimise disruption to existing local community infrastructure or biodiversity and reduce overall costs applicants may choose a site based on nearby available grid export capacity.

The Scheme proposes to connect to an existing National Grid Substation (Cottam 400kV Substation), which is located on one of the major connections between Keadby in the north and three major 400kV transmission lines which provide connections to demand centres in the south and London. Cottam 400kV Substation is also connected directly to the Grid Supply Points (GSP) at West Burton, Staythorpe and Stoke Bardolph. GSPs supply power from the NETS down to local networks. The West Burton, Staythorpe and Stoke Bardolph Substations supply primary substations in important centres of demand in Newark and Nottingham as well as provide power further throughout Nottinghamshire and Lincolnshire.

By connecting at Cottam, the Scheme is making use of an existing connection point and existing transmission infrastructure in a way which does not present the risk of overload or congestion on the NETS during any period of foreseen operation and provides a regional source of locally generated bulk low carbon supplies of electricity to consumers both local to the Scheme and more widely across the country.

Section 9.2 of the Statement of Need [EN010131/APP/2.1] discusses this point further and provides additional evidence which underpins Cottam National Grid Substation as an excellent point of connection for the Scheme.

Relevant Paragraph

Policy Requirement

Compliance with Policy

Where this is the case, applicants should consider the cumulative impacts of situating a solar farm in proximity to other energy generating stations and infrastructure.

The cumulative impact of the Scheme with other projects in the area, including the other three solar NSIPs proposed in the area, is presented in Chapter 16: Cumulative Effects and Interactions of the ES [EN010131/APP/3.1].

Decommissioning and Time Limited Consents

Paragraph 3.10.60

Applicants should set out what would be decommissioned and removed from the site at the end of the operational life of the generating station, considering instances where it may be less harmful for the ecology of the site to keep or retain certain types of infrastructure, for example underground cabling, and where there may be socioeconomic benefits in retaining site infrastructure after the operational life, such as retaining pathways through the site or a site substation.

Details of the decommissioning phase, including which elements will be decommissioned and which will be retained are provided in Chapter 2: The Scheme of the ES [EN010131/APP/3.1]. This sets out that the PV modules, mounting poles, inverters and transformers would be removed and recycled or disposed of in accordance with good practice and market conditions at the time. Buried medium voltage cables would either be removed or left in situ. Any modification work to the National Grid Cottam Substation to facilitate the connection would remain under National Grid's control. It is not currently known if the buried 400 kV cables would be left in situ or removed. For the purposes of assessment, both scenarios are considered within this ES with the worst case for any given topic assessed.

Paragraph 3.10.138 to 3.10.140

Where the consent for a solar farm is to be time-limited, the DCO should impose a requirement setting that time-limit from the date the solar farm starts to generate electricity.

It is not proposed that the application for development consent should be time limited. The Scheme will be decommissioned at the end of its operational life in accordance with a DEMP, as secured by Requirement 19 of the Draft DCO [EN010131/APP/6.1].

Such a requirement should also secure the decommissioning of the generating station after the expiration of its permitted operation to ensure that inoperative plant is removed after its operational life.

An upper limit of 40 years is typical, although applicants may seek consent for differing time-periods for operation.

Paragraphs 3.10.141 to 3.10.142

The time-limited nature of solar farms, where a time-limit is sought by an applicant as a condition of consent, is likely to be an important consideration for the Secretary of State

The Scheme will be decommissioned at the end of its operational life in accordance with a DEMP, as secured by requirements of the Draft DCO [EN010131/APP/6.1]. Although no specific time limit is set, decommissioning of the Scheme at the end of its operational life would be

Relevant Paragraph

Policy Requirement

Compliance with Policy

The Secretary of State should consider the period of time the applicant is seeking to operate the generating station as well as the extent to which the site will return to its original state when assessing impacts such as landscape and visual effects and potential effects on the settings of heritage assets and nationally designated landscapes.

secured by Requirement 19 and the assessments in the ES [EN010131/APP/3.1] have taken account of this. Chapter 2: the Scheme, of the ES [EN010131/APP/3.1] describes how the Order limits would be left on completion of decommissioning.

Design Flexibility

Paragraphs 3.6.1 to 3.6.2 Where details are still to be finalised applicants should explain in the application which elements of the proposal have yet to be finalised, and the reason why this is the case.

Where flexibility is sought in the consent as a result, applicants should, to the best of their knowledge, assess the likely worst-case environmental, social and economic effects of the proposed development to ensure that the impacts of the project as it may be constructed have been properly assessed.

Chapter 5: Environmental Impact Assessment Methodology and Chapter 2: the Scheme of the ES [EN010131/APP/3.1] explain that the parameters for the Scheme are defined by the Outline Design Principles [EN010131/APP/2.3] which have been informed by the assessments in the ES [EN010131/APP/3.1] and reciprocally used for assessment purposes. Where there is uncertainty the Applicant has assessed the worst case scenario for the purposes of the ES.

Paragraphs 3.10.61 to 3.10.63 In many cases, not all aspects of the proposal may have been settled in precise detail at the point of application. Such aspects may include:

- the type, number and dimensions of the panels;
- layout and spacing;
- the type of inverter or transformer; and
- whether storage will be installed (with the option to install further panels as a substitute).

Applicants should set out a range of options based on different panel numbers, types and layout, with and without storage.

Guidance on how applicants should manage flexibility is set out at section [3.6] of this NPS.

The Works Plans [EN010131/APP/5.2] and Outline Design Principles [EN010131/APP/2.3] define the parameters for the Scheme. The approach to flexibility is explained in Chapter 2: the Scheme of the ES [EN010131/APP/3.1].

Relevant Paragraph

Policy Requirement

Compliance with Policy

Ecology

<p>Paragraph 3.10.67 to 3.10.70</p>	<p>The applicant's ecological assessments should identify any ecological risk from developing on the proposed site.</p> <p>Issues that need assessment may include habitats, ground nesting birds, wintering and migratory birds, bats, dormice, reptiles, great crested newts, water voles and badgers.</p> <p>The applicant should use an advising ecologist during the design process to ensure that adverse impacts are avoided, minimised or mitigated in line with the mitigation hierarchy, and biodiversity enhancements are maximised.</p> <p>The assessment may be informed by a 'desk study' of existing ecological records, an evaluation of the likely impacts of the solar farm upon ecological features and should specify mitigation to avoid or minimise these impacts, and any further surveys required.</p>	<p>Section 8.7 of Chapter 8: Ecology of the ES [EN010131/APP/3.1] sets out all the protected species, habitats and other species identified as being of principal importance for the conservation of biodiversity within the study area for the Scheme. Chapter 8: Ecology of the ES [EN010131/APP/3.1] clearly set out the expected effects on the above receptors during the construction, operation and decommissioning phases of the Scheme. This concludes that there are anticipated to be no significant adverse effects on any of these protected species as a result of the Scheme following mitigation. There are predicted to be significant beneficial effects on breeding birds as a result of habitat enhancements.</p>
<p>Paragraphs 3.10.71 and 3.10.72</p>	<p>Applicants should consider earthworks associated with construction compounds, access roads and cable trenching.</p> <p>Where soil stripping occurs topsoil and subsoil should be stripped, stored, and replaced separately to minimise soil damage and to provide optimal conditions for site restoration. Further details on minimising impacts on soil and soil handling are above at paragraphs [3.10.18 and 2.10.19]</p>	<p>Earthworks required for the Scheme are described in Chapter 2: the Scheme of the ES [EN010131/APP/3.1] and Appendix 2-B of the ES [EN010131/APP/3.3] and are taken into account by the assessments in the ES.</p> <p>An Outline Soils Resource Management Plan is provided with the Application [EN010131/APP/7.12]. This sets out principles for how soils will be managed and protected during construction, operation and decommissioning of the Scheme. A detailed soil management plan will be prepared prior to the commencement of construction, prior to operation, and</p>

Relevant Paragraph

Policy Requirement

Compliance with Policy

prior to decommissioning, as set out by the requirements of the draft DCO [EN010131/APP/6.1]

Paragraph 3.10.73 Applicants should consider how security and lighting installations may impact on the local ecology. Where pole mounted CCTV facilities are proposed the location of these facilities should be carefully considered to minimise impact. If lighting is necessary, it should be minimised and directed away from areas of likely habitat.

Lighting and CCTV required for the Scheme are described in Chapter 2: the Scheme of the ES [EN010131/APP/3.1] and are taken into account by the assessments in the ES [EN010131/APP/3.1]. Lighting and security measures have been designed to reduce impacts on ecology and the landscape.

Paragraph 3.10.74 Applicants should consider how site boundaries are managed. If any hedges/scrub are to be removed, further surveys may be necessary to account for impacts. Buffer strips between perimeter fencing and hedges may be proposed, and the construction and design of any fencing should account for enabling mammal, reptile and other fauna access into the site if required to do so in the ecological report.

The ES [EN010131/APP/3.1] takes account of all works to boundaries, and any works to hedgerows. Buffers to woodland and hedgerow are included, and proposals for fencing incorporate features to enable the movement of mammals, reptiles and other fauna.

Paragraphs 3.10.80 to 3.10.81 Solar farms have the potential to increase the biodiversity value of a site, especially if the land was previously intensively managed. In some instances, this can result in significant benefits and enhancements beyond Biodiversity Net Gain, which result in wider environmental gains which is encouraged

The Scheme has taken advantage of opportunities to conserve and enhance biodiversity and accords with this policy. A Biodiversity Net Gain (BNG) assessment, using Defra's Metric 3.1, has been provided with the DCO application [EN010131/APP/7.9], demonstrating that the Scheme will deliver significant biodiversity net gain.

For projects in England, applicants should consider enhancement, management, and monitoring of biodiversity in line with the ambition set out in the Environmental Improvement Plan and any relevant measures and targets, including statutory targets set under the Environment Act or elsewhere.

Drainage

Relevant Paragraph

Policy Requirement

Compliance with Policy

Paragraphs to 3.10.79	<p data-bbox="367 284 1176 411">3.10.75 Where a Flood Risk Assessment has been carried out this must be submitted alongside the applicant's ES. This will need to consider the impact of drainage. As solar PV panels will drain to the existing ground, the impact will not in general be significant.</p> <p data-bbox="367 451 1176 579">Where access tracks need to be provided, permeable tracks should be used, and localised Sustainable Drainage Systems (SuDS), such as swales and infiltration trenches, should be used to control any run-off where recommended.</p> <p data-bbox="367 619 1176 715">Given the temporary nature of solar PV farms, sites should be configured or selected to avoid the need to impact on existing drainage systems and watercourses.</p> <p data-bbox="367 754 1176 818">Culverting existing watercourses/drainage ditches should be avoided.</p> <p data-bbox="367 858 1176 986">Where culverting for access is unavoidable, it should be demonstrated that no reasonable alternatives exist and where necessary it will only be in place temporarily for the construction period.</p>	<p data-bbox="1176 284 2080 475">An FRA is included in Appendix 9-D of the Environmental Statement [EN010131/APP/3.3]. The FRA is accompanied by an Outline Drainage Strategy appended to Appendix 9-C of the ES [EN010131/APP/3.3] includes details of the provision of above ground SuDS in the drainage design. As noted in this policy, the nature of solar development means that the impact of the Scheme on flood risk is not significant.</p> <p data-bbox="1176 483 2080 547">Use of culverts on the site will be avoided where possible in the detailed design of the Scheme.</p>
Paragraph 3.10.83	<p data-bbox="367 994 1176 1121">Applicants should consider whether they need to provide geotechnical and hydrological information (such as identifying the presence of peat at each site) including the risk of landslide connected to any development work.</p>	<p data-bbox="1176 994 2080 1058">The Applicant does not consider that this information is required due to the nature of the Scheme.</p>
Paragraph 3.10.145	<p data-bbox="367 1249 1176 1343">Water management is a critical component of site design for ground mount solar plants. Where previous management of the site has involved intensive agricultural practice, solar sites can deliver</p>	<p data-bbox="1176 1249 2080 1313">Appendix 9-C: Outline Drainage Strategy of the ES [EN010131/APP/3.3] sets out how water and drainage will be managed as part of the Scheme.</p>

Relevant Paragraph

Policy Requirement

Compliance with Policy

significant ecosystem services value in the form of drainage, flood attenuation, natural wetland habitat, and water quality management.

The Secretary of State must consider the worst-case effects in its consideration of the application and consent.

Landscape and Visual Impacts

Paragraph 3.10.88

Applicants should carry out a landscape and visual assessment and report it in the ES. Visualisations may be required to demonstrate the effects of a proposed solar farm on the setting of heritage assets and any nearby residential areas or viewpoints.

An assessment of the potential landscape and visual impacts associated with the construction, operation and decommissioning of the Scheme has been carried out and is presented in Chapter 10: Landscape and Visual Amenity of the ES [EN010131/APP/3.1].

Photographs and visualisations have been included to assist in describing baseline views and visual effects with referenced to the viewpoints, which have been agreed with local planning authorities. They have been prepared in accordance with best practice guidance published by the Landscape Institute (Ref) and are presented as Type 1 (annotated viewpoint photographs) or Type 3 (photomontage) on Figure 10-13 of the ES [EN010131/APP/3.1].

Paragraph 3.10.89 to 3.10.90

Applicants should follow the criteria for good design set out in Section 4.6 of EN-1 when developing projects and will be expected to direct considerable effort towards minimising the landscape and visual impact of solar PV arrays especially within nationally designated landscapes.

Whilst there is an acknowledged need to ensure solar PV installations are adequately secured, required security measures such as fencing should consider the need to minimise the impact on the landscape and visual impact (see paragraphs [3.10.31 – 3.10.33]).

Good design has been a key consideration from the outset, with landscape and visual impacts minimised wherever possible. The LVIA has informed the iterative design process with the design responding to policy requirements, published landscape character assessment guidance and fieldwork analysis. The **Outline Landscape and Ecological Management Plan [EN010131/APP/7.10]** and **Figure 10-23: Outline Landscape Masterplan of the ES [EN010131/APP/3.2]** show measures proposed to mitigate landscape, visual and ecological effects and secure enhancements.

The overall objective of the landscape design is to integrate the Scheme into its landscape setting and avoid or minimise adverse landscape and visual effects as far as practicable. The design has been developed in collaboration with the wider design team and other specialists to achieve a solution that

Relevant Paragraph

Policy Requirement

Compliance with Policy

		<p>achieves this objective whilst maximising opportunities to deliver net gains in biodiversity. Accordingly, the landscape design aims to achieve the following:</p> <ul style="list-style-type: none">• To integrate the Scheme into the existing landscape pattern as far as possible by retaining and following existing features, including vegetation, where practicable;• To replace vegetation lost because of construction of the Scheme through areas of new planting;• To filter and screen more prominent components of the Scheme in views from visual receptors; and• To apply appropriate offsets to residential properties to mitigate/reduce views of the Scheme in views from visual receptors <p>Details of the landscape measures embedded into the Scheme design, including a summary of their environmental functions, is presented in the Outline Landscape and Ecological Management Plan (OLEMP) [EN010131/APP/7.10].</p>
Paragraph 3.10.91 and 3.10.92	<p>The applicant should consider as part of the design, layout, construction, and future maintenance plans how to protect and retain, wherever possible, the growth of vegetation on site boundaries, as well as the growth of existing hedges, established vegetation, including mature trees within boundaries. Applicants should also consider opportunities for individual trees within the boundaries to grow on to maturity</p> <p>The impact of the proposed development on established trees and hedges should be informed by a tree survey and arboricultural/hedge assessment as appropriate.</p>	<p>The proposed vegetation planting and management set out in the Outline Landscape and Ecological Management Plan (OLEMP) [EN010131/APP/7.10] has been carefully designed to deliver landscape and visual, and biodiversity mitigation and enhancement. Tree protection measures will be implemented during construction, including fencing and construction exclusion zones, as set out in the Framework CEMP [EN010131/APP/7.3]</p>
Paragraph 3.10.122 to 3.10.124	<p>Applicants should consider the potential to mitigate landscape and visual impacts through, for example, screening with native hedges, trees and woodlands.</p>	<p>Landscape and visual effects have been mitigated through the Scheme design as set out in Chapter 4 of this PDAS, including consideration given</p>

Relevant Paragraph

Policy Requirement

Compliance with Policy

Applicants should aim to minimise the use and height of security fencing. Where possible applicants should utilise existing features, such as hedges or landscaping, to assist in site security or screen security fencing.

Applicants should minimise the use of security lighting. Any lighting should utilise a passive infra-red (PIR) technology and should be designed and installed in a manner which minimises impact

to minimising vegetation loss, incorporating new planting and selecting lighting and security measures that minimise adverse impacts.

Paragraph 3.10.148 The Secretary of State will consider the landscape and visual impact of any proposed solar PV farm, taking account of any sensitive visual receptors, and the effect of the development on landscape character, together with the possible cumulative effect with any existing or proposed development. Nationally designated landscapes (National Parks, The Broads and Areas of Outstanding Beauty) are afforded extra protection due their statutory purpose. Development in these areas needs to satisfy policy as set out in EN-1 Section 5.10.

The assessment presented in Chapter 10: Landscape and Visual Amenity of the ES **[EN010131/APP/3.1]** concludes that the Scheme would have a range of temporary significant adverse effects on the landscape as a result of construction and decommissioning. Effects would be minimised where possible through measures set out in the Framework CEMP **[EN010131/APP/7.3]**, and the DEMP **[EN010131/APP/7.5]**.

A scheme of mitigation planting will reduce landscape and visual impacts as far as possible, however some significant impacts will remain during the operational phase of the Scheme.

Chapter 10: Landscape and Visual of the ES **[EN010131/APP/3.1]** concludes that the operation of the Scheme during winter of the first year and at Year 15 will not result in significant effects to the LCTs defined at a regional level. In addition, the operation of the Scheme during winter of the first year will not result in significant effects to the LCAs and LCPs defined at the County or the District Level.

There will be residual impacts on local landscape character areas and visual effects on nearby receptors. However, the number and severity of effects is considered low considering the scale of the Scheme and its benefits and whilst they should be taken into consideration in decision making, they are considered to outweighed by the benefits of the Scheme.

Relevant Paragraph

Policy Requirement

Compliance with Policy

Glint and Glare

Paragraphs 3.10.94 to 3.10.97

Applicants should map receptors to qualitatively identify potential glint and glare issues and determine if a glint and glare assessment is necessary as part of the application.

When a quantitative glint and glare assessment is necessary, applicants are expected to consider the geometric possibility of glint and glare affecting nearby receptors and provide an assessment of potential impact and impairment based on the angle and duration of incidence and the intensity of the reflection.

The extent of reflectivity analysis required to assess potential impacts will depend on the specific project site and design. This may need to account for 'tracking' panels if they are proposed as these may cause differential diurnal and/or seasonal impacts.

When a glint and glare assessment is undertaken, the potential for solar PV panels, frames and supports to have a combined reflective quality may need to be assessed, although the glint and glare of the frames and supports is likely to be significantly less than the panels.

A glint and glare assessment has been undertaken for the Scheme and is presented in Appendix 15-D of the ES [EN010131/APP/3.3]. The glint and glare assessment concludes that with the inclusion of mitigation in the form of hedgerow planting and maintenance in the locations outlined in paragraph 7.1 of Appendix 15-D, the impact is predicted to be low at two residential receptors, whilst the remaining ground-based receptors are expected to have no impacts once mitigation measures have been considered. Impacts upon aviation receptors are predicted to be low. Therefore, overall impacts are negligible.

Tracking panels are not included in the Scheme.

Paragraph 3.10.149 to 3.10.150

Solar PV panels are designed to absorb, not reflect, irradiation. However, the Secretary of State should assess the potential impact of glint and glare on nearby homes, motorists, public rights of way, and aviation infrastructure (including aircraft departure and arrival flight paths).

Whilst there is some evidence that glint and glare from solar farms can be experienced by pilots and air traffic controllers in certain conditions, there is no evidence that glint and glare from solar farms results in significant impairment on aircraft safety. Therefore, unless

As stated in Appendix 15-D of the ES [EN010131/APP/3.3] impacts on aviation were assessed in the glint and glare assessment. Consistent with the statement in this policy, this concluded that there would be no impacts on aviation receptors.

Relevant Paragraph

Policy Requirement

Compliance with Policy

a significant impairment can be demonstrated, the Secretary of State is unlikely to give any more than limited weight to claims of aviation interference as a result of glint and glare from solar farms

Cultural Heritage

Paragraphs to 3.10.101

3.10.98 The impacts of solar PV developments on the historic environment will require expert assessment in most cases and may have effect both above and below ground..

Above ground impacts may include the effects of applications on the setting of Listed Buildings and other designated heritage assets as well as on Historic Landscape Character.

Below ground impacts, although generally limited, may include direct impacts on archaeological deposits through ground disturbance associated with trenching, cabling, foundations, fencing, temporary haul routes etc.

Equally solar PV developments may have a positive effect, for example archaeological assets may be protected by a solar PV farm as the site is removed from regular ploughing and shoes or low-level piling is stipulated.

Heritage assets as defined in this policy have been considered and where relevant assessed in Chapter 7: Cultural Heritage of the ES [EN010131/APP/3.1]. Chapter 7: Cultural Heritage of the ES [EN010131/APP/3.1] describes the significance of these assets.

Archaeological evaluations were undertaken to in addition to a desk-based assessment, including a geophysical survey (detailed magnetometry) of the whole scheme and targeted trial trenching. The ES [EN010131/APP/3.1] has therefore identified a suitable baseline from which to assess the Scheme in relation to this policy.

Paragraphs 3.10.103 and 3.10.104

Applicant assessment should be informed by information from Historic Environment Records (HERs) or the local authority.

Where a site on which development is proposed includes or has the potential to include heritage assets with archaeological interest, the applicant should submit an appropriate desk-based assessment and, where necessary, a field evaluation. These should be carried out, using expertise where necessary and in consultation with the local planning authority, and should identify archaeological study

The assessment set out in Chapter 7: Cultural Heritage of the ES [EN010131/APP/3.1] has been informed by the HER.

Relevant Paragraph

Policy Requirement

Compliance with Policy

areas and propose appropriate schemes of investigation, and design measures, to ensure the protection of relevant heritage assets.

Paragraphs 3.10.105 and 3.10.106

In some instances, field studies may include investigative work (and may include trial trenching beyond the boundary of the proposed site) to assess the impacts of any ground disturbance, such as proposed cabling, substation foundations or mounting supports for solar panels on archaeological assets.

The extent of investigative work should be proportionate to the sensitivity of, and extent of ground disturbance in, the associated study area

Archaeological evaluations were undertaken in addition to a desk-based assessment, including a geophysical survey (detailed magnetometry) of the whole Scheme and targeted trial trenching.

The scope and specification of each field investigation have been set out in Written Scheme of Investigations (WSI), which were submitted for approval to the Archaeological Advisors for Lincolnshire County Council and Nottinghamshire County Council in December 2021 (detailed magnetometry) and August 2022 (trial trenching). The first phase of this, comprising geophysical (magnetometer) survey, was undertaken as agreed with the Archaeological Advisors for Lincolnshire and Nottinghamshire in February - October 2022 while the trial trenching survey was carried out in July - October 2022. The results of these surveys (ES Volume 3, Appendix 7-D: Geophysical Survey and Appendix 7-E: Trial Trench Evaluation **[EN010131/APP/3.3]**) have been incorporated into the desk-based assessment (ES Volume 3 Appendix 7-A: Cultural Heritage Desk-based Assessment **[EN010131/APP/3.3]**) and the assessment of impact in this ES Chapter in Section 7.11.

Paragraphs 3.10.107 to 3.10.110

Applicants should take account of the results of historic environment assessments in their design proposal.

Applicants should consider what steps can be taken to ensure heritage assets are conserved in a manner appropriate to their significance, including the impact of proposals on views important to their setting.

As the significance of a heritage asset derives not only from its physical presence, but also from its setting, careful consideration should be given to the impact of large-scale solar farms which, depending on their scale, design and prominence, may cause substantial harm to the significance of the asset.

Chapter 7: Cultural Heritage of the ES **[EN010131/APP/3.1]** states that the embedded mitigation measures developed have been informed by the relationship between the Scheme and relevant assets and on the findings of the desk-based assessment, including the results of a programme of geophysical survey, trial trenching, and a review of aerial photographs and available LiDAR data and the information provided by detailed visualisation works.

Chapter 7 also outlines the avoidance and mitigation measures embedded within the Scheme design in relation to cultural heritage. This includes the provision of stand-offs between the Scheme and heritage assets in order to help to preserve their setting during the construction, operational and decommissioning periods.

Relevant Paragraph

Policy Requirement

Compliance with Policy

Applicants may need to include visualisations to demonstrate the effects of a proposed solar farm on the setting of heritage assets.

Appropriate and sensitive screening has also been developed and implemented to minimise the visual intrusion of the Scheme, while avoiding obscuring or intruding upon key views and relationships between heritage assets.

Paragraphs 3.10.128 and 3.10.129 The ability of the applicants to microsite specific elements of the proposed development during the construction phase should be an important consideration by the Secretary of State when assessing the risk of damage to archaeology.

The draft DCO includes a requirement that enables the Applicant to develop a detailed site layout that accords with the Outline Design Principles post consent, providing flexibility to amend the design should significant archaeological finds be discovered. Flexibility has also been allowed within the Order limits of the Grid Connection Corridor so that the precise cable route can be moved if necessary to reduce impacts on remains, should they be found.

Where requested by the applicant, the Secretary of State should consider granting consents which allow for the micrositing within a specified tolerance of elements of the permitted infrastructure so that precise locations can be amended during the construction phase if unforeseen circumstances, such as the discovery of previously unknown archaeology, arise.

Paragraph 3.10.151 Solar farms are generally consented on the basis that they will be time-limited in operation. The Secretary of State should therefore consider the length of time for which consent is sought when considering the impacts of any indirect effect on the historic environment, such as effects on the setting of designated heritage assets.

During the life of the Scheme, there are not anticipated to be any residual significant impacts on designated and non-designated heritage assets. The design life of the Scheme is 60 years; however, if equipment is still operating successfully and safely, the developer may choose to operate beyond the Scheme's design life. This is a common occurrence for generating stations; many stations operate beyond the design life if they are well maintained. It would not be beneficial to impose a Requirement that secures decommissioning after a specified time period, as this could lead to the important renewable energy generation capacity from a functional and efficient asset being arbitrarily removed. Nonetheless, due to the nature of its component parts, the operational life of the Scheme is finite, and it will be decommissioned in accordance with the DEMP **[EN010131/APP/7.5]** once it has ceased to operate effectively.

Transport and Access

Relevant Paragraph

Policy Requirement

Compliance with Policy

Paragraphs 3.10.111 to 3.10.112

Modern solar farms are large sites that are mainly comprised of small structures that can be transported separately and constructed on-site, with developers designating a compound on-site for the delivery and assemblage of the necessary components.

Many solar farms will be sited in areas served by a minor road network. Public perception of the construction phase of the solar farm will derive mainly from the effects of traffic movements, which is likely to involve smaller vehicles than typical onshore energy infrastructure but may be more voluminous.

A CTMP is provided in Appendix 13-E of the ES [EN010131/APP/3.3]. This sets out the proposals to manage construction traffic and staff vehicles during the construction of the Scheme. It identifies the management of freight traffic i.e. HGVs, as well as staff vehicles. The Framework CTMP has been informed by consultation with Lincolnshire County Council (LCC) and Nottinghamshire County Council (NCC) as the local highway authorities. The Scheme is located adjacent to the A156 and therefore has good access to the highway network.

Paragraph 3.10.114 and 3.10.115

Applicants should assess the various potential routes for delivery of materials and components where the source of the materials is known at the time of the application and select the route that is the most appropriate.

Where the exact location of the source of construction materials, such as crushed stone or concrete is not known at the time of the application applicants should assess the worst-case impact of additional vehicles on the likely potential routes.

A CTMP is provided in Appendix 13-E of the ES [EN010131/APP/3.3]. This sets out the proposals to manage construction traffic and staff vehicles during the construction of the Scheme. It identifies the management of freight traffic i.e. HGVs, as well as staff vehicles. It sets out the worst-case volume of traffic for the peak construction period. The Framework CTMP has been informed by consultation with Lincolnshire County Council (LCC) and Nottinghamshire County Council (NCC) as the local highway authorities.

Appendix 13-D of the ES [EN010131/APP/3.3] states that construction HGVs will travel to/ from the Solar and Energy Storage Park via the A156, to minimise passing through local villages. They will then utilise the B1241 Kexby Lane to reach the northern and eastern portions of the Solar and Energy Storage Park via the Kexby Lane accesses and the Marton Road access if necessary. The routing strategy reflects the most suitable routes available, to avoid limitations/ restrictions associated with alternative local routes adjacent to the Site such as Marton Road to the south of the construction access. A vehicle routing plan showing the routing strategy for HGVs at the Solar and Energy Storage Park is held in ES Volume 2: Figure 13-3 [EN010131/APP/3.2].

Relevant Paragraph

Policy Requirement

Compliance with Policy

Paragraph 3.10.116	Applicants should ensure all sections of roads and bridges on the proposed delivery route can accommodate the weight and volume of the loads and width of vehicles. Although unlikely, where modifications to roads and/or bridges are required, these should be identified, and potential effects addressed in the ES.	<p>Traffic generated by the Scheme during its operational phase will not be of a level that requires management. No new transport infrastructure is therefore proposed as part of the Scheme.</p> <p>During the construction and decommissioning periods, traffic impacts will be managed in accordance with measures set out in the Framework CTMP provided in Appendix 13-E of the ES [EN010131/APP/3.3], and the Framework DEMP [EN010131/APP/7.5].</p> <p>A CTMP is provided in Appendix 13-E of the ES [EN010131/APP/3.3]. This sets out the proposals to manage construction traffic and staff vehicles during the construction of the Scheme. It identifies the management of freight traffic i.e. HGVs, as well as staff vehicles. The Framework CTMP has been informed by consultation with Lincolnshire County Council (LCC) and Nottinghamshire County Council (NCC) as the local highway authorities</p>
Paragraph 3.10.117	Where a cumulative impact is likely because multiple energy infrastructure developments are proposing to use a common port and/or access route and pass through the same towns and villages, applicants should include a cumulative transport assessment as part of the ES. This should consider the impacts of abnormal traffic movements relating to the project in question in combination with those from any other relevant development. Consultation with the relevant local highways authorities is likely to be necessary.	<p>The cumulative schemes for consideration have been agreed in consultation with LCC and NCC. These schemes, for which development aligns to the peak construction year of 2026, are set out within Chapter 13: Transport and Access of the ES [EN010131/APP/3.1] and Appendix 13-E of the ES [EN010131/APP/3.3]. A summary of the schemes that have been are also shown on ES Volume 2: Figure 16-1 [EN010131/APP/3.2].</p> <p>Chapter 13: Transport and Access of the ES [EN010131/APP/3.1] concludes that in terms of the other schemes which have been reviewed, these are also not likely to contribute to the effects on transport and access receptors identified in this chapter and therefore the cumulative effects are not significant.</p>
Paragraphs 3.10.130 and 3.10.131	In some cases, the local highway authority may request that the Secretary of State impose controls on the number of vehicle movements to and from the solar farm site in a specified period during its construction and, possibly, on the routing of such movements particularly by heavy vehicles.	<p>As stated in the Transport Assessment provided in Appendix 13-D of the ES [EN010131/APP/3.3], it is anticipated that as a worst case during the peak construction period, there would be up to 60 HGVs per day to/ from the Solar and Energy Storage Park representing 120 movements and 30 LGVs per day to/ from the Solar and Energy Storage Park representing 60 movements. In addition, there will be up to 138 cars and 16 shuttle services per day</p>

Relevant Paragraph

Policy Requirement

Compliance with Policy

Where the Secretary of State agrees that this is necessary, requirements could be imposed on development consent.

associated with staff for the Solar and Energy Storage Park, representing 308 movements. Furthermore, for the Grid Connection Corridor, there would be up to 16 HGVs, 12 LGVs and one minibus service for construction workers per day, representing 58 movements.

Appendix 13-D of the ES **[EN010131/APP/3.3]** states that construction HGVs will travel to/ from the Solar and Energy Storage Park via the A156, to minimise passing through local villages. They will then utilise the B1241 Kexby Lane to reach the northern and eastern portions of the Solar and Energy Storage Park via the Kexby Lane accesses and the Marton Road access if necessary. The routing strategy reflects the most suitable routes available, to avoid limitations/ restrictions associated with alternative local routes adjacent to the Site such as Marton Road to the south of the construction access. A vehicle routing plan showing the routing strategy for HGVs at the Solar and Energy Storage Park is held in ES Volume 2: Figure 13-3 **[EN010131/APP/3.2]**.

Chapter 13: Transport and Access of the ES **[EN010131/APP/3.1]** concludes that no significant effects have been identified as a result of the Scheme on transport and access during any phase as all effects have either been categorised as minor adverse or negligible.

Paragraphs 3.10.132 and 3.10.133

Where cumulative effects on the local road network or residential amenity are predicted from multiple solar farm developments, it may be appropriate for applicants for various projects to work together to ensure that the number of abnormal loads and deliveries are minimised, and the timings of deliveries are managed and coordinated to ensure that disruption to residents and other highway users is reasonably minimised.

The cumulative schemes for consideration have been agreed in consultation with LCC and NCC. These schemes, for which development aligns to the peak construction year of 2026, are set out within Chapter 13: Transport and Access of the ES **[EN010131/APP/3.1]** and Appendix 13-E of the ES **[EN010131/APP/3.3]**. A summary of the schemes that have been are also shown on ES Volume 2: Figure 16-1 **[EN010131/APP/3.2]**.

It may also be appropriate for the highway authority to set limits for and coordinate these deliveries through active management of the delivery schedules through the abnormal load approval process.

Chapter 13: Transport and Access of the ES **[EN010131/APP/3.1]** concludes that in terms of the other schemes which have been reviewed, these are also not likely to contribute to the effects on transport and access receptors identified in this chapter and therefore the effects are not significant. However, the Applicant would intend to work with the other

Relevant Paragraph

Policy Requirement

Compliance with Policy

developers in the area, particularly those of the other NSIP scale solar schemes, to coordinate CTMPs in a way that minimises local impacts.

Paragraphs 3.10.134 and 3.10.135 Once consent for a scheme has been granted, applicants should liaise with the relevant local highway authority (or other coordinating body) regarding the start of construction and the broad timing of deliveries. Applicants may need to agree a planning obligation to secure appropriate measures, including restoration of roads and verges.

Further it may be appropriate for any non-permanent highway improvements carried out for the development (such as temporary road widening) to be made available for use by other subsequent solar farm developments.

The Applicant will continue to liaise with local highway authorities following submission of the Application and consent. Discussions have started on how to best manage the abnormal load deliveries and potential impacts on the local highway network. Areas where remedial work may be required following deliveries or where street furniture has been removed have been included in the Order limits. It is not currently considered necessary to agree planning obligations to secure highway works but the Applicant is open to discussions if this is deemed necessary at a later date.

Draft National Policy Statement for Electricity Networks Infrastructure (EN-5), March 2023

The Draft Energy National Policy Statement for Electricity Networks Infrastructure was published for consultation in September 2021. EN-5 was written to provide a primary basis for decisions on NSIP applications for electricity networks infrastructure. The policies within the document are considered important and relevant to the Grid Connection Corridor element of the Scheme, which comprises an underground grid connection of approximately 7.5km in length.

The table below considers the extent to which the Scheme complies with policies in the Draft EN-5. The ‘compliance with policy’ section demonstrates that the Scheme complies with all relevant policies in the Draft EN-5.

Paragraph No.	Policy Requirement	Compliance with Policy
Paragraphs 2.2.8 and 2.2.9	<p>There will usually be a degree of flexibility in the location of the development’s associated substations, and applicants should consider carefully their placement in the local landscape, as well as their design.</p> <p>In particular, the applicant should consider such characteristics as the local topography, the possibilities for screening of the infrastructure and/or other options to mitigate any impacts. (See Section 2.1 below and Section 5.10 in EN-1.)</p>	<p>There are two Substations associated with the Gate Burton Scheme, the Cottam Substation located at the Cottam Power Station site and the on-site Substation. The Substation at Cottam Power Station is existing and the need to locate the Scheme close to this grid connection point was a key aspect of site selection. The Substation is existing and in an area of existing electricity infrastructure so there was no flexibility to move this Substation. The need for an additional entirely new substation in the landscape has been avoided by connecting to the NETS at the existing Cottam Substation.</p> <p>Careful consideration was given to the location of the on-site Substation given that it, alongside the BESS, comprise the taller, more industrial elements of the Scheme. The Substation and BESS are co-located because:</p> <p>1/ co-location can reduce the overall landscape and visual impacts by locating all larger scale development in one location; and</p>

Paragraph No.**Policy Requirement****Compliance with Policy**

2/ there are practical reasons that co-location is preferable (e.g. colocation reduces the length of grid connections between the two elements of the Scheme and is logical because similar security and access requirements are required for both elements of the Scheme).

The railway across the site creates a linear barrier and whilst access under the railway is available, it is not suitable for large abnormal load vehicles or appropriate for large amounts of traffic. During construction a significant number of deliveries will be required to the BESS and Substation to carry components, including a large vehicle of over 60 metres in length to take the transformer to the site. During operation, there is a requirement for good access for emergency service vehicles in the event of a fire and access for vehicles for maintenance and, if necessary, component replacement. Access to the west of the site is easier and would have a lesser impact on the surrounding area because it can be taken directly from the A156. A location to the west of the site is also preferred because it reduces the number of grid connections that need to be taken under the railway line.

The eastern side of the site is located in the Area of Great Landscape Value designated in the Central Lincolnshire Local Plan 2012-2036 and there are a number of heritage assets in the vicinity, particularly those to the west of the Scheme around Gate Burton Estate and the Heynings Priory Scheduled Monument located close to the Order limits to the north of the Scheme. A location close to the railway line was selected because it increases the distance between the Gate Burton Estate and the Substation, reducing the potential for visual and heritage impacts on designated assets. This location is also in a less sensitive area of the AGLV than areas further west, reducing landscape and visual impacts on the AGLV. A location between the woodland blocks maximises existing screening, reducing the visibility of this element of the Scheme from, for example, Heynings Priory. However, these Scheme elements needed to be sufficiently distant from the woodland to avoid impacting the roots of trees and areas of Ancient Woodland. Effects on ancient woodland can

Paragraph No.	Policy Requirement	Compliance with Policy
		<p>have arboricultural and ecology impacts but can also have landscape and visual impacts by reducing screening.</p> <p>Finally, a, the Gate Burton Substation has been sited in a section of the Order limits that is not in Flood Zone 2 or 3.</p> <p>In line with this policy the location of the Substation was selected following optioneering exercises to select a location that is screened by existing woodland, topography and existing vegetation; thereby reducing the landscape impacts of the Scheme.</p>
Paragraphs 2.3.1 to 2.3.2	<p>to Section 4.9 of EN-1 sets out the generic considerations that Applicants and the Secretary of State should take into account in order to ensure that electricity networks infrastructure is resilient to the effects of climate change.</p> <p>As climate change is likely to increase risks to the resilience of some of this infrastructure, from flooding for example, or in situations where it is located near the coast or an estuary or is underground, applicants should in particular set out to what extent the proposed development is expected to be vulnerable, and, as appropriate, how it has been designed to be resilient to:</p> <ul style="list-style-type: none"> • flooding, particularly for substations that are vital to the network; and especially in light of changes to groundwater levels resulting from climate change • the effects of wind and storms on overhead lines • higher average temperatures leading to increased transmission losses • earth movement or subsidence caused by flooding or drought (for underground cables) • coastal erosion – for the landfall of offshore transmission cables and their associated substations in the inshore and coastal locations respectively 	<p>The majority of the electricity networks infrastructure associated with the Scheme is underground and is consequently highly unlikely to be affected by flooding or any similar effects of climate change.</p> <p>As outlined in Chapter 6: Climate Change of the ES [EN010131/APP/3.1], account of the effects of climate change have been taken in the design of the Scheme, and its construction and decommissioning. This includes:</p> <ul style="list-style-type: none"> - The design of drainage systems will ensure that there will be no significant increases in flood risk downstream during storms up to and including the 1 in 100 (1%) annual probability design flood, with an allowance of 40% for climate change; - Health and safety plans developed for construction and decommissioning activities will be required to account for potential climate change impacts on workers, such as flooding and heatwaves - Location of the on-site Substation outside areas of elevated flood risk <p>A Decommissioning Environmental Management Plan (DEMP) (taking account of climate change risks at the time) will be prepared prior to decommissioning. A Framework DEMP [EN010131/APP/7.5] is provided as part of the Application.</p>

Paragraph No.	Policy Requirement	Compliance with Policy
		An FRA is provided at Appendix 9-D of the ES [EN010131/APP/3.1] . The FRA provides a detailed assessment of the risk of flooding to the Scheme, taking account of climate change, and concludes that the Scheme is resilient to flood risk. This includes consideration of the Grid Connection Corridor, including evidence of how the Scheme passes the Sequential and Exception Test given that the grid connection is located in an area of elevated flood risk.
Paragraph 2.3.3	Section 4.9 of EN-1 advises that the resilience of the project to the effects of climate change must be assessed in the Environmental Statement (ES) accompanying an application. For example, future increased risk of flooding would be covered in any flood risk assessment (see Section 5.8 in EN-1).	Chapter 6: Climate Change of the ES [EN010131/APP/3.1] and Appendix 9-D of the ES [EN010131/APP/3.3] assess the resilience of the Scheme to climate change, including increased risk of flooding, as required by this policy.
Paragraphs 2.8.3 and 2.8.4	The Secretary of State should also take into account that Transmission Owners (TOs) and Distribution Network Operators (DNOs) are required under Section 9 of the Electricity Act 1989 to bring forward efficient and economical proposals in terms of network design. TOs and DNOs are also required to facilitate competition in the generation and supply of electricity, and electricity distributors have a statutory duty to provide a connection where requested.	The Applicant has secured a connection to the National Grid via a new below ground grid connection cable located within the Grid Connection Route. This will connect the new Gate Burton Substation with the existing Cottam Substation. Further details of this are included in the Grid Connection Statement [EN010131/APP/7.11] .
Paragraphs 2.9.37 to 2.9.38	Audible noise effects can also arise from substation equipment such as transformers, quadrature boosters and mechanically switched capacitors. Transformers are installed at many substations and generate low frequency hum. Whether the noise can be heard outside a substation depends on a number of factors, including transformer type and the level of noise attenuation present (either engineered intentionally or provided by other structures).	Chapter 11: Noise & Vibration of the ES [EN010131/APP/3.1] has assessed the impacts of all aspects of the Scheme including substations in accordance with this policy.

Appendix B: Local Policy Accordance Tables

B.1 Central Lincolnshire Local Plan 2023

1.1.1 The Central Lincolnshire Plan 2023 was adopted on 13 April 2023 by the Central Lincolnshire Joint Strategic Planning Committee and it replaces the Central Lincolnshire Local Plan adopted in 2017. The plan includes policies for the growth and regeneration of Central Lincolnshire over the next 20 years. The Plan contains policies that could be important and relevant in decision making on the Application and the below table considers the extent to which the Scheme complies with these policies.

The ‘compliance with policy’ column demonstrates that the Scheme complies with all relevant policies in the Central Lincolnshire Local Plan.

Policy	Policy Requirement	Compliance with Policy
Policy S1: The Spatial Strategy and Settlement Hierarchy	<p>The spatial strategy will focus on delivering sustainable growth for Central Lincolnshire that meets the needs for homes and jobs, regenerates places and communities, and supports necessary improvements to facilities, services and infrastructure.</p> <p>Development should create strong, sustainable, cohesive and inclusive communities, making the most effective use of previously developed land and enabling a larger number of people to access jobs, services and facilities locally.</p> <p>Development should provide the scale and mix of housing types and a range of new job opportunities that will meet the identified needs of Central Lincolnshire in order to secure balanced communities.</p> <p>Decisions on investment in services and facilities, and on the location and scale of development, will be assisted by the Central Lincolnshire Settlement Hierarchy.</p>	<p>As established in the Statement of Need [EN010131/APP/2.1], large-scale solar generation is essential to support the urgent decarbonisation of the UK’s electricity sector. Large-scale solar is important not only to reduce power-related carbon emissions, but also to provide a timely next step contribution to a future generation portfolio which is capable of supporting the electrification and therefore decarbonisation of transport, heat and industrial demand.</p> <p>Due to the scale of the land required to deliver the substantial renewable energy generation capacity that the Scheme will provide, and the need to be in sufficient proximity of the connection point to the National Electricity Transmission System (NETS), the Scheme could not be located within an urban area or settlement boundary. Nor are there previously developed sites available that could deliver the scale of Scheme proposed and its associated benefits.</p> <p>In delivering substantial renewable energy infrastructure, the Scheme’s location in the countryside complies with this policy.</p>

Countryside

Unless allowed by:

- a) policy in any of the levels 1-7 above; or
- b) any other policy in the Local Plan (such as Policies S4, S5, S34, or S43) or a relevant policy in a neighbourhood plan, development will be regarded as being in the countryside and as such restricted to:
 - that which is demonstrably essential to the effective operation of agriculture, horticulture, forestry, outdoor recreation, transport or utility services;
 - delivery of infrastructure;
 - renewable energy generation; and
 - to minerals or waste development in accordance with separate Minerals and Waste Local Development Documents.

Policy S5:
Development in the
Countryside

Part E: Non-residential development in the countryside
Proposals for non-residential development will be supported provided that:

- a) The rural location of the enterprise is justifiable to maintain or enhance the rural economy or the location is justified by means of proximity to existing established businesses or natural features;
- b) The location of the enterprise is suitable in terms of accessibility;
- c) The location of the enterprise would not result in conflict with neighbouring uses; and
- d) The development is of a size and scale commensurate with the proposed use and with the rural character of the location

This policy is included due to the title of the policy but is not considered important and relevant to decision making on the Gate Burton Application. Policy S1 lists a number of types of development that can be permitted in the countryside, or which one is renewable energy generation and another is development listed in Policy S5. These are therefore separate types of development permitted and Policy S5 is not written to guide development of renewable energy generation in the countryside. This conclusion is further evidenced by the fact that criteria 1 and 2 listed in Policy S5 are not relevant to renewable energy developments.

Policy S11 –
Embodied Carbon

All development should, where practical and viable, take opportunities to reduce the development's embodied carbon content, through the careful choice, use and sourcing of materials.

Major development proposals:

All major development proposals should explicitly set out what opportunities to lower a building's embodied carbon content have been considered, and which opportunities, if any, are to be taken forward.

As established in the Statement of Need **[EN010131/APP/2.1]**, large-scale solar generation is essential to support the urgent decarbonisation of the UK's electricity sector. Large-scale solar is important not only to reduce power-related carbon emissions, but also to provide a timely next step contribution to a future generation portfolio which is capable of supporting the electrification and therefore decarbonisation of transport, heat and industrial demand.

Chapter 6: Climate change of the ES **[EN010131/APP/3.1]**

In the period to 31 December 2024, there will be no requirement (unless mandated by Government) to use any specific lower embodied carbon materials in development proposals, provided the applicant has at least demonstrated consideration of options and opportunities available.

From 1 January 2025, there will be a requirement for a development proposal to demonstrate how the design and building materials to be used have been informed by a consideration of embodied carbon, and that reasonable opportunities to minimise embodied carbon have been taken. Further guidance is anticipated to be issued by the local planning authorities on this matter prior to 1 January 2025.

presents a lifecycle greenhouse gas (GHG) impact assessment which considers the impact of GHG emissions arising over the lifetime of the Scheme on the climate. This concludes that over its 60 year operational lifetime the Scheme will produce approximately 28,802,332 MWh of electricity, with an average operational carbon intensity value of 17.98 grams of carbon dioxide equivalent per kWh (gCO_{2e}/kWh). This demonstrates the Scheme's very low carbon attributes compared to other non-renewable forms of electricity generation, providing an overall major beneficial impact in relation to the UK meeting its carbon reduction targets and therefore represents a major beneficial effect on the climate.

Table 6-19 of Chapter 6: Climate change of the ES **[EN010131/PPP/3.1]** Summarises the emissions resulting from the manufacture of materials for the construction of the Scheme. Components of the Scheme such as the BESS provide carbon saving opportunities. The BESS will provide a grid balancing function which is often performed using high-carbon intensity power sources such as open cycle gas turbines (OCGT), so the use of a battery charged from solar PV generation can deliver a direct carbon saving relative to an OCGT.

A Framework CEMP **[EN010131/APP/7.3]** is provided as part of the DCO application which includes mitigation to reduce the GHG impact of the scheme during construction. Mitigation measures within the CEMP include:

- Adopting the Considerate Constructors Scheme (CCS) to assist in reducing pollution, including GHGs, from the Scheme by employing best practice measures which go beyond the statutory requirements; and
- Designing, constructing, and implementing the Scheme in such a way as to minimise the creation of waste and maximise the use of alternative materials with lower embodied.

As set out above, the Scheme will support decarbonisation of the UK's electricity network and has demonstrated its embodied carbon attributes and therefore complies with this policy.

Policy
S14:Renewable
Energy

The Central Lincolnshire Joint Strategic Planning Committee is committed to supporting the transition to a net zero carbon future and will seek to maximise appropriately located renewable energy generated in Central Lincolnshire (such energy likely being wind and solar based).

Proposals for renewable energy schemes, including ancillary development, will be supported where the direct, indirect, individual and cumulative impacts on the following considerations are, or will be made, acceptable. To determine whether it is acceptable, the following tests will have to be met:

- i. The impacts are acceptable having considered the scale, siting and design, and the consequent impacts on landscape character; visual amenity; biodiversity; geodiversity; flood risk; townscape; heritage assets, their settings and the historic landscape; and highway safety and rail safety; and
- ii. The impacts are acceptable on aviation and defence navigation system/communications; and
- iii. The impacts are acceptable on the amenity of sensitive neighbouring uses (including local residents) by virtue of matters such as noise, dust, odour, shadow flicker, air quality and traffic;

Testing compliance with part (i) above will be via applicable policies elsewhere in a development plan document for the area (i.e. this Local Plan; a Neighbourhood Plan, if one exists; any applicable policies in a Minerals or Waste Local Plan); and any further guidance set out in a Supplementary Planning Document.

In order to test compliance with part (ii) above will require, for relevant proposals, the submission by the applicant of robust evidence of the potential impact on any aviation and defence navigation system/communication, and within such evidence must be documented

The impacts of the Scheme have been assessed and are set out in detail by the ES **[EN010131/APP/3.1]** and are taken into account in Section 7 of the PDAS Section 7. The following is a high-level summary of the matters listed in the policy:

- i) An assessment of the potential landscape and visual impacts associated with the construction, operation and decommissioning of the Scheme has been carried out and is presented in Chapter 10: Landscape and Visual Amenity of the ES **[EN010131/APP/3.1]**. Section 10.6 of Chapter 10: Landscape and Visual Amenity of the ES **[EN010131/APP/3.1]** outlines the relevant landscape character assessments and related studies at national, regional, county and neighbourhood levels. Appendix 10C of the ES **[EN010131/APP/3.1]** sets out the relevant matters of these published assessments in detail.

Chapter 10 concludes that the Scheme would result in significant landscape effects on LLCA 02 Ancient Woodland Ridge due to construction activity for the medium term, For LLCA 06 Clay Farmlands a significant effect is anticipated due to construction altering a wide area at a local level, however this would not result in the permanent loss of key features such as the overall landscape structure or the mature hedgerows network. A significant effect is anticipated on LLCA 10: Cottam Plain, as construction impacts will result from the installation of underground cable to tie into Cottam Power Station.

There is also considered to be significant visual effects for people walking PRoW LL[Knai]44/2, and sections of ProW LL/Upto/53/1 during construction.

For Local LCAs, the operation of the Scheme will result in significant effects to LLCA 02: Ancient Woodland Ridge and LLCA 06: Clay

areas of agreement or disagreement reached with appropriate bodies and organisations responsible for such infrastructure.

In order to test compliance with part (iii) above will require, for relevant proposals, the submission by the applicant of a robust assessment of the potential impact on such users, and the mitigation measures proposed to minimise any identified harm.

For all matters in (i)-(iii), the applicable local planning authority may commission its own independent assessment of the proposals, to ensure it is satisfied what the degree of harm may be and whether reasonable mitigation opportunities are being taken.

Where significant adverse effects are concluded by the local planning authority following consideration of the above assessment(s), such effects will be weighed against the wider environmental, economic, social and community benefits provided by the proposal. In this regard, and as part of the planning balance, significant additional weight in favour of the proposal will arise for any proposal which is community-led for the benefit of that community.

In areas that have been designated for their national importance, as identified in the National Planning Policy Framework, renewable energy infrastructure will only be permitted where it can be demonstrated that it would be appropriate in scale, located in areas that do not contribute positively to the objectives of the designation, is sympathetically designed and includes any necessary mitigation measures.

Additional matters for solar based energy proposals

Proposals for solar thermal or photovoltaics panels and associated infrastructure to be installed on existing property will be under a presumption in favour of permission unless there is clear and demonstrable significant harm arising.

Farmlands during Year 1 and Year 15 (although impact would be reduced), as described below.

The majority of LLCA 02 will be occupied by the Scheme, including solar panels, inverters, the BESS and on-site Substation. By Year 1, the introduction of these features will result in a loss of openness, tranquillity and agricultural character. Although, the remaining key characteristics, including blocks of ancient woodland, will remain unchanged. However, overall, the Scheme will result in a large alteration to the majority of the LLCA which is considered significant. By Year 15, the proposed new and strengthened planting will have established and grown to maturity, improving the vegetated structure of the LLCA. However, given the introduction of the Scheme as described for Year 1 across most of the LLCA the large alteration in character is inevitable such that the magnitude of effect remains the same as for Year 1.

The section of the Order limits within LLCA 06 will be occupied by solar panels, inverters and a security building at the Order limits entrance. By Year 1, many key features will be maintained, including the plateau landform and field boundaries. However, the Scheme will result in the loss of some key characteristics, namely the agricultural character and a reduction in the sense of openness given the change of land use and the introduction of new built features in the landscape. This is therefore considered to be significant. By Year 15 the proposed new and strengthened planting will have established and grown to maturity, improving the vegetated structure of the LLCA. However, given the introduction of the Scheme as described for Year 1 across most of the LLCA the alteration in character will be such that the magnitude of effect will remain medium.

Regarding visual effects on residents, recreational users, road users and public transport and visitors to the area in Year 1 (winter) and Year 15 (summer), In Year 1, the Scheme is anticipated to result in major or moderate adverse significant effects for residents of Sandy Barr Cottage (VP17, Residential 1a & 1b), Nursery House (VP17, Residential 2a & 2c) to the south of the Order limits, Gate Burton Estate (VP15, Residential 6a-6f), Stephenson's Hill Farm to the west of the Order limits, Clay Farm in

Proposals for ground based photovoltaics and associated infrastructure, including commercial large scale proposals, will be under a presumption in favour unless:

- there is clear and demonstrable significant harm arising; or
- the proposal is (following a site specific soil assessment) to take place on Best and Most Versatile (BMV) agricultural land and does not meet the requirements of Policy S67; or
- the land is allocated for another purpose in this Local Plan or other statutory based document (such as a nature recovery strategy or a Local Transport Plan), and the proposal is not compatible with such other allocation.

Proposals for ground based photovoltaics should be accompanied by evidence demonstrating how opportunities for delivering biodiversity net gain will be maximised in the scheme taking account of soil, natural features, existing habitats, and planting proposals accompanying the scheme to create new habitats linking into the nature recovery strategy.

Decommissioning renewable energy infrastructure

Permitted proposals will be subject to a condition that will require the submission of an End of Life Removal Scheme within one year of the facility becoming non-operational, and the implementation of such a scheme within one year of the scheme being approved. Such a scheme should demonstrate how any biodiversity net gain that has arisen on the site will be

protected or enhanced further, and how the materials to be removed would, to a practical degree, be re-used or recycled.

the southern centre of the Scheme but outside the Order limits, South Park Farm (Residential 3a -3c), 30 Station Road (LCC 5, Residential 4a), 2 Heynings Court (Residential 5a) along the northern side of the Order limits, and Woodside, Kexby Lane (VP 10, Residential 7a) along the eastern side of the Order limits. This will be due to the visibility of PV arrays, and due to mitigation planting not being established yet. Significant visual effects will reduce to minor, negligible and neutral with increasing distance from the Order limits, due to intervening vegetation, landform and built structures.

By Year 15 however, proposed planting within and along the boundaries of the Order limits will have established which would result in no residential receptors with open views in proximity to the Order limits or set back from the Order limits in the surrounding settlements being identified as experiencing significant adverse effects at Year 15 of operation.

For road users and public transport, a range of moderate-major adverse significant effects are reported where more open views from the road network are available (sections of the A156, Willingham Road, Marton Road, Kexby Lane, Station Road and Clay Lane). By Year 15, these effects would reduce to not significant due to the establishment of tree planting, and maintenance of existing hedgerows at 3m height.

There will be some moderate-minor significance visual effect on users of the train on the railway line within the Order limits, which runs approximately 20 services a day in each direction running every hour (Monday to Friday); although these will be fleeting and oblique to the direction of travel both in Year 1 and Year 15. Given the nature of the views and the infrequent nature of the train service, a relatively small number of users would view the Scheme for a short period of time.

in Year 1, users of sections of PRoW LL|Knai|44/2 will experience high visual effects similar to the effects experienced during construction. The magnitude of visual effects will be medium and the significance of these effects will be moderate adverse as the proposed Scheme is located adjacent to the PROW for approximately 360m. Views from other PROW

will be screened by matured proposals landscape planting and intervening landform and effects range from moderate-minor adverse. By Year 15, these effects will be similar to those experienced during Year 1.

Decommissioning effects on the landscape and visual amenity are likely to be similar to those temporary impacts experienced during construction of the Order Limits but reduced on account of the containment provided by landscape mitigation measures including proposed vegetation, which will have reached maturity, and general landscape management measures.

However, the decommissioning phase may result in localised significant adverse landscape and visual effects, like the construction phase, due to the presence of machinery and general activity to remove Scheme structures.

In terms of policy S14, the 'acceptability' of the Scheme's landscape and visual impacts need to be weighed against the nationally significant benefits of and need for the Scheme and acknowledgement that with NSIP scale generation schemes some landscape and visual impacts are acceptable. In this context it is considered that the landscape and visual effects that would result are outweighed by the overriding benefits of the Scheme, and that the Scheme is therefore compliant with this policy test. Regarding biodiversity, Section 8.7 of Chapter 8: Ecology of the ES **[EN010131/APP/3.1]** sets out all the protected species, habitats and other species identified as being of principal importance for the conservation of biodiversity within the study area for the Scheme. Chapter 8: Ecology of the ES **[EN010131/APP/3.1]** clearly set out the expected effects on the above receptors during the construction, operation and decommissioning phases of the Scheme. This concludes that there are anticipated to be no significant adverse effects on any of these protected species as a result of the Scheme following mitigation. There are predicted to be significant beneficial effects on broad-leaved woodland, hedgerows and breeding birds as a result of habitat enhancements proposed as part of the Scheme.

There are no sites identified through international conventions and European Directives such as SPA's or RAMSAR sites within the Zone of Influence assessed within Chapter 8: Ecology of the ES **[EN010131/APP/3.1]**. There are no SSSIs within the Order Limits.

There is one Local Wildlife Site (LWS) within the Order limits, Cow Pasture Lane Drains LWS, which is crossed by the grid connection. The Grid Connection Corridor crossing of Cow Pasture Lane Drains LWS will be undertaken using HDD methods to lay cabling, therefore avoiding impacts to the drain and hedge, with setbacks of at least 10m from the centreline of the drain. Access for construction of the Grid Connection Corridor will utilise an existing access track that runs alongside Cow Pasture Lane Drains LWS. However, where there is a need to cross the LWS, this will be via a bailey bridge, rather than culvert to minimise negative impacts.

Construction compounds will be set back from this LWS with a minimum 10m from the centre line of the watercourse. Furthermore, measures to ensure incursion into this LWS does not occur will be put in place, e.g. security fencing, which will be implemented at an early stage. With these measures in place, the Scheme is not predicted to adversely affect the LWS.

There will be no loss of ancient woodland or veteran trees as a result of the Scheme. In consideration of this, the Scheme's impacts on biodiversity are acceptable.

Regarding geodiversity the impacts are acceptable as there is not predicted to be any sterilisation of minerals within the MSA that the Grid Connection Corridor lies within, and the Scheme would not pose a serious hindrance to future extraction in the vicinity.

A FRA is provided at Appendix 9-D of the ES **[EN010131/APP/3.1]**. This demonstrates how the development passes the Sequential Test including its application at the site level. The Grid Connection Corridor is predominantly located within an area of high risk of fluvial flooding (Flood Zone 3), therefore an Exception Test has been undertaken. Given that the grid connection point is located within an area at high risk of fluvial

flooding it was not possible to select a grid connection route that avoided areas of high flood risk. However, given that the development will comprise an underground cable, it will not be vulnerable to flooding or increase the risk of flooding elsewhere through its installation. The impact on flood risk is therefore acceptable.

Section 7.10 of Chapter 7: Cultural Heritage of the ES **[EN010131/APP/3.1]** contains a clear assessment of likely impacts and effects of the Scheme on cultural heritage. Chapter 7: Cultural Heritage of the ES **[EN010131/APP/3.1]** concludes that there will be no significant effect on designated heritage assets or their setting as a result of the Scheme. Chapter 7: Cultural Heritage of the ES **[EN010131/APP/3.1]** states that the magnitude of impact to non-designated archaeological assets (AEC009, AEC010, AEC011, MLI125067, MLI52472; AEC013, MLI52489, MNT15983, MNT4983 and AEC014) as a result of the Scheme has been assessed as medium, resulting in a moderate adverse significance of effect, which in the absence of additional mitigation, would be significant. Additional mitigation in the form of a programme of archaeological excavation and recording is proposed, as set out in the Archaeological Mitigation Strategy **[EN010131/APP/7.6]**. Archaeological excavation and recording would not minimise the physical impact to these assets, as the archaeological evidence would still be removed, but would compensate for their loss by preserving them by record. This would reduce the magnitude of impact on individual assets, resulting in a residual minor adverse effect, which is not significant. As such, the impact on heritage assets is acceptable.

Chapter 13: Transport and Access of the ES **[EN010131/APP/3.1]** summarises that no significant effects have been identified as a result of the Scheme on transport and access during any phase on strategic local highway network users; including pedestrians, cyclists and users of public transport. It is also not expected to have a significant impact on the strategic or local highway networks in terms of their capacity and highway safety. Therefore, the impact of the Scheme on highway safety is considered acceptable.

ii) The scheme will have no impact on MoD operations. As stated in Chapter 15: Other Issues of the ES **[EN010131/APP/3.1]**, impacts on aviation safety were assessed in detail by the glint and glare assessment. The overall impacts on aviation safety in relation to glint and glare are low and not significant. Therefore the scheme is acceptable in regards to this requirement.

iii) As set out in Chapter 11: Noise and Vibration of the ES **[EN010131/APP/3.1]** the Scheme avoids significant noise impacts on health and quality of life; minimising adverse impacts of noise through appropriate embedded mitigation; and providing additional mitigation through the design and selection of operational plant to effectively manage and control operational noise.

The Scheme is not expected to result in an increased risk of insect infestation and will not emit any odour. Construction and decommissioning activities will not include burning materials (as set out in the Framework CEMP **[EN010131/APP/7.3]**). For these reasons, smoke, odour and insect infestation risk has not been assessed in the ES.

Chapter 12: Socio-economics and Land use of the ES **[EN010131/APP/3.1]** confirms that there are no adverse impacts on community facilities or registered assets of community value. Therefore, there are no impacts arising from the Scheme on local amenities. This Chapter also identifies the Scheme as having beneficial (non-significant) effects as a result of employment generation during the construction and decommissioning periods.

As detailed above there are no significant effects have been identified as a result of the Scheme on transport and access during any phase on strategic local highway network users. Therefore, the Scheme is acceptable on the amenity of sensitive neighbouring uses (including local residents).

There would be a permanent loss of approximately 2 ha of BMV land as a result of the Scheme. Soil surveys have been undertaken to identify the

ALC grade of land within the Solar and Energy Storage Park and a desktop study has been undertaken to estimate the ALC grade of land within the Grid Connection Corridor. The ALC survey is provided in Appendix 12-C: ALC Report of the ES **[EN010131/APP/3.3]**.

The majority of the Solar and Energy Park (approximately 85%) comprises Grade 3a agricultural land; Grade 3a land comprises approximately 12%, which is classed as Best and Most Versatile (BMV) Land. Some agricultural use can continue on most BMV land following construction alongside the solar panels and the impact on almost all agricultural land (including all but 2 ha of BMV land) is reversible when the Scheme is decommissioned. The impact on BMV land has been minimised through locating permanent development on lower quality land where possible. It will be further minimised through implementation of an Soils Resource Management Plan to protect soils (see **[EN010131/APP/7.12]** for the Outline Soils Resource Management Plan).

The Grid Connection Corridor is likely to contain areas of best and most versatile agricultural land. However, as agricultural uses of the land can continue following installation of the underground cable there would be no effect on the availability of best and most versatile land after construction. The compliance of the Scheme in relation to BMV land is also considered in Policy 62, and it is considered to comply with this policy.

The Scheme does not conflict with any allocations within the CLLP or other statutory based documents.

The application is also accompanied by a Biodiversity Net Gain (BNG) assessment **[EN010131/APP/7.9]**, using Defra's Metric 3.1. The final percentage of net gain achieved will depend on the detailed design of the Scheme, which cannot be determined with certainty at this stage. However the BNG Assessment demonstrates that the Scheme can achieve far in excess of 10% biodiversity net gain.

The Decommissioning Environmental Management Plan (DEMP) **[EN010131/APP/7.5]** is provided as part of the Application. The key elements of this Framework DEMP are:

- a. An overview of the Scheme, decommissioning activities and programme;
- b. Prior assessment of potential environmental impacts (through the EIA);
- c. Mitigation measures to prevent or reduce potential adverse impacts;
- d. Monitoring of effectiveness of mitigation measures;
- e. Corrective action procedure; and
- f. Links to other complementary plans and procedures.

In summary of the above, the Scheme has demonstrated its acceptability in relation to the requirements of this policy and is therefore considered to accord with Policy S14.

Policy S16: Wider Energy Infrastructure

The Joint Committee is committed to supporting the transition to net zero carbon future and, in doing so, recognises and supports, in principle, the need for significant investment in new and upgraded energy infrastructure.

Where planning permission is needed from a Central Lincolnshire authority, support will be given to proposals which are necessary for, or form part of, the transition to a net zero carbon sub-region, which could include: energy storage facilities (such as battery storage or thermal storage); and upgraded or new electricity facilities (such as transmission facilities, sub-stations or other electricity infrastructure.

However, any such proposals should take all reasonable opportunities to mitigate any harm arising from such proposals, and take care to select not only appropriate locations for such facilities, but also design solutions (see Policy S53) which minimises harm arising

As explained in the Statement of Need [EN010131/APP/2.1] and summarised in Section 2 of the PDAS, the Scheme is a substantial infrastructure asset, capable of delivering large amounts of low-carbon electricity to help meet the UK's urgent need to decarbonise with solar technology supported by recent government policy.

The main components of the Scheme and supporting infrastructure is summarised in Chapter 4 of the PDAS and includes such components as the BESS, on-site cabling and a new on-site substation located within the Solar and Energy Storage Park.

It is therefore considered the Scheme complies with this policy.

Policy S21: Flood Risk and Water Resources

Flood Risk

All development proposals will be considered against the NPPF, including application of the sequential and, if necessary, the exception test.

Policy S21 references the NPPF. Whilst the NPPF can be an important and relevant matter in decision-making on DCO Applications, its weight is diminished by the fact that it was written to guide decision making on TCPA applications and the text in NPS EN-1 and draft NPS EN-1 is likely to be more relevant than the NPPF. However, on this topic the policy in

Through appropriate consultation and option appraisal, development proposals should demonstrate:

- a) that they are informed by and take account of the best available information from all sources of flood risk and by site specific flood risk assessments where appropriate;
- b) that the development does not place itself or existing land or buildings at increased risk of flooding;
- c) that the development will be safe during its lifetime taking into account the impacts of climate change and will be resilient to flood risk from all forms of flooding such that in the event of a flood the development could be quickly brought back into use without significant refurbishment;
- d) that the development does not affect the integrity of existing flood defences and any necessary flood mitigation measures have been agreed with the relevant bodies, where adoption, ongoing maintenance and management have been considered and any necessary agreements are in place;
- e) how proposals have taken a positive approach to reducing overall flood risk and have considered the potential to contribute towards solutions for the wider area; and
- f) that they have incorporated Sustainable Drainage Systems (SuDS)/ Integrated Water Management into the proposals unless they can be shown to be inappropriate.

Protecting the Water Environment

Development proposals that are likely to impact on surface or ground water should consider the requirements of the Water Framework Directive. Development proposals should demonstrate:

- g) that water is available to support the development proposed;
- h) that adequate mains foul water treatment and disposal already exists or can be provided in time to serve the development. Non mains foul sewage disposal solutions should only be considered where it can be

the NPPF, draft Policy S21 and the NPSs do not significantly differ and the Scheme complies with Policy S21.

A FRA is provided at Appendix 9-D of the ES [EN010131/APP/3.1]. This demonstrates how the development passes the Sequential Test including its application at the site level.

As stated in the Appendix 9-D FRA of the ES [EN010131/APP/3.3], the Solar and Energy Storage Park infrastructure is predominantly located within Flood Zone 1 (for fluvial and tidal sources) and is considered to be predominantly at low risk from other sources of flooding (surface water, groundwater, sewer and artificial). This element of the Scheme is therefore considered to pass the Sequential Test and application of the Exception Test is not required. In addition, the FRA demonstrates that reasonable steps have been taken to sequentially located infrastructure within the Solar and Energy Storage Park to areas of lower risk from all sources of flooding.

The Grid Connection Corridor is predominantly located within an area of high risk of fluvial flooding (Flood Zone 3); therefore an Exception Test has been undertaken. Given that the grid connection point is located within an area at high risk of fluvial flooding it was not possible to select a grid connection route that avoided areas of high flood risk. However, given that the development will comprise an underground cable, it will not be vulnerable to flooding or increase the risk of flooding elsewhere through its installation.

Cottam Substation is located in an area of high flood risk so any project that utilises the capacity at the Substation would require electricity connections through Flood Zone 3. In this scenario the sequential approach cannot deliver an alternative outside Flood Zone 3. The Grid Connection Corridor is predominantly location within Flood Zone 3 (for fluvial and tidal sources). Whilst other Grid Connection Corridor options were considered, these were also located within Flood Zone 3 and there are no alternative routes at lower risk of flooding from any source. The Exception Test is therefore applied. The nature of the development in Flood Zones 2 and 3, being predominantly an underground cable, means it will

shown to the satisfaction of the local planning authority that connection to a public sewer is not feasible;

i) that they meet the Building Regulation water efficiency standard of 110 litres per occupier per day or the highest water efficiency standard that applies at the time of the planning application (see also Policy S12);

j) that water reuse and recycling and rainwater harvesting measures have been incorporated wherever possible in order to reduce demand on mains water supply as part of an integrated approach to water management (see also Policy S11);

k) that they have followed the surface water hierarchy for all proposals:

i. surface water runoff is collected for use;

ii. discharge into the ground via infiltration;

iii. discharge to a watercourse or other surface water body;

iv. discharge to a surface water sewer, highway drain or other drainage system, discharging to a watercourse or other surface water body;

v. discharge to a combined sewer;

l) that no surface water connections are made to the foul system;

m) that surface water connections to the combined or surface water system are only made in exceptional circumstances where it can be demonstrated that there are no feasible alternatives (this applies to new developments and redevelopments) and where there is no detriment to existing users;

n) that no combined sewer overflows are created in areas served by combined sewers, and that foul and surface water flows are separated;

o) that development contributes positively to the water environment and its ecology where possible and does not adversely affect surface and ground water quality in line with the requirements of the Water Framework Directive;

p) that development with the potential to pose a risk to groundwater resources is not located in sensitive locations to meet the requirements of the Water Framework Directive;

q) how Sustainable Drainage Systems (SuDS)/ Integrated Water Management to deliver improvements to water quality, the water environment and to improve amenity and biodiversity net gain wherever

not significantly increase flood risk elsewhere or be susceptible to risk when the area is flooded.

The site selection was guided by the aim to select a site close to the grid connection but outside the areas of highest flood risk. This guided the selection of the Gate Burton site, with all areas to the west closer to the grid connection being subject to flooding.

Appendix 9-D of the ES **[EN010131/APP/3.1]** also explains that through the sequential process and design iterations the Solar and Energy Storage Park with the BESS, Substation, the Power Conversion Unit, and the solar PV panel arrays are located in areas with the lowest risk of flooding from any source.

Section 8 of Appendix 9-D FRA of the ES **[EN010131/APP/3.3]** concludes that the Scheme is considered to pass the Sequential and Exception Test.

Section 7.2 of Appendix 9-D of the ES **[EN010131/APP/3.1]** states that the proposed surface water drainage network has been designed to accommodate runoff from all storms up to and including the 1% AEP +40% for climate change, which will be achieved through sustainable drainage systems (SuDs), as set out by the Appendix 9-C: Outline Drainage Strategy **[EN010131/APP/3.1]**. During construction, the Framework CEMP **[EN010131/APP/7.3]** sets

out measures to ensure the safety of staff during construction from flood risk. This includes the appointment of at least one designated Flood Warden who is familiar with the risks and remains vigilant to news reports, Environment Agency flood warnings, relevant weather warnings and water levels of the local waterway. Health and safety plans developed for construction and decommissioning activities will also be required to account for potential climate change impacts on workers, such as flooding and heatwaves.

Buffers of 10m from the centre point of watercourse have also been incorporated into the Scheme.

possible have been incorporated into the proposal unless they can be shown to be impractical;

r) that relevant site investigations, risk assessments and necessary mitigation measures for source protection zones around boreholes, wells, springs and water courses have been agreed with the relevant bodies (e.g. the Environment Agency and relevant water companies);

s) that suitable access is safeguarded for the maintenance of watercourses, water resources, flood defences and drainage infrastructure; and

t) that adequate provision is made to safeguard the future maintenance of water bodies to which surface water and foul water treated on the site of the development is discharged, preferably by an appropriate authority (e.g. Environment Agency, Internal Drainage Board, Water Company, the Canal and River Trust or local Council).

In order to allow access for the maintenance of watercourses, development proposals that include or abut a watercourse should ensure no building, structure or immovable landscaping feature is included that will impede access within 8m of a watercourse, or within 16m of a tidal watercourse. Conditions may be included where relevant to ensure this access is maintained in perpetuity and may seek to ensure responsibility for maintenance of the watercourse including land ownership details up to and of the watercourse is clear and included in maintenance arrangements for future occupants.

Appendix 9-A of the ES [EN010131/APP/3.3] provides a WFD Assessment. This concludes that the Scheme is compliant with the objectives of the WFD: it would not cause deterioration in status of the water bodies, and would not prevent the water bodies achieving Good Ecological Status. The Scheme also contributes to the delivery of WFD objectives.

In summary, the Scheme has demonstrated it complies with this policy by managing flood risk and protecting the water environment.

Policy S45:
Strategic
Infrastructure
Requirements

New Development should be supported by, and have good access to infrastructure.

Infrastructure

Planning permission will only be granted if it can be demonstrated that there is, or will be, sufficient infrastructure capacity to support and meet all the necessary requirements arising from the proposed development. Development proposals must consider all of the infrastructure implications of a scheme; not just those on the site or its immediate vicinity. Conditions or planning obligations, as part of a package or combination of infrastructure

This policy is considered by the Applicant to have limited relevance to a large scale solar project but has been added here due to its inclusion in the LCC Local Impact Report.

The main infrastructure requirement for the solar scheme is the availability of a grid connection point, which is available at Cottam Substation. No construction is required outside the Order limits so the infrastructure required to support the development; primarily the substations, cable route and works at Cottam substation are all part of the development itself. This policy instead is focused on infrastructure required offsite.

delivery measures, are likely to be required for many proposals to ensure that new development meets this principle.

Consideration must be given to the likely timing of infrastructure provision. As such, development may need to be phased. Conditions or a planning obligation may be used to secure this phasing arrangement.

Healthcare Facilities

Proposals for new health care facilities should relate well to public transport services, walking and cycling routes and be easily accessible to all sectors of the community. Proposals which utilise opportunities for the multi-use and co-location of health facilities with other services and facilities, and thus co-ordinate local care and provide convenience for the community, will be particularly supported. Planning obligations are likely to require contributions to primary healthcare provision where there is a demonstrated shortfall in capacity.

Education Provision

Proposals for new or extended school facilities will be expected to relate well to the population that they are to serve, ensuring that they are easily accessible for all. Conditions or planning obligations are likely to require education provision where there is a demonstrated shortfall in capacity.

Development Contributions

Developers will be expected to contribute towards the delivery of relevant infrastructure, either through direct provision or contribution towards the provision of local and strategic infrastructure to meet the needs arising from the development either alone or cumulatively with other developments

Beyond the above, there are no identified infrastructure requirements for the Scheme. There are no significant traffic impacts associated with the construction or operational phase of the scheme, with works to highways generally comprising construction of new accesses, improvement of existing accesses or minor temporary works to facilitate a small number of Abnormal Indivisible Load Vehicles.

The Scheme does not propose new healthcare facilities and the number of staff at the Scheme during operational will be small so no contributions to healthcare are considered applicable.

Similarly, no additional education provision would be required.

No additional infrastructure of the type referred to in this policy is considered to be required for the Scheme.

Policy S47:
Accessibility and
Transport

Development proposals which contribute towards an efficient and safe transport network that offers a range of transport choices for the movement of people and goods will be supported.

The impact of the Scheme in relation to Transport and Access has been considered in Chapter 13: Transport and Access of the ES **[EN010131/APP/3.1]**. The Chapter concludes that that no significant effects have been identified as a result of the Scheme on transport and

All developments should demonstrate, where appropriate, that they have had regard to the following criteria:

- a) Located where travel can be minimised and the use of sustainable transport modes maximised;
- b) Minimise additional travel demand through the use of measures such as travel planning, safe and convenient public transport, car clubs, walking and cycling links and integration with existing infrastructure;
- c) Making allowance for low and ultra-low emission vehicle refuelling infrastructure.

To demonstrate that developers have considered and taken into account the requirements of this policy, an appropriate Transport Statement/ Assessment and/ or Travel Plan should be submitted with proposals, with the precise form dependent on the scale and nature of development and agreed through early discussion with the local planning or highway authority and external bodies where relevant.

Any development that has severe transport implications will not be granted planning permission unless deliverable mitigation measures have been identified, and arrangements secured for their implementation, which will make the development acceptable in transport terms.

access during any phase as all effects have either been categorised as minor adverse or negligible.

Traffic generated by the Scheme during its operational phase will not be of a level that requires management. No new transport infrastructure is therefore proposed as part of the Scheme beyond the creation of new and improved accesses as set out in Chapter 5 of this PDAS.

During the construction and decommissioning periods, traffic impact will be managed in accordance with measures set out in the Framework CTMP provided in Appendix 13-E of the ES **[EN010131/APP/3.3]**, and the Framework DEMP **[EN010131/APP/7.5]**.

As stated in the Transport Assessment provided in Appendix 13-D of the ES **[EN010131/APP/3.3]**, it is anticipated that as a worst case during the peak construction period, there would be up to 60 HGVs per day to/ from the Solar and Energy Storage Park representing 120 movements and 30 LGVs per day to/ from the Solar and Energy Storage Park representing 60 movements. In addition, there will be up to 138 cars and 16 shuttle services per day associated with staff for the Solar and Energy Storage Park, representing 308 movements. Furthermore, for the Grid Connection Corridor, there would be up to 16 HGVs, 12 LGVs and one minibus service for construction workers per day, representing 58 movements.

Appendix 13-D of the ES **[EN010131/APP/3.3]** states that construction HGVs will travel to/ from the Solar and Energy Storage Park via the A156, to minimise passing through local villages. They will then utilise the B1241 Kexby Lane to reach the northern and eastern portions of the Solar and Energy Storage Park via the Kexby Lane accesses and the Marton Road access if necessary. The routing strategy reflects the most suitable routes available, to avoid limitations/ restrictions associated with alternative local routes adjacent to the site such as Marton Road to the south of the construction access. A vehicle routing plan showing the routing strategy for HGVs at the Solar and Energy Storage Park is held in ES Volume 2: Figure 13-3 **[EN010131/APP/3.2]**.

A Construction Travel Management Plan (CTMP) is provided in Appendix 13-E of the ES **[EN010131/APP/3.3]**. This sets out the proposals to

manage construction traffic and staff vehicles during the construction of the Scheme. It identifies the management of freight traffic i.e. HGVs, as well as staff vehicles. The Framework CTMP has been informed by consultation with Lincolnshire County Council (LCC) and Nottinghamshire County Council (NCC) as the local highway authorities. The framework CTMP also outlines measures that will be included in the final CTMP to mitigate transport impact, manage demand, and improve and encourage construction staff to access the Order limits by sustainable modes and reduce car transport to, and parking at, the Order Limits.

There are several PRoW within or abutting the Scheme. These are shown in Figure 2.2 of the ES **[EN010131/APP/3.2]** and detailed in Chapter 12: Socio-Economics and Land Use of the ES **[EN010131/APP/3.1]**. These PRoW are predominantly used for recreational purposes and form part of a wide network of PRoW in the surrounding area providing residents with alternative routes. As detailed in Section 12.9 of Chapter 12: Socio-Economics of the ES **[EN010131/APP/3.1]**, appropriate measures to mitigate temporary impacts on users of PRoW during the construction and decommissioning phases have been proposed. PRoW will be managed throughout the construction phase to ensure that routes can continue to be used as safely as possible, and where diversions are required, these would all be temporary. These measures are also set out in Appendix 13-E Framework Construction Traffic Management Plan (CTPM) **[EN010131/APP/3.2]**

Policy S48: Walking and Cycling Infrastructure

Development proposals should facilitate active travel by incorporating measures suitable for the scheme from the design stage. Plans and evidence accompanying applications will demonstrate how the ability to travel by foot or cycle will be actively encouraged by the delivery of well designed, safe and convenient access for all both into and through the site. Priority should be given to the needs of pedestrians, cyclists, people with impaired mobility and users of public transport by providing a network of high quality pedestrian and cycle routes and green

A Framework Construction Traffic Management Plan (CTMP) is included as Appendix 13-E of the ES **[EN010131/APP/3.3]**. It outlines measures that will be included in the final CTMP to mitigate transport impact, manage demand, and improve and encourage construction staff to access the Order limits by sustainable modes and reduce car transport to, and parking at, the Order Limits.

There are several PRoW within or abutting the Scheme. These are shown in Figure 2.2 of the ES **[EN010131/APP/3.2]** and detailed

corridors, linking to existing routes and public rights of way where opportunities exist, that give easy access and permeability to adjacent areas.

Proposals will:

- a) protect, maintain and improve existing infrastructure, including closing gaps or deficiencies in the network and connecting communities and facilities;
- b) provide high quality attractive routes that are safe, direct, legible and pleasant and are integrated into the wider network;
- c) ensure the provision of appropriate information, including signposting and way-finding to encourage the safe use of the network;
- d) encourage the use of supporting facilities, especially along principle cycle routes;
- e) make provision for secure cycle parking facilities in new developments and in areas with high visitor numbers across Central Lincolnshire; and
- f) consider the needs of all users through inclusive design.

in Chapter 12: Socio-Economics and Land Use of the ES **[EN010131/APP/3.1]**. These PRoW are predominantly used for recreational purposes and form part of a wide network of PRoW in the surrounding area providing residents with alternative routes.

All PRoWs will be kept open and on their existing alignment throughout the operational phase of the Scheme. During construction, PRoW will be kept open, and on their existing alignment as far as possible, with short, convenient, temporary diversions included where this is not possible. A Public Rights of Way Management Plan is provided with the Application **[EN010131APP/7.8]**.

No significant effects have been identified as a result of the Scheme on transport and access during any phase on strategic local highway network users including pedestrians and cyclists. In summary, the Scheme has fully considered walking and cycling infrastructure in its design and therefore complies with this policy.

Policy S53: Design and Amenity

All development, including extensions and alterations to existing buildings, must achieve high quality sustainable design that contributes positively to local character, landscape and townscape, and supports diversity, equality and access for all.

Good design will be at the centre of every development proposal and this will be required to be demonstrated through evidence supporting planning applications to a degree proportionate to the proposal. Design Codes may be produced for parts of Central Lincolnshire or in support of specific developments. The approach taken in these Design Codes should be informed by the National Model Design Code and where these codes have been adopted, developments will be expected to adhere to the Code.

Proposals for new buildings should incorporate the Design Principles for Efficient Buildings in Policy S6 at the centre of design.

As detailed in Section 4 of this PDAS the Scheme has been subject to a detailed and sensitive iterative design process. The process of design evolution has been informed by ongoing environmental assessments, engineering and design considerations, as well as engagement with stakeholders. This has taken account of the context and features of the land within the Order limits, nearby sensitive receptors and assets, consultation responses and information emerging from environmental surveys to develop a good design that balances the need to maximise the energy generation, with the avoidance and mitigation of impacts, and provision of environmental and other enhancements. The Outline Design Principles **[EN010131/APP/2.3]** secure elements of good design and ensure they are implemented. Whilst the appearance of solar panels is largely set by their function, the site layout, landscaping and access design have all been designed to reflect good design principles.

The following design principles were adopted in the development of the overall Scheme layout:

All development proposals will be assessed against, and will be expected to meet the following relevant design and amenity criteria. All development proposals will:

1. Context

- a) Be based on a sound understanding of the context, integrating into the surroundings and responding to local history, culture and heritage;
- b) Relate well to the site, its local and wider context and existing characteristics including the retention of existing natural and historic features wherever possible and including appropriate landscape and boundary treatments to ensure that the development can be satisfactorily assimilated into the surrounding area;
- c) Protect any important local views into, out of or through the site;

2. Identity

- a) Contribute positively to the sense of place, reflecting and enhancing existing character and distinctiveness;
- b) Reflect or improve on the original architectural style of the local surroundings, or embrace opportunities for innovative design and new technologies which sympathetically complement or contrast with the local architectural style;
- c) Use appropriate, high quality materials which reinforce or enhance local distinctiveness;
- d) Not result in the visual or physical coalescence with any neighbouring settlement nor ribbon development;

3. Built Form

- a) Make effective and efficient use of land that contribute to the achievement of compact, walkable neighbourhoods;
- b) Be appropriate for its context and its future use in terms of its building types, street layout, development block type and size, siting, height, scale, massing, form, rhythm, plot widths, gaps between buildings, and the ratio of developed to undeveloped space both within a plot and within a scheme;

- Provision of buffers and offsets from existing landscape features such as watercourses, hedgerows, woodland and Public Rights of Way;
- A heritage setting buffer was proposed to provide offset from listed buildings at Gate Burton, at the Solar and Energy Storage Park's western boundary;
- New grassland and wildflower mixes under the panels were proposed to enhance the range of fauna, enhancing biodiversity and providing resource for pollinators;
- Screening and planting design was proposed to reduce visual impact by providing environmental enhancement areas, off-sets and buffer zones; and
- Siting of infrastructure to avoid below ground archaeological features wherever possible was also considered and screening and planting was designed to minimise impact on the setting of heritage assets.

There are several PRoW within or abutting the Scheme. These are shown in Figure 2-2 of the ES **[EN010131/APP/3.2]**, and detailed in Chapter 12: Socio-Economics and Land Use of the ES **[EN010131/APP/3.1]**. These PRoW are predominantly used for recreational purposes and form part of a wide network of PRoW in the surrounding area providing residents with alternative routes.

They will be kept open and on their existing alignment throughout the operational phase of the Scheme. During construction, PRoW will be kept open, and on their existing alignment as far as possible, with short, convenient, temporary diversions included where this is not possible.

Chapter 12: Socio-economics and Land use of the ES **[EN010131/APP/3.1]** confirms that there are no adverse impacts on community facilities or registered assets of community value. Therefore, there are no impacts arising from the Scheme on local amenities.

The construction noise assessments presented in Section 11.10 of Chapter 11: Noise and Vibration of the ES **[EN010131/APP/3.1]** include

- c) Achieve a density not only appropriate for its context but also taking into account its accessibility;
- d) Have a layout and form that delivers efficient and adaptable homes in accordance with Policy S6 and Policy S20.

4. Movement

a) Form part of a well-designed and connected travel network with consideration for all modes of transport offering genuine choices for non-car travel and prioritising active

travel and where relevant demonstrate this through evidence clearly showing connectivity for all modes and a hierarchy of routes (also see Policy S47 and Policy S48);

b) Maximise pedestrian and cycle permeability and avoid barriers to movement through careful consideration of street layouts and access routes both within the site and in the wider context contributing to the delivery of walkable and cyclable neighbourhoods in accordance with Policy S48;

c) Ensure areas are accessible, safe and legible for all including people with physical accessibility difficulties;

d) Deliver well-considered parking, including suitable electric vehicle charging points, with appropriate landscaping provided in accordance with the parking standards set out in Policy NS18 and Policy S49;

e) Deliver suitable access solutions for servicing and utilities;

5. Nature

a) Incorporate and retain as far as possible existing natural features including hedgerows, trees, and waterbodies particularly where these features offer a valuable habitat to support biodiversity, aligned with policies in the Natural Environment chapter of the Local Plan;

b) Incorporate appropriate landscape and boundary treatments to ensure that the development can be satisfactorily assimilated into the surrounding area, maximising opportunities to deliver diverse ecosystems and biodiverse habitats, strengthening wildlife corridors and green infrastructure networks, and helping to achieve wider goals for biodiversity net gain, climate change mitigation and adaptation and water management;

the assessment of noise resulting from road and rail traffic movements generated during construction. It concludes that no significant noise or vibration effects are predicted during the construction phase or the operational phase. A Dust Risk Assessment has been carried out as part of Section 15.3 Air Quality of Chapter 15: Other Environmental Topics of the ES **[EN010131/APP/3.1]**.

A glint and glare assessment has been undertaken for the Scheme and is presented in Appendix 15-D of the ES **[EN010131/APP/3.3]**. The glint and glare assessment concludes that with the inclusion of mitigation in the form of hedgerow planting and maintenance in the locations outlined in paragraph 7.1 of Appendix 15-D, the impact is predicted to be low at two residential receptors, whilst the remaining ground-based receptors are expected to have no impacts once mitigation measures have been considered. Impacts upon aviation receptors are predicted to be low. Therefore, overall impacts are negligible.

During winter months, mobile lighting towers with a power output of 8kVA may be used during construction in isolated work areas. There will also be lighting at the main construction compounds while construction is underway. All construction lighting will be deployed in accordance with the recommendations set out in the Framework CEMP **[EN010131/APP/3.1]**.

Details of operational lighting are set out in Chapter 2: The Scheme, of the ES **[EN010131/APP/3.1]**. This explains that lighting sensors for security purposes will be deployed around the electrical infrastructure and potentially at other pieces of critical infrastructure. No areas are proposed to be continuously lit. It is anticipated that the lighting will be controlled via infrared.

The embedded design mitigation for screening the Scheme from view of receptors to glint and glare, as well as landscape and visual impacts, is described in detail in Chapter 10: Landscape and Visual Amenity **[EN010131/APP/3.1]** of the ES. These measures will be secured through

6. Public Spaces

- a) Ensure public spaces are accessible to all, are safe and secure and will be easy to maintain with clear definition of public and private spaces;
- b) Form part of a hierarchy of spaces where relevant to offer a range of spaces available for the community and to support a variety of activities and encourage social interaction;
- c) Be carefully planned and integrated into the wider community to ensure spaces feel safe and are safe through natural surveillance, being flanked by active uses and by promoting activity within the space;
- d) Maximise opportunities for delivering additional trees and biodiversity gains through the creation of new habitats and the strengthening or extending wildlife corridors and the green infrastructure network in accordance with policies in the Natural Environment chapter;

7. Uses

- a) Create or contribute to a variety of complementary uses that meet the needs of the community;
- b) Be compatible with neighbouring land uses and not result in likely conflict with existing uses unless it can be satisfactorily demonstrated that both the ongoing use of the neighbouring site will not be compromised, and that the amenity of occupiers of the new development will be satisfactory with the ongoing normal use of the neighbouring site;
- c) Not result in adverse noise and vibration taking into account surrounding uses nor result in adverse impacts upon air quality from odour, fumes, smoke, dust and other sources;

8. Homes and Buildings

- a) Provide homes with good quality internal environments with adequate space for users and good access to private, shared or public spaces;

the Outline Landscape and Ecological Management Plan (LEMP) [EN010131/APP/7.10].

Embedded mitigation measures include:

- Careful siting of the scheme in the landscape with offsets from existing residential areas, vegetation patterns and road networks;
- Conserving existing vegetation patterns; and
- Creating new Green Infrastructure (i.e., vegetation planting) within the Order Limits with extensive planting proposals.

The Scheme is not expected to result in an increased risk of insect infestation and will not emit any odour. Construction and decommissioning activities will not include burning materials (as set out in the Framework CEMP [EN010131/APP/7.3]). For these reasons, smoke, odour and insect infestation risk has not been assessed in the ES.

During the construction, operation and decommissioning of the Scheme, the re-use or recycling of materials will be explored before resorting to landfill options.

As detailed in Section 15.8 of Chapter 15: Other Environmental Topics of the ES [EN010131/APP/3.1] it is proposed that a SWMP will be prepared to ensure recycling and reuse of materials is maximised. The SWMP will be finalised with specific measures to be implemented prior to the start of construction.

It is not anticipated that there would be a significant effect on waste during the construction operation or decommissioning of the Scheme.

The Applicant recognises how important it is to demonstrate that the BESS would be safe and therefore has prepared an **Outline Battery Fire Safety Management Plan** [EN010131/APP/7.1] with the Application. The **Outline Battery Fire Safety Management Plan** has been informed by consultation with Lincolnshire Fire Service and fully explores the risks associated with fires from BESS equipment and minimises the impact of an incident during construction, operation and decommissioning of the

b) Be adaptable and resilient to climate change and be compatible with achieving a net zero carbon Central Lincolnshire as required by Policies S6, S7 and S8;

c) Be capable of adapting to changing needs of future occupants and be cost effective to run by achieving the standards set out in Policy S20;

d) Not result in harm to people's amenity either within the proposed development or neighbouring it through overlooking, overshadowing, loss of light or increase in artificial light or glare;

e) Provide adequate storage, waste, servicing and utilities for the use proposed;

9. Resources

a) Minimise the need for resources both in construction and operation of buildings and be easily adaptable to avoid unnecessary waste in accordance with Policies S10 and S11;

b) Use high quality materials which are not only suitable for the context but that are durable and resilient to impacts of climate change in accordance with the requirements of Policy S20;

10. Lifespan

a) Use high quality materials which are durable and ensure buildings and spaces are adaptive; and

b) Encourage the creation of a sense of ownership for users and the wider community with a clear strategy for ongoing management and stewardship.

Development proposals will be expected to satisfy requirements of any adopted local design guide or design code where relevant to the proposal.

facility. The design of the Scheme has also taken account of fire safety through provision of two accesses to the BESS, internal access roads around the BESS and a commitment to erect signage to alert the public to the use on the site.

As outlined in Chapter 6: Climate Change of the ES [EN010131/APP/3.1], account of the effects of climate change have been taken in the design of the Scheme, and its construction and decommissioning. This includes:

- The design of drainage systems will ensure that there will be no significant increases in flood risk downstream during storms up to and including the 1 in 100 (1%) annual probability design flood, with an allowance of 40% for climate change;
- Health and safety plans developed for construction and decommissioning activities will be required to account for potential climate change impacts on workers, such as flooding and heatwaves; and
- Adaptation measures to reduce the effect of projected temperature increases on electrical equipment over the course of the Scheme's design life have been taken into account. Inverters (PV and BESS) will have a cooling system installed to control the temperature and allow the inverters to operate efficiently in warmer conditions. The PV modules and transformers have a wide range of acceptable operating temperatures, and it has been determined that increasing temperatures will not adversely affect their operation.

As detailed in Section 15.8 Waste and Recycling of Chapter 16: Other Environmental Topics of the ES [EN010131/APP/3.1], waste arisings will be prevented where possible.

Opportunities to re-use material resources will be sought where practicable. Where re-use and prevention are not possible, waste arisings will be managed and detailed in a Site Waste Management Plan (SWMP). Requirement 12 on the draft DCO [EN010131/APP/6.1] secures production of a Waste Management Plan, which would be an appendix to the Construction Environmental Management Plan.

A Decommissioning Environmental Management Plan (DEMP) (taking account of climate change risks at the time) will be prepared prior to decommissioning. A Framework DEMP **[EN010131/APP/7.5]** is provided as part of the Application.

In conclusion, it is considered that the development achieves high quality sustainable design; its sustainability credentials are elevated by the very significant decarbonisation benefits of the Scheme and significant ecological benefits.

The policy also states that this sustainable design *'must achieve high quality sustainable design that contributes positively to local character, landscape and townscape, and supports diversity, equality and access for all.'*

It should be recognised that this policy was not written to guide development on nationally significant infrastructure projects and the relevance of this part of the policy to this type and scale of project is limited. NPS EN-1 recognises the importance of design as has been considered for the Scheme, but also states:

'It is acknowledged, however that the nature of much energy infrastructure development will often limit the extent to which it can contribute to the enhancement of the quality of the area.' (NPS EN-1 paragraph 5.5.1 and Draft NPS EN-1 paragraph 4.6.1).

The landscaping proposed as part of the Scheme contributes positively to local character landscape and to that extent complies with this part of Policy S53. However, the main development itself is an electricity generating station and there is limited potential for it to contribute positively to local character (as acknowledged in policy written to guide decision making on NSIPs).

Further whilst the development has been well designed to have no adverse impacts in terms of diversity, equality and access for all (for

example by ensuring now PRoW are stopped up or permanently diverted) opportunities to positively contribute to these aims are limited by the nature of the development.

Overall, it is considered that the Scheme accords with Policy S53, but it is considered that the relevance of the majority of the policy to a NSIP and different approach to design compared to NPS EN-1 and draft NPS EN-1 reduces the weight that can be applied to it.

Policy S54: Health and Wellbeing

The potential for achieving positive mental and physical health outcomes will be taken into account when considering all development proposals. Where any potential adverse health impacts are identified, the applicant will be expected to demonstrate how these will be addressed and mitigated.

The Central Lincolnshire authorities will expect development proposals to promote, support and enhance physical and mental health and wellbeing, and thus contribute to reducing health inequalities. This will be achieved by:

- a) Seeking, in line with the Central Lincolnshire Developer Contributions SPD, developer contributions towards new or enhanced health facilities from developers where development results in a shortfall or worsening of provision, as informed by the outcome of consultation with health care commissioners;
- b) In the case of development of 150 dwellings or more, or 5ha or more for other development, developers submitting a fit for purpose Health Impact Assessment (HIA) as part of the application or master planning stage where applicable, and demonstrating how the conclusions of the HIA have been taken into account in the design of the scheme. The HIA should be commensurate with the size of the development;
- c) Development schemes safeguarding and, where appropriate, creating or enhancing the role of allotments, orchards, gardens and food markets in providing access to healthy, fresh and locally produced food; and

Chapter 14: Human Health of the ES [EN010131/APP/3.1] includes a Health Impact Assessment that has followed the 'HUDU Rapid Health Impact Assessment Matrix', which is generally considered as a best practice tool to use when undertaking health and well-being impact assessments, and has assessed the principal health benefits and disbenefits to residents of the local community. Section 14.13 of Chapter 14: Human Health of the ES [EN010131/APP/3.1] outlines the cumulative impacts on health.

Embedded and additional mitigation measures are incorporated and secured into the Scheme as set out in the respective chapters of the ES to reduce other construction, operational and decommissioning effects (such as noise and vibration, air quality, transport and access and socio-economics and land use), which in turn will mitigate the effects on the local community and existing facilities from a Human Health and Wellbeing perspective. There will be no significant positive or adverse effects on health as a result of the Scheme.

d) Ensuring quality green infrastructure provides adequate access to nature for its benefits to mental and physical health and wellbeing and potential to overcome health inequalities.

Policy S57: The Historic Environment

Development proposals should protect, conserve and seek opportunities to enhance the historic environment of Central Lincolnshire.

In instances where a development proposal would affect the significance of a heritage asset (whether designated or non-designated), including any contribution made by its setting, the applicant will be required to undertake and provide the following, in a manner proportionate to the asset's significance:

- a) describe and assess the significance of the asset, including its setting, to determine its architectural, historical or archaeological interest; and
- b) identify the impact of the proposed works on the significance and special character of the asset, including its setting; and
- c) provide a clear justification for the works, especially if these would harm the significance of the asset, including its setting, so that the harm can be weighed against public benefits.

Development proposals will be supported where they:

- d) protect the significance of heritage assets (including where relevant their setting) by protecting and enhancing architectural and historic character, historical associations, landscape and townscape features and through consideration of scale, design, architectural detailing, materials, siting, layout, mass, use, and views and vistas both from and towards the asset;
- e) promote opportunities to better reveal significance of heritage assets, where possible;
- f) take into account the desirability of sustaining and enhancing non-designated heritage assets and their setting.

Section 7.7 of Chapter 7: Cultural Heritage of the ES **[EN010131/APP/3.1]** describes the assets located in the study area around the Scheme (having considered the HER and through the Applicant's own assessment) and their significance, and the contribution of their setting to that significance. There are 50 known heritage assets, together with the historical landscape, that have the potential to be subject to physical impacts or impacts to the value of assets through change to their setting as a result of the construction of the Scheme within the study area. These comprise 19 designated assets and 31 non-designated assets as detailed in Section 7.10 of Chapter 7: Cultural Heritage of the ES **[EN010131/APP/3.1]**.

Chapter 7 describes the significance of assets (including their setting), identifies the impact of proposed works and provides a clear justification for the works in line with Policy S57.

As concluded in Chapter 7: Cultural Heritage of the ES **[EN010131/APP/3.1]** there will be no significant effects on designated heritage assets or their setting as a result of the Scheme. Therefore, the Scheme is considered to preserve the historic environment of Central Lincolnshire.

There would be minor (non-significant) adverse effects upon the following designated assets:

- Segelocum Roman Town Scheduled Monument
- Roman fort south of Littleborough Lane Scheduled Monument
- Medieval Bishops Palace, Stow Park, Scheduled Monument
- Heynings Priory, Scheduled Monument
- Gate Burton Hall (II* listed building)
- Church of St Mary in Stow (Grade I listed building)

Proposals to alter or to change the use of a heritage asset will be supported provided:

- g) the proposed use is compatible with the significance of the heritage asset, including its fabric, character, appearance, setting and, for listed buildings, interior; and
- h) such a change of use will demonstrably assist in the maintenance or enhancement of the heritage asset; and
- i) features essential to the special interest of the individual heritage asset are not harmed to facilitate the change of use.

Development proposals that will result in substantial harm to, or the total loss of, a designated heritage asset will only be granted permission where it is necessary to achieve substantial public benefits that outweigh the harm or loss, and the following criteria can be satisfied:

- j) the nature of the heritage asset prevents all reasonable uses of the site; and
- k) no viable use of the heritage asset itself can be found in the medium term through appropriate marketing that will enable its conservation; and
- l) conservation by grant-funding or some form of not for profit, charitable or public ownership is demonstrably not possible; and
- m) the harm or loss is outweighed by the benefit of bringing the site back into use.

Where a development proposal would result in less than substantial harm to a designated heritage asset, permission will only be granted where the public benefits, including, where appropriate, securing its optimum viable use, outweigh the harm.

Where a non-designated heritage asset is affected by development proposals, there will be a presumption in favour of its retention, though regard will be had to the scale of any harm or loss and the significance of the heritage asset. Any special features which contribute to an asset's significance should be retained and reinstated, where possible.

The magnitude of effect on all the above assets is 'very low', with minor adverse effects arising due to the high value assets not due to large changes made to the setting of the assets. All other effects on designated assets would be no more than negligible. The Scheme does not propose to alter or change the use of any heritage asset.

Significant changes have been made to the layout of the Scheme to reduce the effects on the above assets to the level now predicted and protect their significance, including reducing the number of panels to remove development from areas close to the assets and developing sensitive landscaping proposals.

The effects above are outweighed by the very significant public benefits of the Scheme when considered in isolation and cumulatively with other adverse effects of the Scheme.

There are no World Heritage Sites, Registered Park and Gardens, Registered Battlefields, or Protected Wrecks located within the Order limits or study areas. In addition, there are no designated heritage assets, scheduled monuments, conservation areas or listed buildings within the Order limits. When considering the impact on the significance of designated assets outside the Order limits, there would be no substantial harm (or even significant adverse effects) on listed buildings, Conservation Areas or scheduled monuments.

Chapter 7: Cultural Heritage of the ES **[EN010131/APP/3.1]**

states that the magnitude of impact to non-designated archaeological assets (AEC009, AEC010, AEC011, MLI125067, MLI52472; AEC013, MLI52489, MNT15983, MNT4983 and AEC014) as a result of the Scheme has been assessed as medium, resulting in a moderate adverse significance of effect, which in the absence of additional mitigation, would be significant. Additional mitigation in the form of a programme of archaeological excavation and recording is proposed, as set out in the Archaeological Mitigation Strategy **[EN010131/APP/7.6]**. Archaeological excavation and recording would not minimise the physical impact to these assets, as the archaeological evidence would still be removed, but would compensate for their loss by preserving them by record. This

Listed Buildings

Permission to change the use of a Listed Building or to alter or extend such a building will be granted where the local planning authority is satisfied that the proposal is in the interest of the building's conservation and does not involve activities or alterations prejudicial to the special architectural or historic interest of the Listed Building or its setting.

Development proposals that affect the setting of a Listed Building will, in principle, be supported where they make a positive contribution to, or better reveal the significance of the Listed Building.

Conservation Areas

Significant weight will be given to the protection and enhancement of Conservation Areas.

Development within, affecting the setting of, or affecting views into or out of, a Conservation Area should conserve, or where appropriate enhance, features that contribute positively to the area's special character, appearance and setting, including as identified in any adopted Conservation Area appraisal. Proposals should:

- n) retain buildings/groups of buildings, existing street patterns, historic building lines and ground surfaces and architectural details that contribute to the character and appearance of the area;
- o) where relevant and practical, remove features which have a negative impact on the character and appearance of the Conservation Area;
- p) retain and reinforce local distinctiveness with reference to height, massing, scale, form, materials and plot widths of the existing built environment;
- q) assess, and mitigate against, any negative impact the proposal might have on the townscape, roofscape, skyline and landscape; and
- r) aim to protect trees, or where losses are proposed, demonstrate how such losses are appropriately mitigated against.

would reduce the magnitude of impact on individual assets, resulting in a residual minor adverse effect, which is not significant.

Section 7.9 of Chapter 7: Cultural Heritage of the ES **[EN010131/APP/3.1]** outlines the avoidance and mitigation measures embedded within the Scheme design in relation to cultural heritage. This includes the provision of stand-offs between the Scheme and heritage assets in order to help to preserve their setting during the construction, operational and decommissioning periods. Appropriate and sensitive screening has also been developed and implemented to minimise the visual intrusion of the Scheme, while avoiding obscuring or intruding upon key views and relationships between heritage assets.

Following decommissioning, the solar farm will be removed, and its impact on the setting of heritage assets reversed.

Archaeological evaluations were undertaken in addition to a desk-based assessment, including a geophysical survey (detailed magnetometry) of the whole Scheme and targeted trial trenching.

The scope and specification of each field investigation have been set out in Written Scheme of Investigations (WSI), which were submitted for approval to the Archaeological Advisors for Lincolnshire County Council and Nottinghamshire County Council in December 2021 (detailed magnetometry) and August 2022 (trial trenching). The first phase of this, comprising geophysical (magnetometer) survey, was undertaken as agreed with the Archaeological Advisors for Lincolnshire and Nottinghamshire in February - October 2022 while the trial trenching survey was carried out in July - October 2022. The results of these surveys (ES Volume 3, Appendix 7-D: Geophysical Survey and Appendix 7-E: Trial Trench Evaluation **[EN010131/APP/3.3]**) have been incorporated into the desk-based assessment (ES Volume 3 Appendix 7-A: Cultural Heritage Desk-based Assessment **[EN010131/APP/3.3]**) and the assessment of impact in this ES Chapter in Section 7.11.

Archaeology

Development affecting archaeological remains, whether known or potential, designated or undesignated, should take every practical and reasonable step to protect and, where possible, enhance their significance.

Planning applications for such development should be accompanied by an appropriate and proportionate assessment to understand the potential for and significance of remains, and the impact of development upon them.

If initial assessment does not provide sufficient information, developers will be required to undertake field evaluation in advance of determination of the application. This may include a range of techniques for both intrusive and non-intrusive evaluation, as appropriate to the site.

Wherever possible and appropriate, mitigation strategies should ensure the preservation of archaeological remains in-situ. Where this is either not possible or not desirable, provision must be made for preservation by record according to an agreed written scheme of investigation submitted by the developer and approved by the planning authority.

Any work undertaken as part of the planning process must be appropriately archived in a way agreed with the local planning authority.

As set out above, the Scheme will protect and conserve the historic environment through its avoidance of heritage assets and embedded mitigation, therefore complying with this policy.

Policy S58:
Protecting
Lincoln,
Gainsborough
and Sleaford's
Setting and
Character

All development proposals should contribute to the realisation of the following key principles:

Lincoln

- a) Protect the dominance and approach views of Lincoln Cathedral, Lincoln Castle and uphill Lincoln on the skyline;
- b) Protect Lincoln's distinct built heritage and townscape character as set out in the Lincoln Townscape Character Assessment;

This policy has been added into this section because it is mentioned in the LCC Local Impact Report submitted in July 2023. However, it has limited relevance to the development of the Scheme.

Lincoln

The western towers of Lincoln Cathedral are located approximately 15.5km southeast from the south-eastern boundary of Gate Burton Energy Park. The cooling towers and stacks of Cottam and West Burton Power Stations are visible in the far distance during clear weather

- c) Respect Lincoln's unique character and setting and relationship with surrounding villages by maintaining and enhancing a strategic green infrastructure network around and into the City, including Green Wedges (see Policy S63) to protect the City's green character and to maintain the setting and integrity of surrounding villages;
- d) Proposals within, adjoining or affecting the setting of the 11 Conservation Areas and 3 historic parks and gardens within the built up area of Lincoln, should preserve and enhance their special character, setting, appearance and respect their special historic and architectural context;
- e) Support the development of art, cultural and leisure assets and facilities, such as the Collection, the Theatre Royal, the Engine Shed, Arboretum and Whisby Nature Park, and improve access to such assets and facilities; and
- f) Do not detract from the open character of Lincoln's Brayford Pool and waterways, protecting and enhancing them as a major focal points in and through the City.

Gainsborough

- g) Take into account the Gainsborough Town Centre Conservation Area Appraisal and Gainsborough Town Centre Heritage Masterplan;
- h) Protect and enhance the landscape character and setting of Gainsborough and the surrounding villages by ensuring key gateways are landscaped to enhance the setting of the town, minimise impact upon the open character of the countryside and to maintain the setting and integrity of surrounding villages.

Sleaford

- i) Take into account the Sleaford Masterplan, Sleaford Town Centre Conservation Area Appraisal, Sleaford Town Centre Regeneration SPD and any subsequent guidance;
- j) Protect, conserve and, where appropriate, enhance the Castle Site, Market Place, the Bass Maltings, Money's Mill and Yard, Handley Monument and Northgate, through sensitive development and environmental improvement;
- k) Protect important local views of Sleaford, including the Bass Maltings complex and its setting, from both within and outside the town;

conditions from the viewing platform of the central tower and the viewing gallery between the western towers. Associated train tracks, low ancillary buildings (up to 4-6m high) are not distinguishable or visible at all due to intervening vegetation and the effects of distance. This will also apply to the solar farm and its 3.5m (highest edge) above ground level panels. Potential visibility for the naked human eye from Lincoln Cathedral will be negligible and not significant.

The Scheme will not affect the dominance and approach views of Lincoln Cathedral, Lincoln Castle or uphill Lincoln on the skyline. Nor will it affect Lincoln's character, Conservation Areas, historic parks or any other features mentioned in the policy given the separation distance from the city.

Gainsborough

The Scheme is located approximately 4 km south of Gainsborough. It is not envisaged that the Scheme will have any effect on the Gainsborough Town Centre Conservation Area Appraisal and Gainsborough Town Centre Heritage Masterplan. Given the separation distance, Gainsborough is not within the study area for heritage, although it is within the 5km wider study area. No effects are predicted on Gainsborough Conservation Area or the Heritage Masterplan.

Sleaford

The Scheme is located approximately 40km north of Sleaford and will have no impact on the town.

- l) Support the development of art, cultural and leisure assets and facilities within or close to the town centre, and improve access to such assets and facilities, such as The Hub (the National Centre for Craft and Design);
- m) Protect and enhance the River Slea Navigation Corridor as a major focal point for the town, optimising its use and value for recreation, tourism and biodiversity, and taking into account the opportunities identified in the Sleaford Urban Opportunities Study;
- n) Support the development of the Sleaford East West Leisure Link as the key component of the Sleaford Urban Green Grid in accordance with the Sleaford Masterplan and Central Lincolnshire Green Infrastructure Study and take opportunities to deliver improvements to the wider Green Infrastructure network.

Policy S59: Green and Blue Infrastructure

The Central Lincolnshire Authorities will safeguard green and blue infrastructure in Central Lincolnshire from inappropriate development and work actively with partners to maintain and improve the quantity, quality, accessibility and management of the green infrastructure network.

Proposals that cause loss or harm to the green and blue infrastructure network will not be supported unless the need for and benefits of the development demonstrably outweigh any adverse impacts. Where adverse impacts on green infrastructure are unavoidable, development will only be supported if suitable mitigation measures for the network are provided.

Development proposals should ensure that existing and new green and blue infrastructure is considered and integrated into the scheme design from the outset. Where new green infrastructure is proposed, the design and layout should take opportunities to:

- a) incorporate a range of types and sizes of green and blue spaces, green routes and environmental features that are appropriate to the development and the wider green and blue infrastructure network to maximise the delivery of multi-functionality;

The Scheme has been designed to integrate with and enhance the local green infrastructure network, improving ecological connectivity across the Order limits. The initial proposed planting design, shown in ES Volume 2: Figure 2-4 **[EN010131/APP/3.2]**, has responded to the varied character by allowing views to remain open, where tall screening would not be appropriate. New planting includes:

- New native hedgerows;
- Native hedgerow enhancement, gapping up and infill planting;
- New native grassland buffer planting to form ecological corridors;
- Native linear tree belts; and
- New species rich grassland and amenity grassland mixes under the panels and along perimeter buffers. This will be created in advance of construction so that any displaced bird populations have alternative areas of habitat available during construction.

Good design has been a key consideration from the outset. The LVIA has informed the iterative design process, guided by the Outline Design Principles **[EN010131/APP/2.3]** and in response to policy requirements, published landscape character assessment guidance and fieldwork

- b) deliver biodiversity net gain and support ecosystem services;
- c) respond to landscape/townscape and historic character;
- d) support climate change adaptation and resilience including through use of appropriate habitats and species; and
- e) encourage healthy and active lifestyles.

Development proposals must protect the linear features of the green and blue infrastructure network that provide connectivity between green infrastructure assets, including public rights of way, bridleways, cycleways and waterways, and take opportunities to improve and expand such features.

Development will be expected to make a contribution proportionate to their scale towards the establishment, enhancement and on-going management of green and/or blue infrastructure by contributing to the development of the strategic green infrastructure network within Central Lincolnshire, in accordance with the Developer Contributions SPD.

analysis. With reference to the Outline Landscape and Ecological Management Plan **[EN010131/APP/7.10]** and Figure 10-23: Outline Landscape Masterplan of the ES **[EN010131/APP/3.2]**, the design mitigation has been embedded in the Scheme to minimise effects on landscape character and visual amenity.

The overall objective of the landscape design is to integrate the Scheme into its landscape setting and avoid or minimise adverse landscape and visual effects as far as practicable. The design has been developed in collaboration with the wider design team and other specialists to achieve a solution that achieves this objective whilst maximising opportunities to deliver net gains in biodiversity. Accordingly, the landscape design aims to achieve the following:

- To integrate the Scheme into the existing landscape pattern as far as possible by retaining and following existing features, including vegetation, where practicable;
- To replace vegetation lost because of construction of the Scheme through areas of new planting;
- To filter and screen more prominent components of the Scheme in views from visual receptors; and
- To apply appropriate offsets to residential properties to mitigate/reduce views of the Scheme in views from visual receptors.

A Biodiversity Net Gain (BNG) assessment, using Defra's Metric 3.1, has been provided with the DCO application **[EN010131/APP/7.9]**. The final percentage of net gain achieved will depend on the detailed design of the Scheme, which cannot be determined with certainty at this stage. However the BNG Assessment demonstrates that the Scheme can achieve far in excess of 10% biodiversity net gain.

There are several PRoW within or abutting the Scheme. These are shown in Figure 2-2 of the ES **[EN010131/APP/3.2]** and detailed in Chapter 12: Socio-Economics and Land Use of the ES **[EN010131/APP/3.1]**. These PRoW are predominantly used for recreational purposes and form part of a wide network of PRoW in the surrounding area providing residents with alternative routes.

They will be kept open and on their existing alignment throughout the operational phase of the Scheme. During construction, PRow will be kept open, and on their existing alignment as far as possible, with short, convenient, temporary diversions included where this is not possible.

The Scheme is not anticipated to have an effect on open space or recreational facilities.

In summary the Scheme will overall provide positive improvement to the local green infrastructure network and therefore accords with this policy.

Policy S60:
Protecting
Biodiversity and
Geodiversity

All development should:

- a) protect, manage, enhance and extend the ecological network of habitats, species and sites of international, national and local importance (statutory and non-statutory), including sites that meet the criteria for selection as a Local Site;
- b) minimise impacts on biodiversity and features of geodiversity value;
- c) deliver measurable and proportionate net gains in biodiversity in accordance with Policy S61; and
- d) protect and enhance the aquatic environment within or adjoining the site, including water quality and habitat.

Part One: Designated Sites

The following hierarchy of sites will apply in the consideration of development proposals:

1. International Sites

The highest level of protection will be afforded to internationally protected sites. Development proposals that will have an adverse impact on the integrity of such areas, will not be supported other than in exceptional circumstances, in accordance with the NPPF.

Section 8.7 of Chapter 8: Ecology of the ES **[EN010131/APP/3.1]** sets out all the protected species, habitats and other species identified as being of principal importance for the conservation of biodiversity within the study area for the Scheme. Chapter 8: Ecology of the ES **[EN010131/APP/3.1]** clearly set out the expected effects on the above receptors during the construction, operation and decommissioning phases of the Scheme. This concludes that there are anticipated to be no significant adverse effects on any of these protected species as a result of the Scheme following mitigation.

There are predicted to be significant beneficial effects on broad-leaved woodland, hedgerows and breeding birds as a result of habitat enhancements proposed as part of the Scheme.

There are no sites identified through international conventions and European Directives such as SPA's or RAMSAR sites within the Zone of Influence assessed within Chapter 8: Ecology of the ES **[EN010131/APP/3.1]**.

There are no SSSIs within the Order Limits. Table 8-4 in Chapter 8: Ecology of the ES **[EN010131/APP/3.1]** identifies two SSSIs

Development proposals that are likely to result in a significant adverse effect, either alone or in combination with other proposals, on any internationally designated site, must satisfy the requirements of the Habitats Regulations (or any superseding similar UK legislation). Development requiring Appropriate Assessment will only be allowed where it can be determined, taking into account mitigation, that the proposal would not result in significant adverse effects on the site's integrity.

2. National Sites (NNRs and SSSIs)

Development proposals should avoid impact on these nationally protected sites. Development proposals within or outside a national site, likely to have an adverse effect, either individually or in combination with other developments, will not normally be supported unless the benefits of the development, at this site, clearly outweigh both the adverse impacts on the features of the site and any adverse impacts on the wider network of nationally protected sites.

3. Irreplaceable Habitats

Planning permission will be refused for development resulting in the loss, deterioration or fragmentation of irreplaceable habitats, including ancient woodland and aged or veteran trees, unless there are wholly exceptional reasons and a suitable compensation strategy will be delivered.

4. Local Sites (LNR, LWS and LGS)

Development likely to have an adverse effect on locally designated sites, their features or their function as part of the ecological network, will only be supported where the benefits of the development clearly outweigh the loss, and the coherence of the local ecological network is maintained. Where significant harm cannot be avoided, the mitigation hierarchy should be followed.

Part Two: Species and Habitats of Principal Importance

within 2km of the Order Limits, namely: Ashton's Meadow SSSI and Lea Marsh SSSI. There would be no adverse effects on these SSSIs given the nature of the development and the separation distance.

There is one Local Wildlife Site (LWS) within the Order limits, Cow Pasture Lane Drains LWS, which is crossed by the grid connection. The Grid Connection Corridor crossing of Cow Pasture Lane Drains LWS will be undertaken using HDD methods to lay cabling, therefore avoiding impacts to the drain and hedge, with setbacks of at least 10m from the centreline of the drain. Access for construction of the Grid Connection Corridor will utilise an existing access track that runs alongside Cow Pasture Lane Drains LWS. However, where there is a need to cross the LWS, this will be via a bailey bridge, rather than culvert to minimise negative impacts.

Construction compounds will be set back from this LWS with a minimum 10m from the centre line of the watercourse. Furthermore, measures to ensure incursion into this LWS does not occur will be put in place, e.g. security fencing, which will be implemented at an early stage. With these measures in place, the Scheme is not predicted to adversely affect the LWS.

There are two further LWS, Knaith Park Wood and Coates Wetland, located close to the Order limits. There are not predicted to be any adverse effects on either site. Chapter 8: Ecology of the ES **[EN010131/APP/3.1]** concludes that there are no potential significant adverse effects on local or regional biodiversity sites as a result of the construction, operation or decommissioning of the Scheme.

A Biodiversity Net Gain (BNG) Assessment, using Defra's Metric 3.1, has been provided with the DCO application **[EN010131/APP/7.9]**. The final percentage of net gain achieved will depend on the detailed design of the Scheme, which cannot be determined with certainty at this stage. However the BNG Assessment demonstrates that the Scheme can achieve far in excess of 10% biodiversity net gain.

There will be no loss of ancient woodland or veteran trees as a result of the Scheme.

All development proposals will be considered in the context of the relevant Local Authority's duty to promote the protection and recovery of priority species and habitats.

Development should seek to preserve, restore and re-create priority habitats, ecological networks and the protection and recovery of priority species set out in the Natural Environment

and Rural Communities Act 2006, Lincolnshire Biodiversity Action Plan, Lincolnshire Geodiversity Strategy and Local Nature Recovery Strategy.

Where adverse impacts are likely, development will only be supported where the need for and benefits of the development clearly outweigh these impacts. In such cases, appropriate mitigation or compensatory measures will be required.

Part Three: Mitigation of Potential Adverse Impacts

Development should avoid adverse impact on existing biodiversity and geodiversity features as a first principle, in line with the mitigation hierarchy. Where adverse impacts are unavoidable they must be adequately and proportionately mitigated. If full mitigation cannot be provided, compensation will be required as a last resort where there is no alternative. Development will only be supported where the proposed measures for mitigation and/or compensation along with details of net gain are acceptable to the Local Planning Authority in terms of design and location, and are secured for the lifetime of the development with appropriate funding mechanisms that are capable of being secured by condition and/or legal agreement. If significant harm to biodiversity resulting from development cannot be avoided, adequately mitigated, or, as a last resort, compensated for, then planning permission will be refused.

As outlined in Section 8.8 and 8.12 of Chapter 8: Ecology of the ES **[EN010131/APP/3.1]**, with the application of mitigation measures no significant adverse effects have been identified on designated ecological sites, habitats or protected species during construction, operation or decommissioning of the Scheme.

As outlined in Chapter 8: Ecology of the ES **[EN010131/APP/3.1]**, from the outset the Scheme has been designed to avoid key nature conservation and ecological features present within or adjacent to the Order limits. Accordingly, the following buffers from key habitat features have been applied within the Solar and Energy Storage Park:

- All woodlands, including ancient woodland – at least 15m;
- All trees within hedgerows and individual trees – protected by clearly defined root protection areas, concordant with the requirements for each individual tree;
- All hedgerows – at least 5m

Within some of these buffers, particularly around the ancient woodland, natural regeneration of woodland will create additional scrub and woodland habitat. Other areas will be managed as grassland. Tree Root Protection fencing will be erected around retained trees, in line with British Standard BS 5837: Trees in relation to design, demolition and construction – Recommendations. Embedded design mitigation measures are outlined in Section 8.9 of Chapter 8: Ecology of the ES **[EN010131/APP/3.1]**, and are illustrated within the Framework CEMP **[EN010131/APP/7.3]**, Framework OEMP **[EN010131/APP/7.4]** and the Framework DEMP **[EN010131/APP/7.5]**. These include habitat avoidance, creation and replacement measures; mitigation relating to protected and notable species; and standard mitigation measures that comply with industry good practice and environmental legislation. The final CEMP will be supported by a Water Management Plan (WMP), that will provide greater detail regarding the mitigation to be implemented to protect the water environment from adverse effects during construction. Production of a final CEMP, OEMP and DEMP are secured by way of requirements in the draft DCO.

The Scheme therefore complies with all elements of this policy.

Policy S61:
Biodiversity
Opportunity and
Delivering
Measurable Net
Gains

Following application of the mitigation hierarchy, all development proposals should ensure opportunities are taken to retain, protect and enhance biodiversity and geodiversity features proportionate to their scale, through site layout, design of new buildings and proposals for existing buildings with consideration to the construction phase and ongoing site management.

Development proposals should create new habitats, and links between habitats, in line with Central Lincolnshire Biodiversity Opportunity and Green Infrastructure Mapping evidence, the biodiversity opportunity area principles set out in Appendix 4 to this Plan and the Local Nature Recovery Strategy (once completed), to maintain and enhance a network of wildlife sites and corridors, to minimise habitat fragmentation and provide opportunities for species to respond and adapt to climate change.

Proposals for major and large scale development should seek to deliver wider environmental net gains where feasible.

Biodiversity Net Gain

The following part of the policy applies unless, and until, subsequently superseded, in whole or part, by national regulations or Government policy associated with the delivery of mandatory biodiversity net gain arising from the Environment Act 2021. Where conflict between the policy below and the provisions of Government regulations or national policy arises, then the latter should prevail.

All qualifying development proposals must deliver at least a 10% measurable biodiversity net gain attributable to the development. The net gain for biodiversity should be calculated using Natural England's Biodiversity Metric.

Chapter 8: Ecology of the ES [EN010131/APP/3.1] concludes that the Scheme would result in significant beneficial effects to broad-leaved woodland, including ancient woodland, hedgerows and breeding birds, particularly farmland birds associated with hedgerows and field margins, with the application of enhancement measures set out in section 8.11 of Chapter 8: Ecology of the ES [EN010131/APP/3.1].

The Scheme has been designed to integrate with and enhance the local green infrastructure network, improving ecological connectivity across the Order limits. The initial proposed planting design, shown in ES Volume 2: Figure 2-4 [EN010131/APP/3.2], has responded to the varied character by allowing views to remain open, where tall screening would not be appropriate. New planting would include:

- New native hedgerows;
- Native hedgerow enhancement, gapping up and infill planting;
- New native grassland buffer planting to form ecological corridors;
- Native linear tree belts; and

New species rich grassland and amenity grassland mixes under the panels and along perimeter buffers. This will be created in advance of construction so that any displaced bird populations have alternative areas of habitat available during construction.

Opportunities for biodiversity enhancement and securing biodiversity net gain have been sought throughout the Scheme development and led to a Scheme that will have significant positive ecological effects. This includes delivering moderate beneficial significant effects on broad leaved woodland, hedgerows and breeding birds. These measures are shown in the Outline Landscape and Ecological Management Plan (LEMP) [EN010131/APP/7.10].

A Biodiversity Net Gain (BNG) Assessment, using Defra's Metric 3.1, has been provided with the DCO application [EN010131/APP/7.9]. The final percentage of net gain achieved will depend on the detailed design of the Scheme, which cannot be determined with certainty at this stage.

Biodiversity net gain should be provided on-site wherever possible. Off-site measures will only be considered where it can be demonstrated that, after following the mitigation hierarchy, all reasonable opportunities to achieve measurable net gains on-site have been exhausted or where greater gains can be delivered off-site where the improvements can be demonstrated to be deliverable and are consistent with the Local Nature Recovery Strategy.

However the BNG Assessment demonstrates that the Scheme can achieve far in excess of 10% biodiversity net gain.

The Scheme has therefore taken opportunities to protect and enhance biodiversity by delivering significant and accords with this policy.

All development proposals, unless specifically exempted by Government, must provide clear and robust evidence for biodiversity net gains and losses in the form of a biodiversity gain plan, which should ideally be submitted with the planning application (or, if not, the submission and approval of a biodiversity gain plan before development commences will form a condition of any planning application approval), setting out:

- a) information about the steps to be taken to minimise the adverse effect of the development on the biodiversity of the onsite habitat and any other habitat;
- b) the pre-development biodiversity value of the onsite habitat;
- c) the post-development biodiversity value of the onsite habitat following implementation of the proposed ecological enhancements/interventions;
- d) the ongoing management strategy for any proposals;
- e) any registered off-site gain allocated to the development and the biodiversity value of that gain in relation to the development; and
- f) exceptionally any biodiversity credits purchased for the development through a recognised and deliverable offsetting scheme.

Demonstrating the value of the habitat (pre and post-development) with appropriate and robust evidence will be the responsibility of the applicant. Proposals which do not demonstrate that the post-development biodiversity value will exceed the pre-development value of the onsite habitat by a 10% net gain will be refused.

Ongoing management of any new or improved onsite and offsite habitats, together with monitoring and reporting, will need to be planned and funded for 30 years after completion of a development.

Policy S62: Area of Outstanding Natural Beauty and Areas of Great Landscape Value

The Lincolnshire Wolds Area of Outstanding Natural Beauty

The Lincolnshire Wolds Area of Outstanding Natural Beauty (AONB) is a nationally designated landscape and has the highest level of protection. Great weight should be given to conserving and enhancing the landscape and scenic beauty in this area. All development proposals within, or affecting the setting of, the AONB shall: ...

Areas of Great Landscape Value

Areas of Great Landscape Value (AGLV) are locally designated landscape areas recognised for their intrinsic character and beauty and their natural, historic and cultural importance. A high level of protection will be afforded to AGLV reflecting their locally important high scenic quality, special landscape features and sensitivity.

Development proposals within, or within the setting of, AGLV shall:

- e) conserve and enhance the qualities, character and distinctiveness of locally important landscapes; and
- f) protect, and where possible enhance, specific landscape, wildlife and historic features which contribute to local character and landscape quality; and
- g) maintain landscape quality and minimise adverse visual impacts through high quality building and landscape design; and
- h) demonstrate how proposals have responded positively to the landscape character in relation to siting, design, scale and massing and where appropriate have retained or enhanced important views, and natural, historic and cultural features of the landscape; and

As outlined in Chapter 10: Landscape and Visual Amenity of the ES **[EN010131/APP/3.1]**, neither the study area, nor the Order limits is covered by any statutory landscape designations (e.g. National Parks or Areas of Outstanding Natural Beauty (AONB)). No impacts on National Parks, the Broads and AONBs have been identified and therefore complies with policy S62. The Scheme would have no impact on the Lincolnshire Wolds Area of Outstanding Natural Beauty.

The landscape and visual impact assessment has taken account of relevant policies in local development documents, including particularly the local Area of Great Landscape Value designation discussed in this policy.

As outlined in Chapter 10: Landscape and Visual Amenity of the ES **[EN010131/APP/3.1]**, West Lindsey District Council has designated several Areas of Great Landscape Value (AGLV). An AGLV covers part of the study area, extending from Marton in the south, to north of Gainsborough, covering land between the River Trent in the west and the East Midlands Railway to the east. This includes the eastern part of the Order limits, as shown on ES Volume 2: Figure 10-7 of the ES **[EN010131/APP/3.2]**.

The Applicant is not aware of any evidence base documents that set out in detail the rationale behind the AGLV designation or its boundaries; nor are there any documents that specify where the most valued areas of the AGLV are located. Therefore, the Applicant has made judgements on the most sensitive areas of the AGLV based on baseline research as part of the AGLV.

Particular attention has been paid to the AGLV in Chapter 10: Landscape and Visual of the ES **[EN010131/APP/3.1]** by taking the designation into

i) where appropriate, restore positive landscape character and quality.

Where a proposal may result in adverse impacts, it may exceptionally be supported if the overriding benefits of the development demonstrably outweigh the harm – in such circumstances the harm should be minimised and mitigated through design and landscaping.

account when defining the value of landscape character areas, taking it into consideration in the design and landscaping of the Scheme and assessing the impact of the Scheme on the local designation. The approach taken recognises and is in accordance with Policy S62, which states that Policy S62 affords a high level of protection to AGLVs.

The Scheme has been designed to minimise the impact on the AGLV where possible by locating the BESS and Substation to the far eastern extent of the AGLV, distant from the more sensitive areas around Gate Burton. An area of panels to the east of Gate Burton has also been removed from the Scheme to reduce the impacts on heritage assets near Gate Burton; which also reduces landscape and visual impacts from the Gate Burton area, including removing effects that were significant prior to the change. This further reduces the impact on the most sensitive areas of the AGLV. Influence of the Scheme on the wider AGLV will be limited by intervening woodland, which, for example, limit views to the BESS and Substation from areas of the AGLV to the north west and south west. Access through the AGLV will primarily be via the A156, an existing A road, with the location of the internal access road route being selected to be further from the Gate Burton area of the AGLV.

As a result of the measures proposed, the Scheme would have a minor adverse (non-significant) impact on the locally designated AGLV.

In summary, the Scheme complies with this policy because:

- the Scheme conserves and enhances the qualities, character and distinctiveness of the AGLV by avoiding significant effects and sensitive landscaping (e);
- protect, and where possible enhances, specific landscape, wildlife and historic features which contribute to local character and landscape quality. It does this by careful design that avoids significant effects on heritage assets and delivers significant beneficial effects on wildlife, particularly breeding birds (f);
- maintaining landscape quality and minimising visual impact through landscape design. It is noted that the number and extent of visual

impacts is limited considering the scale of the project and its benefits (h);

- restored landscape character by strengthening and extending hedgerows on the site.

The policy states that: *'Where a proposal may result in adverse impacts, it may exceptionally be supported if the overriding benefits of the development demonstrably outweigh the harm – in such circumstances the harm should be minimised and mitigated through design and landscaping.'*

It is considered that the very significant benefits associated with this nationally significant infrastructure project in the context of the urgent need to decarbonise our electricity generation provide these exceptional circumstances, particularly when considering that the harm is localised and limited and that harm has been minimised and mitigated through design and landscaping. Therefore, it is considered that the Scheme complies with policy S62.

It should also be recognised that Policy S62 was written to guide decision-making on Town and Country Planning Act 1990 scale Schemes, where it may be possible to avoid significant landscape and visual effects. NPS EN-1 emphasises that landscape impacts are largely inevitable for NSIP scale schemes:

'Virtually all nationally significant energy infrastructure projects will have effects on the landscape.' (NPS EN-1 paragraph 5.9.8 and draft NPS EN-1 paragraph 5.10.9).

NPS EN-1 and draft NPS EN-1 are also clear that whilst local landscape designations should be considered, they should not be used in themselves to refuse development:

'Outside nationally designated areas, there are local landscapes that may be highly valued locally and protected by local designation. Where a local development document in England or a local development plan in Wales

has policies based on landscape or waterscape character assessment, these should be paid particular attention. However, local landscape designations should not be used in themselves to refuse consent, as this may unduly restrict acceptable development.

The scale of such projects means that they will often be visible within many miles of the site of the proposed infrastructure. The Secretary of State should judge whether 115 Section 15 of the NPPF applies a public interest test for major development in these designated areas. 116 National considerations should be understood to include the national need for the infrastructure as set out in Part 3 of this NPS and the contribution of the infrastructure to the national economy. Overarching National Policy Statement for Energy (EN-1) 110 any adverse impact on the landscape would be so damaging that it is not offset by the benefits (including need) of the project. (NPS EN01 5.9.14- 5.9.15; draft NPS EN-1 paragraph 5.10.16-5.10.17).

The test in Policy S62 is that proposals with adverse impacts may *'exceptionally be supported'* where benefits *'demonstrably outweigh the harm'*. This is a more stringent test than that in the NPS, which is whether the impacts are *'so damaging that they are not offset by the benefits of the Scheme'*. This could be because the more stringent test is challenging to meet for NSIP scale projects. Given that the NPSs were written to guide decision making on NSIP scale schemes and the CLLP Review was not, this conflict reduces the weight that should be applied to draft Policy S62 in decision-making.

Nevertheless, the Scheme complies with both Policy S62 and policy in NPS EN-1 and draft EN-1 as the benefits significantly and demonstrably outweigh the landscape and visual harm, including the minor adverse (non significant) impact on the AGLV and all other harm.

Policy S66: Trees, Woodland and Hedgerows

Development proposals should be prepared based on the overriding principle that:

- the existing tree and woodland cover is maintained, improved and expanded; and
- opportunities for expanding woodland are actively considered, and implemented where practical and appropriate to do so.

Existing Trees and Woodland

Planning permission will only be granted if the proposal provides evidence that it has been subject to adequate consideration of the impact of the development on any existing trees and woodland found on-site (and off-site, if there are any trees near the site, with 'near' defined as the distance comprising 12 times the stem diameter of the off-site tree). If any trees exist on or near the development site, 'adequate consideration' is likely to mean the completion of a British Standard 5837 Tree Survey and, if applicable, an Arboricultural Method Statement.

Where the proposal will result in the loss or deterioration of:

- a) ancient woodland; and/or
- b) the loss of aged or veteran trees found outside ancient woodland,

permission will be refused, unless and on an exceptional basis the need for, and benefits of, the development in that location clearly outweigh the loss.

Where the proposal will result in the loss or deterioration of a tree protected by a Tree Preservation Order or a tree within a Conservation Area, then permission will be refused unless:

- c) there is no net loss of amenity value which arises as a result of the development; or

There will be no loss of ancient woodland or veteran trees as a result of the Scheme. The Scheme will deliver a significant beneficial effect to broad leaved woodland, as set out in Chapter 8: Ecology of the ES **[EN010131/APP/3.1]**.

As outlined in Chapter 8: Ecology of the ES **[EN010131/APP/3.1]**, from the outset the Scheme has been designed to avoid key nature conservation and ecological features present within or adjacent to the Order limits. Accordingly, the following buffers from key habitat features have been applied within the Solar and Energy Storage Park:

- All woodlands, including ancient woodland – at least 15m;
- All trees within hedgerows and individual trees – protected by clearly defined root protection areas, concordant with the requirements for each individual tree;
- All hedgerows – at least 5m

Within some of these buffers, particularly around the ancient woodland, natural regeneration of woodland will create additional scrub and woodland habitat. Other areas will be managed as grassland. Tree Root Protection fencing will be erected around retained trees, in line with British Standard BS 5837: Trees in relation to design, demolition and construction – Recommendations

The initial proposed planting design, shown in ES Volume 2: Figure 2-4 **[EN010131/APP/3.2]**, has responded to the varied character by allowing views to remain open, where tall screening would not be appropriate. New planting includes:

- New native hedgerows;
- Native hedgerow enhancement, gapping up and infill planting;
- New native grassland buffer planting to form ecological corridors;
- Native linear tree belts; and
- New species rich grassland and amenity grassland mixes under the panels and along perimeter buffers. This will be created in advance of construction so that any displaced bird populations have alternative areas of habitat available during construction.

d) the need for, and benefits of, the development in that location clearly outweigh the loss.

Where the proposal will result in the loss of any other tree or woodland not covered by the above, then the Council will expect the proposal to retain those trees that make a significant contribution to the landscape or biodiversity value of the area, provided this can be done without compromising the achievement of good design for the site.

New Trees and Woodland

Where appropriate and practical, opportunities for new tree planting should be explored as part of all development proposals (in addition to, if applicable, any necessary compensatory tree provision). Where new trees are proposed, they should be done so on the basis of the five Tree Planting Principles. Proposals which fail to provide practical opportunities for new tree planting will be refused.

Planting schemes should include provision to replace any plant failures within five years after the date of planting. Planting of trees must be considered in the context of wider plans for nature recovery which seeks to increase biodiversity and green infrastructure generally, not simply planting of trees, and protecting / enhancing soils, particularly peat soils. Tree planting should only be carried out in appropriate locations that will not impact on existing ecology or opportunities to create alternative habitats that could deliver better enhancements for people and wildlife, including carbon storage. Where woodland habitat creation is appropriate, consideration should be given to the economic and ecological benefits that can be achieved through natural regeneration. Any tree planting should use native and local provenance tree species suitable for the location.

Management and Maintenance

Details of the landscape measures embedded into the Scheme design, including a summary of their environmental functions, is presented in the Outline Landscape and Ecological Management Plan (**OLEMP**) **[EN010131/APP/7.10]**.

As detailed above, the Scheme ensures that existing trees and woodland is protected and the new planting is appropriate, therefore according with this policy.

In instances where new trees and/or woodlands are proposed, it may be necessary for the council to require appropriate developer contributions to be provided, to ensure provision is made for appropriate management and maintenance of the new trees and/or woodland.

Hedgerows

Proposals for new development will be expected to retain existing hedgerows where appropriate and integrate them fully into the design having regard to their management requirements.

Proposals for new development will not be supported that would result in the loss of hedges of high landscape, heritage, amenity or biodiversity value unless the need for, and benefits of, the development clearly outweigh the loss and this loss can be clearly demonstrated to be unavoidable.

Development requiring the loss of a hedgerow protected under The Hedgerow Regulations will only be supported where it would allow for a substantially improved overall approach to the design and landscaping of the development that would outweigh the loss of the hedgerow. Where any hedges are lost, suitable replacement planting or restoration of existing hedges, will be required within the site or the locality, including appropriate provision for maintenance and management.

Policy S67: Best and Most Versatile Agricultural Land

Proposals should protect the best and most versatile agricultural land so as to protect opportunities for food production and the continuance of the agricultural economy.

With the exception of allocated sites, significant development resulting in the loss of the best and most versatile agricultural land will only be supported if:

a) The need for the proposed development has been clearly established and there is insufficient lower grade land available at that

As explained in the Statement of Need **[EN010131/APP/2.1]**, and summarised in Section 4 of the PDAS, the Scheme is a substantial infrastructure asset, capable of delivering large amounts of low-carbon electricity to help meet the UK's commitments to decrease carbon emissions and reach net zero by 2050. As noted by the policy, failure to address climate change will result in significant adverse impacts to biodiversity. Without the Scheme, a significant and vital opportunity to develop a large-scale low-carbon generation scheme will have been passed over, increasing materially the risk that future Carbon Budgets and Net Zero 2050 will not be achieved. The need for the Scheme is therefore established.

settlement (unless development of such lower grade land would be inconsistent with other sustainability considerations); and

b) The benefits and/or sustainability considerations outweigh the need to protect such land, when taking into account the economic and other benefits of the best and most versatile agricultural land; and

c) The impacts of the proposal upon ongoing agricultural operations have been minimised through the use of appropriate design solutions; and

d) Where feasible, once any development which is supported has ceased its useful life the land will be restored to its former use (this condition will be secured by planning condition where appropriate).

Where proposals are for sites of 1 hectare or larger, which would result in the loss of best and most versatile agricultural land, an agricultural land classification report should be submitted, setting out the justification for such a loss and how criterion b has been met.

There would be a permanent loss of approximately 2 ha of BMV land as a result of the Scheme. Soil surveys have been undertaken to identify the ALC grade of land within the Solar and Energy Storage Park and a desktop study has been undertaken to estimate the ALC grade of land within the Grid Connection Corridor. The ALC survey is provided in Appendix 12-C: ALC Report of the ES **[EN010131/APP/3.3]**.

The majority of the Solar and Energy Park (approximately 85%) comprises Grade 3a agricultural land; Grade 3a land comprises approximately 12% of the area (which is classed as BMV land). Some agricultural use can continue on most BMV land following construction alongside the solar panels and the impact on almost all agricultural land (including all but 2 ha of BMV land) is reversible when the Scheme is decommissioned. The impact on BMV land has been minimised through locating permanent development on lower quality land where possible. It will be further minimised through implementation of an Soils Resource Management Plan to protect soils (see **[EN010131/APP/7.12]** for the Outline Soils Resource Management Plan).

The Grid Connection Corridor is likely to contain BMV land but as agricultural uses of the land can continue following installation of the underground cable impacts on this land would be limited.

Policy L67 states that development affecting BMV land will only be supported if it meets criteria a-d; compliance with these criteria is assessed below:

a/ The need for the Scheme is clearly established as outlined above. As shown in Figure 7-2 of this PDAS there are no areas on non-agricultural land or lower quality agricultural land within 15 miles of Cottam National Grid Substation that could accommodate the development. There is therefore insufficient lower grade land available and criterion a is met.

b/ The benefits and/or sustainability considerations outweigh the need to protect such land, when taking into account the economic and other benefits of the best and most versatile agricultural land. This is evidenced

both by the limited impacts on BMV land and significant benefits of the Scheme. Therefore criterion b is met.

c/ The impacts of the Scheme on ongoing agricultural operations have been minimised through:

- selection of a site mapped as Grade 3 (avoiding Grade 2 areas);
- avoiding locating permanent development on BMV land where possible (taking into account other sustainability considerations);
- omitting built development from an area of estimated BMV land in the north west of the Scheme;
- returning the Grid Connection Corridor to agricultural use after construction; retaining the potential for some agricultural use at the solar farm;
- incorporating measures to protect soils and enable recovery during the lifetime of the project; and
- retuning land to agricultural use following decommissioning of the Scheme.

It is therefore considered that the impacts upon ongoing agricultural operations have been minimised through appropriate design solutions and criterion c is met.

d/ Once the permitted use has ceased its useful life it will be decommissioned and former use can be reinstated. This decommissioning is secured by requirement 19 on the draft DCO, with initial details provided in the Framework DEMP **[EN010131/APP/7.5]**. criterion c is therefore also met.

An Agricultural Land Classification report has been submitted with the Application and is provided in Appendix 12C of the ES **[EN010131/APP/3.3]**.

Therefore the development complies with this policy.

B.2 Bassetlaw District Council Core Strategy

The Bassetlaw Core Strategy and Development Management Policies Development Plan Document was adopted in December 2011. The Core Strategy and Development Management Policies Development Plan Document provides the overarching vision for change in Bassetlaw to 2028. It contains policies that could be considered important and relevant by the Applicant, therefore the table below considers the extent to which the Scheme complies with these policies. Given that the development within Bassetlaw comprises an underground grid connection and connection works at the Cottam National Grid Substation, with very few impacts on the surrounding area, the majority of policies in the document are not relevant to the development proposed.

The ‘compliance with policy’ column demonstrates that the Scheme complies with all relevant policies in the Bassetlaw Core Strategy and Development Management Policies document.

Relevant Paragraph/Policy Reference	Policy Requirement	Compliance with Policy
Policy DM8: The Historic Environment	<p>Support will be given to development proposals or regeneration schemes (particularly in central Worksop, Retford and Tuxford) that protect and enhance the historic environment and secure its long-term future, especially the District's Heritage at Risk. Support will also be given to proposals from the Welbeck Estate for the re-use of heritage assets, where these will result in the enhancement of the assets. Such proposals must recognise the significance of heritage assets as a central part of the development. They will be expected to be in line with characterisation studies, village appraisals, conservation area appraisals (including any site specific development briefs that may be found within them), archaeological reports and other relevant studies.</p> <p>A. Definition of Heritage Assets</p> <p>Designated heritage assets in Bassetlaw include:</p> <ol style="list-style-type: none">Listed Buildings (including attached and curtilage structures);Conservation Areas;Scheduled Monuments; and	<p>Chapter 7: Cultural Heritage of the ES [EN010131/APP/3.1] describes the heritage assets within the study area for the Scheme and their significance. and the contribution of their setting to that significance. Section 7.8 and 7.10 of Chapter 7: Cultural Heritage of the ES [EN010131/APP/3.1] contains a clear assessment of likely impacts and effects of the Scheme on cultural heritage. Within Bassetlaw the main potential affects would be on archaeological assets, due to the nature of the works. The Archaeological Mitigation Strategy [EN010131/APP/7.6] sets out mitigation measures to manage this impacts and has been agreed with the LCC County Archaeologists, who also represent Bassetlaw (see Statement of Common Ground with Bassetlaw District Council and Nottingham County Council [EN010131/APP/4.3B]). Effects on the setting of heritage assets during construction of the grid connection would be temporary and reversible following the construction period. Overall there would be no significant effects on heritage assets as a result of the Scheme.</p>

iv. Registered Parks and Gardens.

Non-Designated assets in Bassetlaw include:

v. Buildings of Local Interest

vi. Areas of archaeological interest;

vii. Unregistered Parks and Gardens; and

viii. Buildings, monuments, places, areas or landscapes positively identified as having significance in terms of the historic environment.

A. Development Affecting Heritage Assets

There will be a presumption against development, alteration, advertising or demolition that will be detrimental to the significance of a heritage asset.

Proposed development affecting heritage assets, including alterations and extensions that are of an inappropriate scale, design or material, or which lead to the loss of important spaces, including infilling, will not be supported.

The setting of an asset is an important aspect of its special architectural or historic interest and proposals that fail to preserve or enhance the setting of a heritage asset will not be supported. Where appropriate, regard shall be given to any approved characterisation study or appraisal of the heritage asset. Development proposals within the setting of heritage assets will be expected to consider:

i. Scale;

ii. Design;

iii. Materials;

iv. Siting; and

v. Views away from and towards the heritage asset.

Policy DM9: Green Infrastructure; Biodiversity & Geodiversity; Landscape; Open Space & Sports Facilities

A. Green Infrastructure

Development proposals will be expected to support the Council's strategic approach to the delivery, protection and enhancement of multi-functional Green Infrastructure, to be achieved through the establishment of a network of green corridors and assets (please refer to the Council's Green Infrastructure work for a full list of Green Corridors and Nodes within, and running beyond, the District) at local, sub-regional and regional levels. Particular support will be given to proposals that will further the development of:

- The Idle Valley Project;
- The Trent Vale Partnership;
- Sherwood Forest Regional Park.

Development proposals will be expected to demonstrate, in line with the Council's Green Infrastructure work, that:

- i. they protect and enhance green infrastructure assets affected by the development and take opportunities to improve linkages between green corridors;
- ii. where they overlap with or will affect existing green infrastructure nodes or corridors, such assets are protected and enhanced to improve public access and use;
- iii. where opportunities exist, development proposals provide improvements to the green infrastructure network that benefit biodiversity through the incorporation of retained habitats and by the creation of new areas of habitat; and
- iv. they provide robust delivery mechanisms for, and means of ensuring the long-term management of, green infrastructure.

Development that will result in the loss of existing green infrastructure may be supported where replacement provision is made that is considered to be of equal or greater value than that which will be lost. Where new development may have an adverse impact on green infrastructure, alternative scheme designs that minimise impact must be presented to the Council for

A. Green Infrastructure

The Scheme has also been designed to integrate with and enhance the local green infrastructure network, improving ecological connectivity across the Order limits. The initial proposed planting design, shown in ES Volume 2: Figure 2-4 [EN010131/APP/3.2], has responded to the varied character by allowing views to remain open, where tall screening would not be appropriate. New planting would include:

- New native hedgerows;
- Native hedgerow enhancement, gapping up and infill planting;
- New native grassland buffer planting to form ecological corridors;
- Native linear tree belts; and
- New species rich grassland and amenity grassland mixes under the panels and along perimeter buffers. This will be created in advance of construction so that any displaced bird populations have alternative areas of habitat available during construction.

B. Biodiversity and Geodiversity

Section 8.7 of Chapter 8: Ecology of the ES [EN010131/APP/3.1] sets out all the designated sites of ecological or geological conservation importance; protected species; and habitats and other species identified as being of principal importance for the conservation of biodiversity within the study area for the Scheme. Sections 8.10 and 8.12 of ES Chapter 8 [EN010131/APP/3.1] go on to set out the expected effects on the above receptors during the construction, operation and decommissioning phases of the Scheme. This concludes that with the application of mitigation measures set out in Chapter 8: Ecology of the ES [EN010131/APP/3.1] no significant adverse effects have been identified on any internationally, nationally or locally designated sites during construction, operation or decommissioning of the Scheme.

Embedded design mitigation measures such as those set out in this policy are outlined in Section 8.9 of Chapter 8: Ecology of the ES [EN010131/APP/3.1] and are illustrated within the Framework CEMP

consideration before the use of mitigation measures (e.g. off-site or through financial contributions for improvements elsewhere) is considered.

B. Biodiversity and Geodiversity

Development proposals will be expected to take opportunities to restore or enhance habitats and species' populations and to demonstrate that they will not adversely affect or result in the loss of features of recognised importance, including:

- i. Protected trees and hedgerows;
- ii. Ancient woodlands;
- iii. Sites of Special Scientific Interest (SSSI);
- iv. Regionally Important Geodiversity Sites;
- v. Local Wildlife Sites (Sites of Importance for Nature Conservation (SINC));
- vi. Local and UK Biodiversity Action Plan Habitats (including Open Mosaic Habitats on Previously Developed Land); and
- vii. Protected Species.

Development that will result in the loss of such features may be supported where replacement provision is made that is considered to be of equal or greater value than that which will be lost and which is likely to result in a net gain in biodiversity. Where new development may have an adverse impact on such features, alternative scheme designs that minimise impact must be presented to the Council for consideration before the use of mitigation measures is considered. Where sufficient mitigation measures cannot be delivered, compensation measures must be provided as a last resort.

C. Landscape Character New development proposals in and adjoining the countryside will be expected to be designed so as to be sensitive to their landscape setting. They will be expected to enhance the distinctive qualities of the landscape character policy zone in which they would be situated, as identified in the Bassetlaw Landscape Character Assessment. Proposals will be

[EN010131/APP/7.3], Framework OEMP [EN010131/APP/7.4]) and Framework DEMP [EN010131/APP/7.5]. These include habitat avoidance, creation and replacement measures; mitigation relating to protected and notable species; and standard mitigation measures that comply with industry good practice and environmental legislation.

Production of a final CEMP, OEMP and DEMP are secured by way of a requirement in the draft DCO. The Framework CEMP [EN010131/APP/7.3] includes best practice measures to ensure that activities will be confined to the minimum areas required for the works during construction, in accordance with this part of the policy.

The ecological mitigation measures proposed as part of the Scheme are set out in **Chapter 8: Ecology of the ES [EN010131/APP/3.1]**. Mitigation measures embedded within the Scheme design ensure that designated sites are not impacted during construction, operation and decommissioning e.g. through siting construction routes away from and outside of designated sites, incorporating suitable buffer zones and erection of temporary construction fencing to avoid incursion into exclusion zones. In addition, from the outset the Scheme has been designed to avoid key nature conservation and ecological features present within or adjacent to the Order limits. Accordingly, the following buffers from key habitat features have been applied within the Solar and Energy Storage Park:

- All woodlands, including ancient woodland – at least 15m;
- All trees within hedgerows and individual trees – protected by clearly defined root protection areas, concordant with the requirements for each individual tree;
- All watercourses (where practicable) – at least 10m from the centre point of the watercourse; and
- All hedgerows – at least 5m.

There are no designated sites of international or national importance within the Order limits or likely to be adversely affected by the development. There is one Local Wildlife Site within the Order limits and the Scheme has been designed to minimise any risk to this site, ensuring there will be no

expected to respond to the local recommendations made in the Assessment by conserving, restoring, reinforcing or creating landscape forms and features accordingly.

D. Open Space and Sports Facilities

Development proposals will be expected to demonstrate that they will not adversely affect or result in the loss of open spaces and sports facilities. Exceptions may be made if the open spaces or facilities are identified as surplus to demand in a given location and that alternative provision, or a contribution towards new or improved facilities elsewhere, would be preferable. Alternative scheme designs that minimise impact should be considered before the use of mitigation (on-site, off-site or through contributions as appropriate).

New development proposals will be expected to provide functional on-site open space and/or sports facilities, or to provide contributions towards new or improved facilities elsewhere locally, as well as contributions for on-going maintenance, to meet any deficiencies in local provision (when assessed against locally defined standards) that will be caused by the development.

Areas of protected open space will be identified in the Site Allocations Development Plan Document.

significant adverse effects upon it. The works within the LWS are limited to the grid connection corridor passing under the site. Further information is provided in Chapter 8: Ecology of the ES **[EN010131/APP/3.1]**,

Chapter 8: Ecology of the ES **[EN010131/APP/3.1]** concludes that the Scheme has the potential to result in significant beneficial effects to broad-leaved woodland, including ancient woodland, hedgerows and breeding birds, particularly farmland birds associated with hedgerows and field margins, with the application of enhancement measures set out in section 8.11 of Chapter 8: Ecology of the ES **[EN010131/APP/3.1]**.

A Biodiversity Net Gain (BNG) Assessment, using Defra's Metric 3.0, has been provided with the DCO application **[EN010131/APP/7.9]**. This report demonstrates that the project has the potential to deliver significant biodiversity net gain on site, significantly exceeding the 10% target. The Scheme has therefore taken advantage of opportunities to conserve and enhance biodiversity.

B. Landscape Character

Good design has been a key consideration from the outset and has shaped the design, layout and landscape design. Mitigation has been embedded in the Scheme to minimise effects on landscape character and visual amenity. This includes selecting a site that is naturally not very visible in the landscape with few PRoW across it; locating larger elements of the Scheme away from sensitive receptors and in locations where there are elements of natural screening from topography and existing woodland; removing panels from areas to reduce significant landscape and visual effects and incorporating landscape design.

The overall objective of the landscape design set out in the Outline Landscape and Ecological Management Plan **[EN010131/APP/7.10]** is to integrate the Scheme into its landscape setting and avoid or minimise adverse landscape and visual effects as far as practicable. Accordingly, the landscape design aims to achieve the following:

- To integrate the Scheme into the existing landscape pattern as far as possible by retaining and following existing features, including vegetation, where practicable;
- To replace vegetation lost because of construction of the Scheme through areas of new planting;
- To filter and screen more prominent components of the Scheme in views from visual receptors; and
- To apply appropriate offsets to residential properties to mitigate/reduce views of the Scheme in views from visual receptors.

D. Open Space and Sports Facilities

The Scheme is not anticipated to have an effect on open space or recreational facilities.

Policy DM10:
Renewable & Low
Carbon Energy

A. Carbon Reduction

The Council will be supportive of proposals that seek to utilise renewable and low carbon energy to minimise CO₂ emissions. Proposals for renewable and low carbon energy infrastructure will also need to demonstrate that they:

- are compatible with policies to safeguard the built and natural environment, including heritage assets and their setting, landscape character and features of recognised importance for biodiversity;
- will not lead to the loss of or damage to high-grade agricultural land (Grades 1 & 2);
- are compatible with tourism and recreational facilities;
- will not result in unacceptable impacts in terms of visual appearance; noise; shadow flicker; watercourse engineering and hydrological impacts; pollution; or traffic generation; and
- will not result in an unacceptable cumulative impact in relation to the factors above.

The proposal is for a renewable energy development so are supported in principle by Policy DM10. As explained in the Statement of Need **[EN010131/APP/2.1]** and summarised in Section 4 of the PDAS, the Scheme is a substantial infrastructure asset, capable of delivering large amounts of low-carbon electricity to help meet the UK's urgent need to decarbonise with solar technology supported by recent government policy.

The impacts of the Scheme have been assessed and are set out in detail by the ES **[EN010131/APP/3.1]** and are taken into account in Section 7 of the PDAS. The following is a high-level summary of how the Scheme complies with points (i-v in the policy).

i) are compatible with policies to safeguard the built and natural environment, including heritage assets and their setting, landscape character and features of recognised importance for biodiversity;

- The Scheme has been carefully designed to safeguard the built and natural environment, including heritage assets, landscape

Large-scale renewable and low carbon energy proposals must provide full details of arrangements for decommissioning and reinstatement of the site if/when it ceases to operate.

character and biodiversity as explained by the PDAS Sections 7.5, 7.4, and 7.6 respectively

- Whilst some significant landscape impacts are unavoidable due to the scale of the Scheme and its presence within the landscape, particularly at the local level, the site selection (including topography), design and layout limits mean the visibility of the site and impacts are limited. A scheme of mitigation planting will reduce landscape and visual impacts as far as possible, however some significant effects will remain during the operational phase of the Scheme.
- The Scheme has been carefully designed to incorporate stand-offs between the Scheme and heritage assets in order to help to preserve important elements of their setting during the construction, operational and decommissioning periods.
- Following the implementation of embedded and additional mitigation measures, Chapter 7: Cultural Heritage of the ES **[EN010131/APP3.1]** the Scheme will not have any residual significant impacts on designated or non-designated heritage assets or their settings. This mitigation includes excavation and recording (strip, map and record) of archaeological remains in advance of construction activities and has been agreed in principle with the Archaeological Advisors for LCC and NCC.
- The Scheme will enhance the quality of natural assets such as hedgerows, tree belts and species rich grassland and the connectivity of habitats within and adjacent to Order limits. There will be significant beneficial effects on broad-leaved woodland, hedgerows and breeding birds as part of the Scheme.
- Chapter 8: Ecology of the ES **[EN010131/APP/3.1]** concludes that there are no potential significant adverse effects on local or regional biodiversity sites as a result of the construction, operation or decommissioning of the Scheme. A Biodiversity Net Gain (BNG) Assessment, using Defra's Metric 3.1, has been provided with the DCO application **[EN010131/APP/7.9]**. The final percentage of net gain achieved will depend on the detailed design of the Scheme, which cannot be determined with certainty at this stage. However, the BNG Assessment demonstrates that

the Scheme can achieve far in excess of 10% biodiversity net gain.

ii. will not lead to the loss of or damage to high-grade agricultural land (Grades 1 & 2);

- The Grid Connection Corridor is predominantly mapped as Grade 3 agricultural land, with a small area of Grade 4 agricultural land around the River Trent. No land is mapped as Grade 2 land.
- A desktop study of agricultural land carried out for the Grid Connection Corridor (see Appendix 12C of the ES **[EN010131/APP/3.3]**) estimates that the Grid Connection Corridor is likely to contain areas of BMV agricultural land. However, as agricultural uses of the land can continue following installation of the underground cable there would be no effect on the availability of BMV land after construction.

iii. are compatible with tourism and recreational facilities;

As reported in ES Chapter 12: Socio-Economics and Land Use **[EN010131/APP/3.1]** there would be no significant adverse impacts on tourism or recreation as part of the Scheme. PRow present within the Grid Connection Corridor will be kept open throughout construction, with minor, temporary diversions where necessary.

iv. will not result in unacceptable impacts in terms of visual appearance; noise; shadow flicker; watercourse engineering and hydrological impacts; pollution; or traffic generation;

The Scheme will not result in any significant adverse effects in terms of noise, shadow flicker, watercourse engineering and hydrological impacts, pollution or traffic generation. Within Bassetlaw any significant adverse landscape and visual effects will be limited to the construction period only.

v. will not result in an unacceptable cumulative impact in relation to the factors above.

Cumulative impacts have been assessed in Chapter 16: Cumulative Effects and Interactions of the ES [EN010131/APP/3.1]. The cumulative impacts arising from the West Burton, Cottam and Gate Burton Schemes have been minimised in Bassetlaw by joint working to establish a shared grid corridor that will provide the potential for the grid connections for the three projects to be installed together. Joint working may also be possible with the Tillbridge scheme as it progresses. All cumulative impacts are limited and acceptable.

Therefore it is considered that the Scheme complies with Policy DM10 and benefits from the in principle support given to the development by the policy.

Policy DM12: Flood Risk, Sewerage and Drainage

A. Flood Risk

Proposals for the development of new units in Flood Zones 2, 3a and 3b that are not defined by national planning guidance as being suitable for these zones will not be supported while development sites remain available in sequentially superior locations across the District. Reference should be made to the Council's Strategic Flood Risk Assessment when making assessments about likely suitability. Site specific Flood Risk Assessments will be required for all developments in flood risk areas, even where flood defences exist, as defined on the Proposals Map.

Where suitable redevelopment opportunities arise, the Council will require, in liaison with the Environment Agency, the opening up of culverts, notably in Worksop and Retford, in order to reduce the blocking of flood flow routes. Particular support will be given to the Flood Alleviation Scheme for Retford Beck.

A FRA is provided at Appendix 9-D of the ES [EN010131/APP/3.1]. This demonstrates how the development passes the Sequential Test including its application at the site level.

The site selection was guided by the aim to select a site close to the grid connection but outside the areas of highest flood risk. This guided the selection of the Gate Burton site, with all areas to the west closer to the grid connection being subject to flooding.

The Grid Connection Corridor is predominantly located within an area of high risk of fluvial flooding (Flood Zone 3), therefore an Exception Test has been undertaken. Given that the grid connection point is located within an area at high risk of fluvial flooding it was not possible to select a grid connection route that avoided areas of high flood risk. However, given that the development will comprise an underground cable, it will not be vulnerable to flooding or increase the risk of flooding elsewhere through its installation.

During construction, the Framework CEMP [EN010131/APP/7.3] sets out measures to ensure the safety of staff during construction from flood risk.

B. Sewerage and Drainage

Proposals for new development (other than minor extensions) in:

- i. Beckingham
- ii. Clarborough and Hayton
- iii. East Drayton
- iv. East Markham
- v. Harworth Bircotes
- vi. North Leverton
- vii. North Wheatley
- viii. Misterton
- ix. South Wheatley
- x. Sturton-le-Steeple
- xi. Welham
- xii. Walkeringham

will only be supported where it is demonstrated to the Council's satisfaction that the proposed development will not exacerbate existing land drainage and sewerage problems in these areas.

All new development (other than minor extensions) will be required to incorporate Sustainable Drainage Systems (SuDS) and provide details of adoption, ongoing maintenance and management. Proposals will be required to provide reasoned justification for not using SuDS techniques, where ground conditions and other key factors show them to be technically feasible.

Preference will be given to systems that contribute to the conservation and enhancement of biodiversity and green infrastructure in the District.

This includes the appointment of at least one designated Flood Warden who is familiar with the risks and remains vigilant to news reports, Environment Agency flood warnings, relevant weather warnings and water levels of the local waterway. Health and safety plans developed for construction and decommissioning activities will also be required to account for potential climate change impacts on workers, such as flooding and heatwaves. Section 7.2 of Appendix 9-D of the ES **[EN010131/APP/3.1]** states that the proposed surface water drainage network has been designed to accommodate runoff from all storms up to and including the 1% AEP +40% for climate change, which will be achieved through sustainable drainage systems (SuDS), as set out by the Appendix 9-C: Outline Drainage Strategy **[EN010131/APP/3.1]**.

Appendix 9-A of the ES [EN010131/APP/3.3] provides a WFD Assessment. This concludes that the Scheme is compliant with the objectives of the WFD: it would not cause deterioration in status of the water bodies, and would not prevent the water bodies achieving Good Ecological Status. The Scheme also contributes to the delivery of WFD objectives.

It is considered that the development complies with this policy, although it is unlikely that the policy envisaged an underground cable as being the development within the Flood Zone and this reduces the weight applied to it compared to policies within NPS EN-1, draft NPS EN-1 and EN-3.

B.3 Bassetlaw District Council Draft Local Plan 2020-2038

Bassetlaw District Council recently consulted on a new Local Plan 2020-2037 (Publication version) in late 2021 and early 2022. A number of changes were proposed, and an Addendum was then consulted on between January and February 2022. A second Addendum was then consulted on between May and June 2022. Bassetlaw District Council then submitted the Local Plan 2020-2038: Publication Version, Addendum and Second Addendum to the Secretary of State on 18 July 2022 for independent examination. Examination Hearings were carried out between November 2022 and January 2023. The Council anticipate the adoption of the Local Plan in Spring 2023. Upon adoption the Local Plan would replace the current Core Strategy and given their advanced stage, the emerging plan is considered to have potential to have weight as an important and relevant matter. Therefore, the table below considers the extent to which the Scheme complies with these policies. It should be noted, however, that the development in Bassetlaw comprises an underground cable and connection works at Cottam National Grid Substation. Given the nature of development in this area, only a limited number of policies are considered important and relevant. The draft status of the Local Plan further decreases the weight likely to be applied to it.

The ‘compliance with policy’ column demonstrates that the Scheme complies with all relevant policies in the Local Plan 2020-2038 Publication Version, with the Scheme supporting the delivery of renewable, affordable, predictable electricity generation, and providing beneficial gains in biodiversity.

Relevant Paragraph/Policy Reference

Policy Requirement

Compliance with Policy

Policy ST1: Bassetlaw's Spatial Strategy

1. The spatial strategy for Bassetlaw will be delivered over the plan period 2020-2038 through:
- a) managed sustainable development and growth, appropriate to the size of each settlement to meet the evidenced need for new homes and jobs, to regenerate the District's town centres, and to support necessary improvements to infrastructure, services and facilities by:
 - i. promoting the efficient and effective use of land and the re-use of previously developed land in sustainable locations, unless there are overriding amenity, biodiversity or heritage matters that preclude such use; and by seeking to minimise the use of the most versatile Grade 1-3 agricultural land, where practicable;
 - ii. emphasising the need to develop in sustainable locations in close proximity to transport hubs and key public transport nodes, and by encouraging higher density development in those locations;
 - iii. ensuring that sufficient physical, social and green/blue infrastructure is delivered to meet identified needs in a timely manner.

The Statement of Need **[EN010131/APP/2.1]** and Section 2 of the PDAS explain that the Scheme is a substantial infrastructure asset, capable of delivering large amounts of secure, affordable, low-carbon electricity to local and national networks.

In line with paragraph 3.3.15 of EN-1, the Scheme can directly respond to the urgent need to deliver a large amount of renewable generation capacity quickly. Subject to obtaining the necessary consents, construction is anticipated to commence in Q1 2025 and be completed ready for operation in Q1 2028. The Scheme will quickly deliver significant amounts of low carbon power. Solar is relatively quick to construct compared to other technologies which have longer construction timeframes or have potentially not yet been proven at scale.

The majority of the Solar and Energy Park (approximately 85%) comprises Grade 3a agricultural land; Grade 3b land comprises approximately 12%, which is classed as Best and Most Versatile (BMV) land. Some agricultural use can continue on most BMV land following construction alongside the solar panels and the impact on almost all agricultural land (including all but 2 ha of BMV land) is reversible when the Scheme is decommissioned. The impact on BMV land has been minimised through locating permanent development on lower quality land where possible. It will be further minimised through implementation of an Soils Resource Management Plan to protect soils (see **[EN010131/APP/7.12]** for the Outline Soils Resource Management Plan).

The Grid Connection Corridor, of which the western part is in Bassetlaw, is likely to contain areas of best and most versatile agricultural land. However, as agricultural uses of the land can continue following installation of the underground cable there would be no effect on the availability of best and most versatile land after construction.

The Applicant has therefore minimised the impact on agricultural land and the proposal is considered an efficient use of land in line with Policy ST2.

Embedded ecological design mitigation measures are outlined in Section 8.9 of Chapter 8: Ecology of the ES [EN010131/APP/3.1] and are illustrated within the Framework CEMP [EN010131/APP/7.3], Framework OEMP [EN010131/APP/7.4] and Framework DEMP [EN010131/APP/7.5]. These include habitat avoidance, creation and replacement measures; mitigation relating to protected and notable species; and standard mitigation measures that comply with industry good practice and environmental legislation

A Biodiversity Net Gain (BNG) Assessment, using Defra's Metric 3.0, has been provided with the DCO application [EN010131/APP/7.9]. This report demonstrates that the project has the potential to deliver significant biodiversity net gain on site, significantly exceeding the 10% target.

Policy ST6: Cottam Priority Regeneration Areas

Land at the former Cottam Power Station site is identified as a broad location for mixed use regeneration. As such, the site will be safeguarded from development which would jeopardise the comprehensive remediation, reclamation and redevelopment of the whole site.

Given the Scheme's works in this area comprise an underground cable and connection to an existing substation, the works are not considered to prejudice the comprehensive redevelopment of the Priority Regeneration Area.

Policy ST39: Green and Blue Infrastructure

1. The connectivity, quality, multifunctionality, biodiversity and amenity value of the green and blue infrastructure network will be enhanced, extended and managed through:

- protecting and enhancing the landscape character and the distinctiveness of Green Gaps, Registered Parks and Gardens and ornamental parklands, registered Common Lands and Village Greens, and Local Green Spaces;
- protecting, enhancing and restoring watercourses, ponds, lakes and water dependent habitats where appropriate;
- providing for biodiversity net gain, including reconnecting vulnerable and priority habitats (see policy ST41);
- protecting and enhancing ancient and mature woodland and hedgerows, and providing for tree planting to secure recreational benefits and/or to aid carbon offsetting;
- making appropriate provision for new green/blue infrastructure in new development including open space, allotments, playing

The ecological mitigation measures proposed as part of the Scheme are set out in **Chapter 8: Ecology of the ES [EN010131/APP/3.1]**. Mitigation measures embedded within the Scheme design ensure that designated sites are not impacted during construction, operation and decommissioning e.g. through siting construction routes away from and outside of designated sites, incorporating suitable buffer zones and erection of temporary construction fencing to avoid incursion into exclusion zones. In addition, from the outset the Scheme has been designed to avoid key nature conservation and ecological features present within or adjacent to the Order limits. Accordingly, the following buffers from key habitat features have been applied within the Solar and Energy Storage Park:

- All woodlands, including ancient woodland – at least 15m;
- All trees within hedgerows and individual trees – protected by clearly defined root protection areas, concordant with the requirements for each individual tree;

fields and outdoor sports facilities, and natural and semi natural greenspace and bluespace; and/or incorporating and where practicable facilitating the improvement of existing provision through the design of development;

f) applying climate change mitigation and adaptation measures through new development, including flood risk and watercourse management;

g) linking walking and cycling routes, bridleways and public rights of way to and through development, where appropriate;

2. The function, setting, and biodiversity, landscape, access and recreational value of the following main and minor green corridors, as identified on the Policies Map will be protected and enhanced:

a) Main green corridors

i. Chesterfield Canal

ii. River Idle

iii. River Ryton

iv. River Trent

b) Minor green corridors

i. Trent Valley Way

ii. Cuckoo Way

iii. National Cycle Route 6

iv. River Maun

v. Robin Hood Way

vi. River Meden

vii. River Poulter

c) All proposals wholly or partly within the minimum buffer zone of a main green corridor (30m width), or a minor green corridor (15m width) should be supported by an Ecological Impact Assessment and landscape statement. This should confirm the extent of the buffer zone in that location and demonstrate how the design and layout of the scheme will positively respond to its green/blue infrastructure location.

- All watercourses (where practicable) – at least 10m from the centre point of the watercourse; and
- All hedgerows – at least 5m.

The Scheme has also been designed to integrate with and enhance the local green infrastructure network, improving ecological connectivity across the Order limits. The initial proposed planting design, shown in ES Volume 2: Figure 2-4 [EN010131/APP/3.2], has responded to the varied character by allowing views to remain open, where tall screening would not be appropriate. New planting would include:

- New native hedgerows;
- Native hedgerow enhancement, gapping up and infill planting;
- New native grassland buffer planting to form ecological corridors;
- Native linear tree belts; and
- New species rich grassland and amenity grassland mixes under the panels and along perimeter buffers. This will be created in advance of construction so that any displaced bird populations have alternative areas of habitat available during construction.

Chapter 8: Ecology of the ES [EN010131/APP/3.1] concludes that the Scheme has the potential to result in significant beneficial effects to broad-leaved woodland, including ancient woodland, hedgerows and breeding birds, particularly farmland birds associated with hedgerows and field margins, with the application of enhancement measures set out in section 8.11 of Chapter 8: Ecology of the ES [EN010131/APP/3.1]. These measures are shown in the **Outline Landscape and Ecological Management Plan (LEMP)** [EN010131/APP/7.10]. **Requirement 7 of the draft DCO** [EN010131/APP/6.1] requires that a LEMP should be submitted and approved by the local planning authority before commencement of development and this plan should be substantially in accordance with the Outline LEMP, securing the measures proposed.

There is one Local Wildlife Site (LWS) within the Order limits, Cow Pasture Lane Drains LWS, which is crossed by the grid connection and lies within Bassetlaw District. The Grid Connection Corridor crossing of Cow Pasture Lane Drains LWS will be undertaken using HDD methods to lay cabling, therefore avoiding impacts to the drain and hedge, with setbacks of at least

3. All new green and blue infrastructure should be accompanied by appropriate management and maintenance arrangements.

10m from the centreline of the drain. Access for construction of the Grid Connection Corridor will utilise an existing access track that runs alongside Cow Pasture Lane Drains LWS. However, where there is a need to cross the LWS, this will be via a bailey bridge, rather than culvert to minimise negative impacts.

Construction compounds will be set back from this LWS with a minimum 10m from the centre line of the watercourse. Furthermore, measures to ensure incursion into this LWS does not occur will be put in place, e.g. security fencing, which will be implemented at an early stage. With these measures in place, the Scheme is not predicted to adversely affect the LWS.

A number of other PRow are located within the area affected by the Grid Connection Corridor. The location of these PRow is shown on the Streets, Rights of Way and Access Plans **[EN010131/APP/5.3]**.

All PRow will be kept open and on their existing alignment throughout the operational phase of the Scheme. During construction, PRow will be kept open, and on their existing alignment as far as possible, with short, convenient, temporary diversions included where this is not possible. There will therefore be no significant adverse effects on PRow users.

Works at the River Trent comprise a cable to be installed using HDD to minimise impacts.

The Scheme is therefore considered to comply with this policy.

Policy ST40:
Biodiversity and
Geodiversity

1. The Council will seek to protect and enhance the biodiversity and geodiversity of Bassetlaw, including:
International Sites
a) a proposal that may impact on a Special Area of Conservation (SAC), Special Protection Area (SPA), Ramsar site and/or the Sherwood Forest ppSPA will only be supported where it can be demonstrated that there will be no adverse effects on their integrity, unless there are no alternative solutions and it is justified by an 'imperative reasons of overriding public interest' assessment under the Habitats Regulations;

Section 8.7 of Chapter 8: Ecology of the ES **[EN010131/APP/3.1]** sets out all the designated sites of ecological or geological conservation importance; protected species; and habitats and other species identified as being of principal importance for the conservation of biodiversity within the study area for the Scheme. Sections 8.10 and 8.12 of ES Chapter 8 **[EN010131/APP/3.1]** go on to set out the expected effects on the above receptors during the construction, operation and decommissioning phases of the Scheme. This concludes that with the application of mitigation measures set out in Chapter 8: Ecology of the ES **[EN010131/APP/3.1]** no significant adverse effects have been identified

b) any scheme within the 5km buffer zone of the Sherwood Forest ppSPA will require a project level 'shadow level' Habitats Regulations Assessment to ensure any significant adverse effects on the Sherwood Forest ppSPA are identified and appropriately mitigated;

National Designations

c) a proposal (either individually or in combination with other developments) that may either directly or indirectly adversely impact a Site of Special Scientific Interest (SSSI), National Nature Reserve (NNR) or ancient woodland and their buffer zones will be refused, other than in wholly exceptional circumstances where it can be demonstrated that the benefits of the development in the location proposed clearly outweigh any harm to the special interest features of the asset. In such circumstances measures should be identified through an Ecological Impact Assessment to mitigate the adverse effects resulting from the development.

Local Designations and Locally Important Ecological Features

d) proposals having a direct or indirect adverse effect on a Local Nature Reserve, Local Wildlife Site or Local Geological Site and their buffer zones or other biodiversity/geodiversity asset, will only be supported where there are no reasonable alternatives; and the case for development clearly outweighs the need to safeguard the ecological, recreational and/or educational value of the site.

2. In all cases, where the principle of development is considered appropriate the mitigation hierarchy must be applied so that:

- a) firstly harm is avoided wherever possible; then
- b) appropriate mitigation is provided to ensure no net loss or a net gain of priority habitat and local populations of priority species;
- c) as a last resort, compensation is delivered to offset any residual damage to biodiversity;
- d) they protect, restore, enhance and provide appropriate buffers around wildlife and geological features at a local and wider landscape-scale to deliver robust ecological networks, to help deliver priorities in the draft Nottinghamshire Biodiversity Opportunity Model for Bassetlaw and Idle Valley 201814;
- e) they establish additional ecological links to the Nature Recovery Network.

on any internationally, nationally or locally designated sites during construction, operation or decommissioning of the Scheme.

Embedded design mitigation measures such as those set out in this policy are outlined in Section 8.9 of Chapter 8: Ecology of the ES [EN010131/APP/3.1] and are illustrated within the Framework CEMP [EN010131/APP/7.3], Framework OEMP [EN010131/APP/7.4]) and Framework DEMP [EN010131/APP/7.5]. These include habitat avoidance, creation and replacement measures; mitigation relating to protected and notable species; and standard mitigation measures that comply with industry good practice and environmental legislation.

Production of a final CEMP, OEMP and DEMP are secured by way of a requirement in the draft DCO. The Framework CEMP [EN010131/APP/7.3] includes best practice measures to ensure that activities will be confined to the minimum areas required for the works during construction, in accordance with this part of the policy.

The ecological mitigation measures proposed as part of the Scheme are set out in **Chapter 8: Ecology of the ES [EN010131/APP/3.1]**. Mitigation measures embedded within the Scheme design ensure that designated sites are not impacted during construction, operation and decommissioning e.g. through siting construction routes away from and outside of designated sites, incorporating suitable buffer zones and erection of temporary construction fencing to avoid incursion into exclusion zones. In addition, from the outset the Scheme has been designed to avoid key nature conservation and ecological features present within or adjacent to the Order limits. Accordingly, the following buffers from key habitat features have been applied within the Solar and Energy Storage Park:

- All woodlands, including ancient woodland – at least 15m;
- All trees within hedgerows and individual trees – protected by clearly defined root protection areas, concordant with the requirements for each individual tree;
- All watercourses (where practicable) – at least 10m from the centre point of the watercourse; and

Biodiversity Net Gain

3. All new development should make provision for at least 10% net biodiversity gain on site, or where it can be demonstrated that for design reasons this is not practicable, off site through an equivalent financial contribution.

4. A commuted sum equivalent to 30 years maintenance will be sought to manage the biodiversity assets in the long term.

- All hedgerows – at least 5m.

The Scheme has also been designed to integrate with and enhance the local green infrastructure network, improving ecological connectivity across the Order limits. The initial proposed planting design, shown in ES Volume 2: Figure 2-4 [EN010131/APP/3.2], has responded to the varied character by allowing views to remain open, where tall screening would not be appropriate. New planting would include:

- New native hedgerows;
- Native hedgerow enhancement, gapping up and infill planting;
- New native grassland buffer planting to form ecological corridors;
- Native linear tree belts; and
- New species rich grassland and amenity grassland mixes under the panels and along perimeter buffers. This will be created in advance of construction so that any displaced bird populations have alternative areas of habitat available during construction.

There are no designated sites of international or national importance within the Order limits or likely to be adversely affected by the development. There is one Local Wildlife Site within the Order limits and the Scheme has been designed to minimise any risk to this site, ensuring there will be no significant adverse effects upon it. The works within the LWS are limited to the grid connection corridor passing under the site. Further information is provided in Chapter 8: Ecology of the ES [EN010131/APP/3.1],

Chapter 8: Ecology of the ES [EN010131/APP/3.1] concludes that the Scheme has the potential to result in significant beneficial effects to broad-leaved woodland, including ancient woodland, hedgerows and breeding birds, particularly farmland birds associated with hedgerows and field margins, with the application of enhancement measures set out in section 8.11 of Chapter 8: Ecology of the ES [EN010131/APP/3.1].

A Biodiversity Net Gain (BNG) Assessment, using Defra's Metric 3.0, has been provided with the DCO application [EN010131/APP/7.9]. This report demonstrates that the project has the potential to deliver

Policy 41: Trees, woodlands and hedgerows

1. The Council will protect existing trees, woodland and hedgerows and secure additional planting that increases canopy cover in the interests of biodiversity, amenity and climate change adaptation by:
 - a) retaining, protecting and improving woodland and trees subject to Tree Preservation Orders (TPOs), trees within conservation areas, and 'important' hedgerows as defined by the Hedgerows Regulations 1997;
 - b) making Tree Preservation Orders;
 - c) giving consideration to trees and hedgerows both on individual merit as well as their contribution to amenity and interaction as part of a group within the broader landscape setting;
 - d) resisting the loss or deterioration of ancient woodland and ancient or veteran trees unless there are wholly exceptional reasons and a suitable compensation strategy exists;
 - e) seeking contributions to the national tree planting target to contribute to net zero emissions in accordance with Policy ST50.
2. Where development would adversely affect trees or hedgerows the application must be accompanied by:
 - a) an accurate tree survey and arboriculture assessment, undertaken by an experienced arboriculturist, of all existing trees and hedgerows on site in accordance with BS5837 (Trees in relation to design, demolition and construction – Recommendations) 201217;
 - b) details of protective measures to be put in place during the development to ensure the health and safety of each specimen and hedgerow to be retained;
 - c) an avoidance and mitigation strategy to include replacement planting for specimens of at least equal amenity and ecological value of a local provenance; and
 - d) a detailed management plan providing details of maintenance arrangements for 10 years.

significant biodiversity net gain on site, significantly exceeding the 10% target. The Scheme has therefore taken advantage of opportunities to conserve and enhance biodiversity.

The Scheme will not result in any significant adverse effects on biodiversity, but it will deliver significant beneficial effects on broad-leaved woodlands, hedgerows and breeding birds. It will also deliver significant biodiversity net gain.

As stated in Appendix 10-I of the ES **[EN010131/APP/3.3]** there is a commitment to avoid likely high-quality trees as well as any ancient or veteran trees and trees protected by TPO, as detailed in the Framework CEMP **[EN010131/APP/7.3]** secured as a requirement in the draft DCO.

As outlined in Chapter 8: Ecology of the ES **[EN010131/APP/3.1]**, from the outset the Scheme has been designed to avoid key nature conservation and ecological features present within or adjacent to the Order limits. Accordingly, the following buffers from key habitat features have been applied within the Solar and Energy Storage Park:

- All woodlands, including ancient woodland – at least 15m;
- All trees within hedgerows and individual trees – protected by clearly defined root protection areas, concordant with the requirements for each individual tree;
- All hedgerows – at least 5m

Within some of these buffers, particularly around the ancient woodland, natural regeneration of woodland will create additional scrub and woodland habitat. Other areas will be managed as grassland. Tree Root Protection fencing will be erected around retained trees, in line with British Standard BS 5837: Trees in relation to design, demolition and construction – Recommendations

The initial proposed planting design, shown in ES Volume 2: Figure 2-4 **[EN010131/APP/3.2]**, has responded to the varied character by allowing views to remain open, where tall screening would not be appropriate. New planting includes:

- New native hedgerows;
- Native hedgerow enhancement, gapping up and infill planting;
- New native grassland buffer planting to form ecological corridors;
- Native linear tree belts; and New species rich grassland and amenity grassland mixes under the panels and along perimeter buffers. This will be created in advance of construction so that any displaced bird populations have alternative areas of habitat available during construction.

There is one Local Wildlife Site (LWS) within the Order limits, Cow Pasture Lane Drains LWS, which is crossed by the grid connection and lies within Bassetlaw District. The Grid Connection Corridor crossing of Cow Pasture Lane Drains LWS will be undertaken using HDD methods to lay cabling, therefore avoiding impacts to the drain and hedge, with setbacks of at least 10m from the centreline of the drain. Access for construction of the Grid Connection Corridor will utilise an existing access track that runs alongside Cow Pasture Lane Drains LWS. However, where there is a need to cross the LWS, this will be via a bailey bridge, rather than culvert to minimise negative impacts.

Construction compounds will be set back from this LWS with a minimum 10m from the centre line of the watercourse. Furthermore, measures to ensure incursion into this LWS does not occur will be put in place, e.g. security fencing, which will be implemented at an early stage. With these measures in place, the Scheme is not predicted to adversely affect the LWS.

Policy ST42: The Historic Environment

1. The historic environment will be conserved and enhanced, sensitively managed, enjoyed and celebrated for its contribution to sustainable communities. Proposals will be supported where they:

a) give great weight to the conservation and re-use of heritage assets (designated and non-designated) and their settings, including for appropriate temporary use, based on their significance in accordance with national policy ;

Section 7.7 of Chapter 7: Cultural Heritage of the ES [EN010131/APP/3.1] describes the assets located in the study area around the Scheme (having considered the HER and through the Applicant's own assessment) and their significance, and the contribution of their setting to that significance

Section 7.9 of Chapter 7: Cultural Heritage of the ES [EN010131/APP/3.1] outlines the avoidance and mitigation measures embedded within the

- b) make a positive contribution to the character and local distinctiveness of the historic environment, including through the use of innovative design;
- c) positively conserve or enhance a historic designed landscape;
- d) maintain, conserve, sustain or return to beneficial use designated or non designated assets;
- e) capitalise in an appropriate and sensitive manner the regeneration, tourism and energy efficiency potential of heritage assets;
- f) positively secure the conservation and re-use of 'at risk' heritage assets;
- g) improve access and enjoyment of the historic environment where appropriate, particularly where they retain, create or facilitate public access to heritage assets to increase understanding of their significance.

2. Applicants will be required to submit evidence in line with best practice and relevant national guidance, examining the significance of any heritage assets affected through a Heritage Statement, including any contribution made by their setting. The level of detail should be proportionate to the asset's significance, and the results submitted to the Nottinghamshire Historic Environment Record. In some circumstances, further survey, analysis and/or recording will be made a condition of consent.

Scheme design in relation to cultural heritage. Chapter 7: Cultural Heritage of the ES [EN010131/APP/3.1] concludes that following mitigation there will be no significant effect on designated or non-designated heritage assets or their setting as a result of the Scheme.

Policy 43: Designated and Non-Designated heritage Assets

Designated Heritage Assets

2. Proposals that will lead to substantial harm or total loss of significance will be refused unless it can be demonstrated that the substantial harm or loss is necessary to achieve substantial public benefits that outweigh that harm or loss, where it can be demonstrated that:

- a) the nature of the heritage asset prevents all reasonable uses of the site;
- b) no viable use of the heritage asset itself can be found in the medium term through appropriate marketing that will enable its conservation;

Heritage assets have been considered and where relevant assessed in Chapter 7: Cultural Heritage of the ES [EN010131/APP/3.1]. Section 7.7 of Chapter 7: Cultural Heritage of the ES [EN010131/APP/3.1] describes the significance of these assets. Designated heritage assets and non-designated heritage assets with archaeological significance are identified in Chapter 7: Cultural Heritage of the ES [EN010131/APP/3.1]. Section 7.7 of Chapter 7: Cultural Heritage of the ES [EN010131/APP/3.1] describes these assets and their significance.

Section 7.9 of Chapter 7: Cultural Heritage of the ES [EN010131/APP/3.1] outlines the avoidance and mitigation measures embedded within the Scheme design in relation to cultural heritage. This

- c) conservation by grant-funding or some form of not for profit, charitable or public ownership is demonstrably not possible;
- d) the harm or loss is outweighed by the benefit of bringing the site back into use.

3. Proposals that would result in less than substantial harm to the significance of a designated heritage asset will only be supported where it can be demonstrated that the public benefits will outweigh any harm identified.

Non-Designated Heritage Assets

2. Proposals that will lead to harm to or loss of significance of a non-designated heritage asset will only be considered where it can be demonstrated that:

- a) the asset's architectural or historic significance is proven to be minimal; or
- b) through an up-to-date structural report produced by a suitably qualified person, the asset is not capable of viable repair; or
- c) through appropriate marketing, the asset has no viable use; or
- d) the public benefits of the scheme outweigh the loss of significance.

Archaeological sites

1. Where the 'in situ' preservation of archaeological remains is not possible or desirable, suitable provision shall be made by the developer for the excavation, recording, analysis, storage, relocation of assets and archiving, in accordance with a Written Scheme of Investigation that has been approved by the Local Planning Authority.

includes the provision of stand-offs between the Scheme and heritage assets in order to help to preserve their setting during the construction, operational and decommissioning periods. Appropriate and sensitive screening has also been developed and implemented to minimise the visual intrusion of the Scheme, while avoiding obscuring or intruding upon key views and relationships between heritage assets. Following decommissioning, the solar farm will be removed, and its impact on the setting of heritage assets reversed.

Section 7.10 of Chapter 7: Cultural Heritage of the ES

[EN010131/APP/3.1] contains a clear assessment of likely impacts and effects of the Scheme on cultural heritage. Chapter 7: Cultural Heritage of the ES **[EN010131/APP/3.1]** concludes that there will be no significant effect on designated heritage assets or their setting as a result of the Scheme.

Impacts on non-designated heritage assets are presented in Section 7.8 and 7.10 of Chapter 7: Cultural Heritage of the ES **[EN010131/APP/3.1]**.

Chapter 7: Cultural Heritage of the ES **[EN010131/APP/3.1]** sets out that archaeological evaluations were undertaken in addition to a desk-based assessment, including a geophysical survey (detailed magnetometry) of the whole Scheme and targeted trial trenching. The scope and specification of each field investigation have been set out in Written Scheme of Investigations (WSI), which were submitted for approval to the Archaeological Advisors for Lincolnshire County Council and Nottinghamshire County Council in December 2021 (detailed magnetometry) and August 2022 (trial trenching). The first phase of this, comprising geophysical (magnetometer) survey, was undertaken as agreed with the Archaeological Advisors for Lincolnshire and Nottinghamshire in February - October 2022 while the trial trenching survey was carried out in July - October 2022. The results of these surveys (ES Volume 3, Appendix 7-D: Geophysical Survey and Appendix 7-E: Trial Trench Evaluation **[EN010131/APP/3.3]**) have been incorporated into the desk-based assessment (ES Volume 3 Appendix 7-

A: Cultural Heritage Desk-based Assessment [EN010131/APP/3.3]) and the assessment of impact in this ES Chapter in Section 7.11.

Chapter 7: Cultural Heritage of the ES [EN010131/APP/3.1] states that the magnitude of impact to non-designated archaeological assets (AEC009, AEC010, AEC011, MLI125067, MLI52472;AEC013, MLI52489, MNT15983, MNT4983 and AEC014) as a result of the Scheme has been assessed as medium, resulting in a moderate adverse significance of effect, which in the absence of additional mitigation, would be significant. Additional mitigation in the form of a programme of archaeological excavation and recording is proposed, as set out in the Archaeological Mitigation Strategy [EN010131/APP/7.6]. Archaeological excavation and recording would not minimise the physical impact to these assets, as the archaeological evidence would still be removed, but would compensate for their loss by preserving them by record. This would reduce the magnitude of impact on individual assets, resulting in a residual minor adverse effect, which is not significant.

All evidence will be published, with copies of the reports deposited with the relevant Historic Environment Record.

Policy ST50: Reducing Carbon Emissions, Climate Change and Mitigation and Adaption

1. All proposals, including the change of use of existing buildings and spaces, should seek to reduce carbon and energy impacts in their design and construction in accordance with Policy ST35. Proposals should incorporate measures that address issues of climate change mitigation through:

- a) ensuring no adverse impact on local air quality;
- b) directing development towards locations that minimise the need to travel and maximise the ability to make trips by sustainable modes of transport;
- c) incorporating passive and energy efficient materials and/or technologies where appropriate;
- d) requiring compliance with relevant national building standards such as meeting BREEAM very good-excellent standards;
- e) promoting the retrofitting of existing buildings, including incorporating measures to reduce energy consumption;

Chapter 6: Climate change of the ES [EN010131/APP/3.1] presents a lifecycle greenhouse gas (GHG) impact assessment which considers the impact of GHG emissions arising over the lifetime of the Scheme on the climate. This concludes that over its 60 year operational lifetime the Scheme will produce approximately 28,802,332 MWh of electricity, with an average operational carbon intensity value of 17.98 grams of carbon dioxide equivalent per kWh (gCO_{2e}/kWh). This demonstrates the Scheme's very low carbon attributes compared to other non-renewable forms of electricity generation, providing an overall major beneficial impact in relation to the UK meeting its carbon reduction targets and therefore represents a major beneficial effect on the climate.

Table 6-19 of Chapter 6: Climate change of the ES [EN010131/APP/3.1] summarises the emissions resulting from the manufacture of materials for the construction of the Scheme. Components of the Scheme such as the BESS provide carbon saving opportunities. The BESS will provide a grid balancing function which is often performed using high-carbon intensity

- f) providing for electric vehicle charging capability and charging infrastructure in new development, and/or providing infrastructure that supports car-free living, particularly in town centres;
- g) ensuring that major development makes an appropriate financial contribution to the Bassetlaw carbon offsetting fund;
- h) making best use of available opportunities to reduce the impact of climate change on biodiversity and the natural environment by providing space for habitats and species to move through the landscape and for the operation of natural processes;
- i) minimising the use of natural resources over the development's lifetime, such as minerals and consumable products, by reuse or recycling of materials in construction, and by making the best use of existing buildings and infrastructure;

2. All new development should be designed to improve resilience to the anticipated effects of climate change. Proposals should incorporate measures that address issues of adaptation to climate change through:

- a) designing layouts so that the orientation of buildings and spaces take the opportunity to maximise solar gain;
- b) using appropriate materials that enable buildings to ventilate efficiently by day and night;
- c) adapting surface materials and drainage design to reduce the risk of flooding to land, property and people as a result of more extreme rainfall in accordance with Policy ST52;
- d) promoting water efficiency by residential development meeting the tighter Building Regulations optional requirement of 110 litres per person/per day;
- e) using integrated water management systems to manage runoff and provide a non potable water supply;
- f) providing green/blue infrastructure, and where possible, retaining existing trees and woodlands to reduce the 'urban heating effect' during warmer summers; and
- g) using urban greening methods within the design of new buildings.

power sources such as open cycle gas turbines (OCGT), so the use of a battery charged from solar PV generation can deliver a direct carbon saving relative to an OCGT.

A **Framework CEMP [EN010131/APP/7.3]** is provided as part of the DCO application which includes mitigation to reduce the GHG impact of the scheme during construction. Mitigation measures within the CEMP include:

- Adopting the Considerate Constructors Scheme (CCS) to assist in reducing pollution, including GHGs, from the Scheme by employing best practice measures which go beyond the statutory requirements; and
- Designing, constructing, and implementing the Scheme in such a way as to minimise the creation of waste and maximise the use of alternative materials with lower embodied.

Chapter 15: Other Environmental Topics of the ES **[EN010131/APP/3.1]** concludes that there are anticipated to be no significant adverse effects on air quality as a result of the construction, operation or decommissioning of the Scheme.

The Scheme has been designed to integrate with and enhance the local green infrastructure network, improving ecological connectivity across the Order limits. The initial proposed planting design, shown in **ES Volume 2: Figure 2-4 [EN010131/APP/3.2]**, has responded to the varied character by allowing views to remain open, where tall screening would not be appropriate. New planting includes:

- New native hedgerows;
- Native hedgerow enhancement, gapping up and infill planting;
- New native grassland buffer planting to form ecological corridors;
- Native linear tree belts; and
- New species rich grassland and amenity grassland mixes under the panels and along perimeter buffers. This will be

created in advance of construction so that any displaced bird populations have alternative areas of habitat available during construction.

A Framework Construction Traffic Management Plan (CTMP) is included as Appendix 13-E of the ES **[EN010131/APP/3.3]**. It outlines measures that will be included in the final CTMP to mitigate transport impact, manage demand, and improve and encourage construction staff to access the Order limits by public transport, cycling and reduce car transport to, and parking at, the Order Limits.

A Flood Risk Assessment (FRA) is provided at Appendix 9-D of the ES **[EN010131/APP/3.3]**. The FRA provides a detailed assessment of the risk of flooding to and from the Scheme (taking account of climate change) and concludes that the risk of flooding will not be increased as a result of the construction, operation or decommissioning of the Scheme.

Appendix 9-C Outline Drainage Strategy of the ES **[EN010131/APP/3.1]** and Section 7.2 of Appendix 9-D of the ES **[EN010131/APP/3.1]** states that the proposed surface water drainage network has been designed to accommodate runoff from all storms up to and including the 1% AEP +40% for climate change, which will be achieved through sustainable drainage systems (SuDS), as set out by the Appendix 9-C: Outline Drainage Strategy **[EN010131/APP/3.1]**

An Outline Landscape and Ecological Management Plan (LEMP) has been prepared **[EN010131/APP/7.10]**. This document sets out the principles for how the land will be managed throughout the operational phase, following the completion of construction. A detailed Landscape and Ecology Management Plan will be produced following the granting of the DCO and prior to the start of construction and will be secured as a Requirement attached to the DCO.

Policy ST51:
Renewable Energy
Generation

3. Outside the Area of Best Fit, development that generates, shares, transmits and/or stores zero carbon and/or low carbon renewable energy including community energy schemes will be supported and expected to demonstrate an operational and/or economic need for the development in that location, and the satisfactory resolution of all relevant site specific and cumulative impacts that the scheme could have on the area, taking into account operational and approved developments, as well as any proposed intensification to operational or approved proposals. An assessment should address cumulative visual and landscape impacts, as well as heritage; hydrology; hydrogeology; ecology; traffic and transport; noise; recreation and local amenity impacts.

4. All renewable energy development will be expected to provide details of the expected power generation based upon yield or local self-consumption to enable effective monitoring of the district's contribution to the national zero carbon targets.

5. A decommissioning programme will be required to demonstrate, the effective restoration of land and/or buildings to their original use (such as agriculture) and condition three years after cessation of operations.

The Statement of Need **[EN010131/APP/2.1]** and Section 2 of the PDAS explain that the Scheme is a substantial infrastructure asset, capable of delivering large amounts of affordable, low-carbon electricity to local and national networks. The Statement of Need demonstrates the operational need for the project, thereby according with the provision in ST51.

The ES **[EN010131/APP/3.1]** addressed all impacts of the proposal, demonstrating that there will be no significant adverse effects of the proposal except those associated with landscape and visual impacts. Cumulative impacts have also been considered and documented in ES Chapter 16. The ES covers all areas required by the policy.

ES Chapter 6 on Climate Change **[EN010131/APP/3.1]** provides detail of the anticipated capacity and yield of the development. It anticipates that the Scheme is likely to have an installed capacity of approximately 531MW and can produce approximately 26.99 TWh of electricity over its lifetime. This electricity would be produced with an average operational carbon intensity value of 17.98 grams of carbon dioxide equivalent per kWh (gCO_{2e}/kWh). This demonstrates the Scheme's very low carbon attributes compared to other non-renewable forms of electricity generation, providing an overall major beneficial impact in relation to the UK meeting its carbon reduction targets. The Scheme thereby complies with requirement '4' in Policy ST51.

In accordance with requirement '5' in policy ST51, the Scheme will be sensitively decommissioned following its operational life. The requirement for decommissioning is set out in requirement 19 of the draft DCO **[EN010131/APP/6.1]** and a Framework Decommissioning Environmental Management Plan **[EN010131/APP/7.5]** has been submitted with the Application. After decommissioning the Scheme can return to its agricultural use. In Bassetlaw the works comprise an underground grid connection and agricultural use can therefore return once construction is complete.

Policy ST52: Flood Risk and Drainage

1. All proposals are required to consider and, where necessary, mitigate the impacts of the proposed development on flood risk, on-site and off-site, commensurate with the scale and impact of the development. Proposals, including change of use applications, must be accompanied by a Flood Risk Assessment (where appropriate), which demonstrates that the development, including the access and egress, will be safe for its lifetime, without increasing or exacerbating flood risk elsewhere and where possible will reduce flood risk overall.

2. Where relevant, proposals must demonstrate that they pass the Sequential Test and if necessary the Exceptions Test in Flood Zones 2 and 3 and ensure that where land is required to manage flood risk, it is safeguarded from development.

River Ryton Flood Management Impact Zone

3. All development within the River Ryton Flood Management Impact Zone, as identified on the Policies Map, will need to demonstrate through a Design and Access Statement that they will not prejudice the delivery of a future flood management scheme for the River Ryton catchment through prior agreement with the Environment Agency.

Surface Water Flood Risk

4. All development (where appropriate) should incorporate sustainable drainage systems (SuDS) in line with national standards. These should:

- a) be informed by the Lead Local Flood Authority, sewerage company and relevant drainage board;
- b) have appropriate minimum operational standards;
- c) be managed in line with the Government's water strategy;
- d) have maintenance arrangements in place to ensure an acceptable standard of operation and management for the development's lifetime;
- e) prevent surface water discharge into the sewerage system;
- f) maximise environmental gain through: enhancing the green/blue infrastructure network, including urban greening measures, contributing to biodiversity net gain where possible, and, securing amenity benefits along with flood storage volumes;
- g) seek to reduce runoff rates in areas at risk from surface water

A FRA is provided at Appendix 9-D of the ES **[EN010131/APP/3.1]**. This demonstrates how the development passes the Sequential Test including its application at the site level.

The site selection was guided by the aim to select a site close to the grid connection but outside the areas of highest flood risk. This guided the selection of the Gate Burton site, with all areas to the west closer to the grid connection being subject to flooding.

Appendix 9-D of the ES **[EN010131/APP/3.1]** also explains that through the sequential process and design iterations the Solar and Energy Storage Park with the BESS substation, the Power Conversion Unit, and the solar PV panel arrays are located in areas with the lowest risk of flooding from any source.

The Grid Connection Corridor is predominantly located within an area of high risk of fluvial flooding (Flood Zone 3), therefore an Exception Test has been undertaken. Given that the grid connection point is located within an area at high risk of fluvial flooding it was not possible to select a grid connection route that avoided areas of high flood risk. However, given that the development will comprise an underground cable, it will not be vulnerable to flooding or increase the risk of flooding elsewhere through its installation.

During construction, the Framework CEMP **[EN010131/APP/7.3]** sets out measures to ensure the safety of staff during construction from flood risk. This includes the appointment of at least one designated Flood Warden who is familiar with the risks and remains vigilant to news reports, Environment Agency flood warnings, relevant weather warnings and water levels of the local waterway. Health and safety plans developed for construction and decommissioning activities will also be required to account for potential climate change impacts on workers, such as flooding and heatwaves. Section 7.2 of Appendix 9-D of the ES **[EN010131/APP/3.1]** states that the proposed surface water drainage network has been designed to accommodate runoff from all storms up to and including the 1% AEP +40% for climate change, which will be

flooding, and that any surface water is directed to sustainable outfalls.

achieved through sustainable drainage systems (SuDs), as set out by the Appendix 9-C: Outline Drainage Strategy **[EN010131/APP/3.1]**.

A Biodiversity Net Gain (BNG) assessment, using Defra's Metric 3.1, has been provided with the DCO application **[EN010131/APP/7.9]**. The final percentage of net gain achieved will depend on the detailed design of the Scheme, which cannot be determined with certainty at this stage. However the BNG Assessment demonstrates that the Scheme can achieve far in excess of 10% biodiversity net gain.

Appendix 9-A of the ES **[EN010131/APP/3.3]** provides a WFD Assessment. This concludes that the Scheme is compliant with the objectives of the WFD: it would not cause deterioration in status of the water bodies, and would not prevent the water bodies achieving Good Ecological Status. The Scheme also contributes to the delivery of WFD objectives.

Policy ST53: Protecting Water Quality and Management

1. In line with the objectives of the Water Framework Directive, the quantity and quality of surface and groundwater bodies will be protected and where possible enhanced in accordance with the Humber River Basin Management Plan. Development adjacent to, over or in, a main river or ordinary watercourse will be supported where proposals consider opportunities to improve the river environment and water quality by:

- a) actively contributing to enhancing the status of the waterbody through positive actions or ongoing projects;
- b) naturalising watercourse channels;
- c) improving the biodiversity and ecological connectivity of watercourses;
- d) safeguarding and enlarging river buffers with appropriate habitat in accordance with Policy ST39; and
- e) mitigating diffuse agricultural and urban pollution.

2. Proposals within a Source Protection Zone will need to demonstrate that any risk to the Sherwood Sandstone Principle Aquifer and its groundwater resources and groundwater quality

Chapter 9: Water Environment of the ES **[EN010131/APP/3.1]** takes into account the Anglian River Basin District River Basin Management Plan and Humber River Basin District River Basin Management Plan.

Appendix 9A of the ES **[EN010131/APP/3.3]** provides a WFD Assessment. This concludes that the Scheme is compliant with the objectives of the WFD: it would not cause deterioration in status of the water bodies, and would not prevent the water bodies achieving Good Ecological Status. The Scheme also contributes to the delivery of WFD objectives.

will be protected throughout the construction and operational phase of development.

3. All proposals must ensure that appropriate infrastructure for water supply, sewerage and sewage treatment, is available or can be made available at the right time to meet the needs of the development. Proposals should:

a) utilise the following drainage hierarchy:

- i. connection to a public sewer; then
- ii. package sewage treatment plant (which can be offered to the Sewerage Undertaker for adoption); then
- iii. septic tank, which will only be considered if it can be clearly demonstrated by the applicant that discharging into a public sewer is not feasible.

b) ensure that development that discharges water into a watercourse incorporates appropriate water pollution control measures;

c) ensure that drainage design take into account an appropriate climate change allowance as agreed with the relevant authority(s);

d) ensure that infiltration based SuDS incorporate appropriate water pollution control measures;

e) consider use of water recycling, rainwater and storm water harvesting, wherever feasible, to reduce demand on mains water supply.

Policy ST54: Transport Infrastructure

2. Proposals for new development which have significant transport implications that either arise from the development proposed or cumulatively with other development proposals will need to submit a Transport Assessment or a Transport Statement, and where relevant a Travel Plan alongside an application. These documents will need to take into account Nottinghamshire County Council guidance and national Planning Practice, and where appropriate, the scope should be agreed with National Highways.

3. Appropriate provision for works and/or contributions may be required towards providing 1a-i of this policy to provide an adequate level of accessibility by all modes of transport and to

Appendix 13-D of the ES **[EN010131/APP/3.3]** contains a transport Assessment, prepared in accordance with the appropriate guidance which includes the Government's Planning Practice Guidance; Travel Plans, TAs and Transport Statements in Decision Taking (2014).

The Applicant has consulted with the relevant Highways Authorities and National Highways regarding the assessment and mitigation. Comments from these stakeholders are presented in Section 13.2 of Chapter 13: Transport and Access of the ES **[EN010131/APP/3.1]**. Further detail on consultation with Local Highway Authorities is provided

mitigate the impacts of development upon the transport network. Consideration should be given to the cumulative impact of relevant development both in Bassetlaw and within neighbouring authorities, and how this links to planned infrastructure improvements. This should take into account the most recent Infrastructure Delivery Plan and Local Plan Transport Assessments, which, where relevant, will inform the scoping of the Transport Assessment and Travel Plan.

4. Where relevant, evidence obtained from a site-specific Transport Assessment or Transport Statement will inform the number and phasing of homes to be permitted on proposed development sites and will be established (and potentially conditioned) through the planning application process, in consultation with the highway authority

in the Statements of Common Ground with Lincolnshire County Council **[EN010131/APP/4.3H]** and Nottinghamshire County Council **[EN010131/APP/4.3B]** respectively.

Chapter 13: Transport and Access of the ES **[EN010131/APP/3.1]** outlines the embedded design mitigation measures in relation to traffic and transport, including HGV deliveries and staff vehicles. Chapter 13: Transport and Access of the ES **[EN010131/APP/3.1]** states that there will be no significant effects as a result of the Scheme on transport and access during any phase.

A Framework Construction Traffic Management Plan (CTMP) is included as Appendix 13-E of the ES **[EN010131/APP/3.3]**. It outlines measures that will be included in the final CTMP to mitigate transport impact, manage demand, and improve and encourage construction staff to access the Order limits by public transport, cycling and reduce car transport to, and parking at, the Order Limits.

The suitability of the access routes to the proposed site has been considered in the Transport Assessment presented in Appendix 13-D of the ES **[EN010131/APP/3.3]**, with the accesses to the Solar and Energy Storage Park and Grid Connection Corridor being selected and designed to provide safe access whilst minimising the impacts on the local area. Chapter 13: Transport and Access of the ES **[EN010131/APP/3.1]** states that there will be no significant effects as a result of the Scheme on transport and access during any phase and is considered to be in accordance with relevant national and local policy and that it avoids any adverse impacts on highway safety or any severe residual cumulative impacts on the road network.

Policy ST55: Promoting Sustainable Transport and Active Travel

1. Development that contributes towards a sustainable, safe, active transport network and offers a range of public transport and active travel choices will be supported.

A Framework Construction Traffic Management Plan (CTMP) is included as Appendix 13-E of the ES **[EN010131/APP/3.3]**. It outlines measures that will be included in the final CTMP to mitigate transport impact, manage demand, and improve and encourage construction staff to access the Order limits by public transport, cycling and reduce car transport to, and parking at, the Order Limits.

All PRow will be kept open and on their existing alignment throughout the operational phase of the Scheme. During construction, PRow will be kept open, and on their existing alignment as far as possible, with short, convenient, temporary diversions included where this is not possible. There will therefore be no significant adverse effects on PRow users.

B.4 Lincolnshire Minerals and Waste Local Plan: Core Strategy and Development Management Policies

The Lincolnshire Minerals and Waste Local Plan was adopted in June 2016 (Core Strategy and Development Management Policies Plan) and December 2017 (Site Locations Plan) and provides the criteria for considering minerals and waste development applications in Lincolnshire. The majority of the land within the Order limits, including all of the Solar and Energy Storage Park, is located outside Mineral Safeguarding Areas (MSA). However a section of Grid Connection Corridor is located within a MSA for Sand and Gravel. Therefore, the table below considers the extent to which the Scheme complies with policies within the Plan. Following further development of the project, it was confirmed with NCC and LCC that there is not a need for a standalone Mineral Safeguarding Assessment to accompany the DCO Application (see Statements of Common Ground with Bassetlaw District Council and Nottinghamshire County Council **[EN010131/APP/4.3B]** and Lincolnshire County Council **[EN010131/APP/4.3H]** respectively). There is not predicted to be any sterilisation of minerals within the MSA that the Grid Connection Corridor lies within, and the Scheme would not pose a serious hindrance to future extraction in the vicinity.

Therefore, the ‘compliance with policy’ column demonstrates that the Scheme complies with all relevant policies in the Lincolnshire Minerals and Waste Local Plan.

Relevant
Paragraph/Policy
Reference

Policy Requirement

Compliance with Policy

DM1: Presumption in favour of sustainable development

When considering development proposals, the County Council will take a positive approach that reflects the presumption in favour of sustainable development contained in the National Planning Policy Framework. It will always work proactively with applicants jointly to find solutions which mean that proposals can be approved wherever possible, and to secure development that improves the economic, social and environmental conditions in the area. Planning applications that accord with the policies in this Local Plan will be approved without delay, unless material considerations indicate otherwise. Where there are no policies relevant to the application or relevant policies are out of date at the time of making the decision then the County Council will grant permission unless material considerations indicate otherwise - taking into account whether:

- Any adverse impacts of granting permission would significantly and demonstrably outweigh the benefits, when assessed against the policies in the National Planning Policy Framework taken as a whole; or
- Specific policies in that Framework indicate that development should be restricted.

The Applicant notes the presumption in favour of sustainable development.

As established in the Statement of Need **[EN010131/APP/2.1]**, large-scale solar generation is essential to support the urgent decarbonisation of the UK's electricity sector. Large-scale solar is important not only to reduce power-related carbon emissions, but also to provide a timely next step contribution to a future generation portfolio which is capable of supporting the electrification and therefore decarbonisation of transport, heat and industrial demand.

The Applicant has considered the compliance of the Scheme with national planning policy that is likely to be considered important and relevant to the Secretary of State's decision in Section 7 of the Planning, Design and Access Statement (PDAS) **[EN010131/APP/2.2]**. Section 2 of the PDAS considers the needs and benefits of the scheme. Section 8 concludes that the benefits of the Scheme in delivering urgently needed renewable electricity generation capacity outweigh the limited impacts of the Scheme, and that it should be approved.

DM4: Historic Environment

Proposals that have the potential to affect heritage assets including features of historic or archaeological importance (whether known or unknown) should be accompanied by an assessment of the significance of the assets and the potential impact of the development proposal on those assets and their settings.

Planning permission will be granted for minerals and waste development where heritage assets, and their settings, are conserved and, where possible enhanced.

Where any impact on heritage assets is identified, the assessment should provide details of the proposed mitigation measures that would be implemented. These should include details of any conservation of assets and also of any further

The Scheme is not a minerals and waste development.

Heritage assets have been considered and where relevant assessed in Chapter 7: Cultural Heritage of the ES **[EN010131/APP/3.1]**. Section 7.7 of Chapter 7: Cultural Heritage of the ES **[EN010131/APP/3.1]** describes the significance of these assets. Designated heritage assets and non-designated heritage assets with archaeological significance are identified in Chapter 7: Cultural Heritage of the ES **[EN010131/APP/3.1]**. Section 7.7 of Chapter 7: Cultural Heritage of the ES **[EN010131/APP/3.1]** describes these assets and their significance.

Section 7.9 of Chapter 7: Cultural Heritage of the ES **[EN010131/APP/3.1]** outlines the avoidance and mitigation measures embedded within the Scheme design in relation to cultural heritage. This includes the provision of stand-offs between the Scheme and heritage assets in order to help to preserve their setting during the construction,

investigation and recording of heritage assets to be lost and provision for the results to be made publicly available.

Where adverse impacts are identified planning permission will only be granted for minerals and waste development provided that:

- the proposal cannot reasonably be located on an alternative site to avoid harm; and
- the harmful aspects can be satisfactorily mitigated; or
- there are exceptional overriding reasons which outweigh the need to safeguard the significance of heritage assets which would be harmed.

operational and decommissioning periods. Appropriate and sensitive screening has also been developed and implemented to minimise the visual intrusion of the Scheme, while avoiding obscuring or intruding upon key views and relationships between heritage assets. Following decommissioning, the solar farm will be removed, and its impact on the setting of heritage assets reversed.

Section 7.10 of Chapter 7: Cultural Heritage of the ES

[EN010131/APP/3.1] contains a clear assessment of likely impacts and effects of the Scheme on cultural heritage. Chapter 7: Cultural Heritage of the ES **[EN010131/APP/3.1]** concludes that there will be no significant effect on designated heritage assets or their setting as a result of the Scheme.

Impacts on non-designated heritage assets are presented in Section 7.8 and 7.10 of Chapter 7: Cultural Heritage of the ES **[EN010131/APP/3.1]**.

Chapter 7: Cultural Heritage of the ES **[EN010131/APP/3.1]** sets out that archaeological evaluations were undertaken in addition to a desk-based assessment, including a geophysical survey (detailed magnetometry) of the whole Scheme and targeted trial trenching. The scope and specification of each field investigation have been set out in Written Scheme of Investigations (WSI), which were submitted for approval to the Archaeological Advisors for Lincolnshire County Council and Nottinghamshire County Council in December 2021 (detailed magnetometry) and August 2022 (trial trenching). The first phase of this, comprising geophysical (magnetometer) survey, was undertaken as agreed with the Archaeological Advisors for Lincolnshire and Nottinghamshire in February - October 2022 while the trial trenching survey was carried out in July - October 2022. The results of these surveys (ES Volume 3, Appendix 7-D: Geophysical Survey and Appendix 7-E: Trial Trench Evaluation **[EN010131/APP/3.3]**) have been incorporated into the desk-based assessment (ES Volume 3 Appendix 7-A: Cultural Heritage Desk-based Assessment **[EN010131/APP/3.3]**) and the assessment of impact in this ES Chapter in Section 7.11.

Chapter 7: Cultural Heritage of the ES [EN010131/APP/3.1] states that the magnitude of impact to non-designated archaeological assets (AEC009, AEC010, AEC011, MLI125067, MLI52472;AEC013, MLI52489, MNT15983, MNT4983 and AEC014) as a result of the Scheme has been assessed as medium, resulting in a moderate adverse significance of effect, which in the absence of additional mitigation, would be significant. Additional mitigation in the form of a programme of archaeological excavation and recording is proposed, as set out in the Archaeological Mitigation Strategy [EN010131/APP/7.6]. Archaeological excavation and recording would not minimise the physical impact to these assets, as the archaeological evidence would still be removed, but would compensate for their loss by preserving them by record. This would reduce the magnitude of impact on individual assets, resulting in a residual minor adverse effect, which is not significant.

All evidence will be published, with copies of the reports deposited with the relevant Historic Environment Record.

M2: Providing for an Adequate Supply of Sand and Gravel

The County Council will ensure a steady and adequate supply of sand and gravel for aggregate purposes by making provision over the period 2014 - 2031 (inclusive) for the extraction of 42.66 million tonnes of sand and gravel (2.37 million tonnes per annum). This will be divided between the three Production Areas (as shown on the Key Diagram) as follows:

- 18.00 million tonnes (1.00 million tonnes per annum) from the Lincoln/ Trent Valley Production Area;
- 9.00 million tonnes (0.50 million tonnes per annum) from the Central Lincolnshire Production Area; and
- 15.66 million tonnes (0.87 million tonnes per annum) from the South Lincolnshire Production Area.

The County Council will make provision for the release of sand and gravel reserves in the Site Locations Document. This will give priority to extensions to existing Active Mining Sites. New quarries will be allocated where they are required to replace existing Active

Part of the Grid Connection Corridor is also located within a Mineral Safeguarding Area for Sand and Gravel. However it was confirmed with NCC and LCC that there is not a need for a standalone Mineral Safeguarding Assessment to accompany the DCO Application. This is on the basis that no problems are foreseen in terms of sterilisation, as there would be no permanent above ground infrastructure within previously undisturbed land in the grid connection route. It was also agreed that wherever possible, the route of the Grid Connection Corridor follow existing corridors/linear features (field boundaries), to minimise sterilisation of the MSA for sand and gravel.

Section 7.11 of the Planning Statement [EN010131/APP/2.2] considers the impact of the Scheme on mineral resources and compliance with relevant mineral policies in detail.

Mining Sites that will become exhausted during the Plan period and where they are located in the relevant Areas of Search as shown on the Policies Map (Figure 5), namely:

- west of Lincoln and north/ south of Gainsborough for the Lincoln/ Trent Valley Production Area;
- Tattershall Thorpe for the Central Lincolnshire Production Area; and
- West Deeping/ Langtoft for the South Lincolnshire Production Area.

Policy M11:
Safeguarding of Mineral Resources

Sand and gravel, blown sand and limestone resources that are considered to be of current or future economic importance within the Minerals Safeguarding Areas shown on Figure 1, together with potential sources of dimension stone for use in building and restoration projects connected to Lincoln Cathedral/ Lincoln Castle within the areas shown on Figure 2, and chalk resources included on Figure 3, will be protected from permanent sterilisation by other development.

Applications for non-minerals development in a minerals safeguarding area must be accompanied by a Minerals Assessment. Planning permission will be granted for development within a Minerals Safeguarding Area provided that it would not sterilise mineral resources within the Mineral Safeguarding Areas or prevent future minerals extraction on neighbouring land. Where this is not the case, planning permission will be granted when:

- the applicant can demonstrate to the Mineral Planning Authority that prior extraction of the mineral would be impracticable, and that the development could not reasonably be sited elsewhere; or
- the incompatible development is of a temporary nature and can be completed and the site restored to a condition that does not inhibit extraction within the timescale that the mineral is likely to be needed; or
- there is an overriding need for the development to meet local economic needs, and the development could not reasonably be sited elsewhere; or

Part of the Grid Connection Corridor is also located within a Mineral Safeguarding Area for Sand and Gravel. However it was confirmed with NCC and LCC that there is not a need for a standalone Mineral Safeguarding Assessment to accompany the DCO Application. This is on the basis that no problems are foreseen in terms of sterilisation, as there would be no permanent above ground infrastructure within previously undisturbed land in the grid connection route. It was also agreed that wherever possible, the route of the Grid Connection Corridor follow existing corridors/linear features (field boundaries), to minimise sterilisation of the MSA for sand and gravel.

Section 7.11 of the Planning Statement **[EN010131/APP/2.2]** considers the impact of the Scheme on mineral resources and compliance with relevant mineral policies in detail.

-
- the development is of a minor nature which would have a negligible impact with respect to sterilising the mineral resource; or
 - the development is, or forms part of, an allocation in the Development Plan.

Exemptions

This policy does not apply to the following:

- Applications for householder development
- Applications for alterations to existing buildings and for change of use of existing development, unless intensifying activity on site
- Applications for Advertisement Consent
- Applications for Listed Building Consent
- Applications for reserved matters including subsequent applications after outline consent has been granted
- Prior Notifications (telecommunications; forestry; agriculture; demolition) • Certificates of Lawfulness of Existing or Proposed Use or Development (CLEUDs and CLOPUDs)
- Applications for Tree Works

W1: Future requirements for new waste facilities

The County Council will, through the Site Locations document, identify locations for a range of new or extended waste management facilities within Lincolnshire where these are necessary to meet the predicted capacity gaps for waste arisings in the County up to and including 2031, as presented in Table 9, subject to any new forecasts published in the Council's Annual Monitoring Reports.

As detailed in Section 15.8 Waste and Recycling of Chapter 16: Other Environmental Topics of the ES **[EN010131/APP/3.1]**, waste arisings will be prevented where possible.

Opportunities to re-use material resources will be sought where practicable. Where re-use and prevention are not possible, waste arisings will be managed and detailed in a Site Waste Management Plan (SWMP). Requirement 12 on the draft DCO **[EN010131/APP/6.1]** secures production of a Waste Management Plan, which would be an appendix to the Construction Environmental Management Plan.

B.5 Nottinghamshire Minerals Local Plan adopted March 2021

The Nottinghamshire Local Plan was adopted in March 2021 and provides the criteria for considering minerals and waste development applications in Nottinghamshire. The majority of the land within the Order limits, including all of the Solar and Energy Storage Park, is located outside Mineral Safeguarding Areas (MSA). However a section of Grid Connection Corridor is located within a MSA for Sand and Gravel. Therefore, the table below considers the extent to which the Scheme complies with policies within the Plan. Following further development of the project, it was confirmed with NCC and LCC that there is not a need for a standalone Mineral Safeguarding Assessment to accompany the DCO Application. There is not predicted to be any sterilisation of minerals within the MSA that the Grid Connection Corridor lies within, and the Scheme would not pose a serious hindrance to future extraction in the vicinity.

Therefore, the ‘compliance with policy’ column demonstrates that the Scheme complies with all relevant policies in the Nottinghamshire Minerals Local Plan.

Relevant Paragraph/Policy Reference	Policy Requirement	Compliance with Policy
Policy SP7: Minerals Safeguarding, Consultation Areas and Associated Minerals Infrastructure	<p>Minerals Safeguarding Areas</p> <ol style="list-style-type: none">1. Locally and nationally important mineral resources, permitted reserves, allocated sites and associated minerals infrastructure will be safeguarded from needless sterilisation by non-minerals development through the designation of minerals safeguarding areas as identified on the Policies Map.2. Non-minerals development within minerals safeguarding areas will have to demonstrate that mineral resources will not be needlessly sterilised as a result of the development and that the development would not pose a serious hindrance to future extraction in the vicinity.	<p>Part of the Grid Connection Corridor is also located within a Mineral Safeguarding Area for Sand and Gravel. However it was confirmed with NCC and LCC that there is not a need for a standalone Mineral Safeguarding Assessment to accompany the DCO Application. This is on the basis that no problems are foreseen in terms of sterilisation, as there would be no permanent above ground infrastructure within previously undisturbed land in the grid connection route. It was also agreed that wherever possible, the route of the Grid Connection Corridor follow existing corridors/linear features (field boundaries), to minimise sterilisation of the MSA for sand and gravel.</p> <p>Section 7.11 of the Planning Statement [EN010131/APP/2.2] considers the impact of the Scheme on mineral resources and compliance with relevant mineral policies in detail.</p>

3. Where this cannot be demonstrated, and where there is a clear and demonstrable need for the non-minerals development, prior extraction will be sought where practicable.

Minerals Consultation Areas

4. District and Borough Councils within Nottinghamshire will consult the County Council as Minerals Planning Authority on proposals for non-minerals development within the designated Mineral Consultation Area, as shown on the Policies Map.

5. The Minerals Planning Authority will resist inappropriate non-minerals development within the Minerals Consultation Areas.

6. Where non-minerals development would cause an unacceptable impact on the development, operation or restoration of a permitted minerals site, mineral allocation, or associated minerals infrastructure, suitable mitigation should be provided by the applicant prior to the completion of the development.

Policy MP2c: Sand and Gravel Provision

1. An adequate supply of sand and gravel will be identified to meet expected demand over the plan period from:

a) The extraction of remaining reserves at the following permitted quarries:

The proposed cabling routes for the Grid Connection Corridor at scoping and during non-statutory consultation ran in close proximity to the sand and gravel sit at Sturton Le Steeple. As illustrated in Figure 1-1 Scheme Location of Chapter 1: Introduction [EN010131/APP/3.2] the Grid Connection Corridor now runs approximately 4.5km to the south of the site.

B.6 Tresswell and Cottam Neighbourhood Plan made February 2019

The Tresswell and Cottam Neighbourhood Plan was formally made by Bassetlaw District Council, following the Referendum held on 21 February 2019. The Neighbourhood Plan forms part of the statutory Local Development Plan for Bassetlaw and contains policies that could be considered important and relevant, therefore the table below considers the extent to which the Scheme complies with these policies. The Plan area covers the settlements of Tresswell and Cottam, Cottam Power Station and land on the western bank of the River Trent. Given that the development within Bassetlaw comprises an underground grid connection and connection works at the

Cottam National Grid Substation with very few impacts on the surrounding area, the majority of policies in the document are not relevant to the development proposed.

The ‘compliance with policy’ column demonstrates that the Scheme complies with all relevant policies in the Tresswell and Cottam Neighbourhood Plan.

Relevant Paragraph/Policy Reference	Policy Requirement	Compliance with Policy
Policy 6: Design Principles	<p>1. All new development within Tresswell and Cottam will be designed and comprise of development and spaces that are high quality and distinctive to the Parish. To ensure that growth across the Plan Area is delivered in a coherent and coordinated way, development should positively address the relevant principles in the Tresswell and Cottam Character Assessment for each of the identified character areas;</p> <p>All development should:</p> <ul style="list-style-type: none"> a) take inspiration from the identified character area concerned, as identified within the most up-to-date Tresswell and Cottam Character Assessment; b) be designed to sustain significant views that contribute to the character and appearance of the area. These views include (but not limited to) those identified on figures 8 and 5, and applications shall include an assessment of the impact of the proposal on the positive qualities of such views, explaining the rationale of design choices used; c) respect existing plot boundaries, ratios, orientation and the historic or traditional forms and grain of development within its character area; d) respect the predominant materials used in the immediate area which include red-brick and clay pantile; e) reflect high quality standards and, where possible, reflect local design references in both the natural and built environment and reflect and reinforce local distinctiveness; 	<p>Good design has been a key consideration from the outset. The LVIA has informed the iterative design process, which in turn has guided development of the Outline Design Principles [EN010131/APP/2.3] to provide confidence that the Scheme detailed design will respect local context and minimise impacts. The Scheme layout and design has been developed in response to policy requirements, published landscape character assessment guidance and fieldwork analysis. The design mitigation has been embedded in the Scheme to minimise effects on landscape character and visual amenity as shown in the Outline Landscape and Ecological Management Plan [EN010131/APP/7.10] and Figure 10-23: Outline Landscape Masterplan of the ES [EN010131/APP/3.2].</p> <p>The Grid Connection Corridor crosses the Neighbourhood Plan Area via an underground cable and therefore the introduction of new tall linear features in the landscape will be avoided.</p> <p>There are several PRoW within or abutting the Scheme. These are shown in Figure 2.2 of the ES [EN010131/APP/3.2] and detailed in Chapter 12: Socio-Economics and Land Use of the ES [EN010131/APP/3.1].</p> <p>The PRoWs included within the Neighbourhood Plan area are:</p> <ul style="list-style-type: none"> - NT Cottam FP1 - NT Cottam FP3

f) be in-keeping with the height of neighbouring properties and demonstrate how heights of the development will not be over-bearing or dominant in the existing street-scene;

g) protected green spaces from unsympathetic development where this would have an adverse impact on the spacious character of the existing site and the area;

h) take inspiration from the existing predominant boundary treatments appropriate to the immediate buildings and wider character of that part of the village. These consist of low brick walls, low wooden fences or hawthorn hedging;

2. Proposals affecting the listed buildings and/ or its setting will be expected to preserve and, if possible, enhance the listed building and its setting. Proposals affecting non-designated heritage assets will be judged against the scale of harm or loss to the significance of the asset.

3. Proposals should maximise opportunities for solar gain through the orientation of the building(s). Any incorporation of renewable energy materials should consider their impact on both the character of the building and the wider area.

4. Proposals that do not have regard to the key features of the character area concerned and would result in demonstrable harm to its key features and attributes, will not be supported.

- NT|Cottam|RB4
- NT|Treswell|FP4
- NT|Treswell|FP5

Visual effects on users of the above PRoW resulting from construction works are considered to range between medium to high and their significance moderate – major adverse. During operation, visual effects are considered very low and their significance negligible neutral.

Visual effects resulting from decommissioning will not be similar to construction works as buried cables will either be removed or left in situ. Open cut trenching will therefore be minimised resulting in visual effects becoming localised to selected areas. In those areas temporary visual effects will range between medium to high and their significance moderate – major adverse. Areas previously affected by construction works but which are not required to be re-used during decommissioning works will experience either no visual effects or a low-very low magnitude due to partial visibility in the distance. Their significance is considered to range from minor to negligible / neutral.

Visitors of Sundown Adventureland east of Treswell will not experience significant effects due to the distance from the site and screening provided by intervening vegetation and landform.

As detailed in Section 12.9 of Chapter 12: Socio-Economics of the ES **[EN010131/APP/3.1]**, appropriate measures to mitigate temporary impacts on users of PRoW during the construction and decommissioning phases have been proposed. PRoW will be managed throughout the construction phase to ensure that routes can continue to be used as safely as possible, and where diversions are required, these would all be temporary. These measures are also set out in Appendix 13-E Framework Construction Traffic Management Plan (CTPM) **[EN010131/APP/3.2]**.

As concluded in Chapter 7: Cultural Heritage of the ES **[EN010131/APP/3.1]** there will be no significant effects on designated

heritage assets or their setting within the neighbourhood plan area as a result of the Scheme

B.7 Rampton and Woodbeck Neighbourhood Plan made 2019

The Rampton and Woodbeck Neighbourhood Plan was formally made by Bassetlaw District Council, following the Referendum held on 6 May 2021. The Neighbourhood Plan forms part of the statutory Local Development Plan for Bassetlaw and contains policies that could be considered important and relevant by the Applicant, therefore the table below considers the extent to which the Scheme complies with these policies. The Plan area covers the whole Rampton and Woodbeck Parish, including the settlements of Rampton and Woodbeck and covers the surrounding countryside. Given that the development within Bassetlaw comprises an underground grid connection and connection works at the Cottam National Grid Substation, with very few impacts on the surrounding area, the majority of policies in the document are not relevant to the development proposed.

The ‘compliance with policy’ column demonstrates that the Scheme complies with all relevant policies in the Rampton and Woodbeck Neighbourhood Plan.

Relevant Paragraph/Policy Reference

Policy Requirement

Compliance with Policy

Policy 5: Development Principles

1. New developments, including the extension to and alteration of existing buildings, should create places of distinct character based upon an appreciation of the site and its surrounding area by responding positively to its natural and built context. Development proposals should be designed to take account of the following development principles insofar as they relate to the scale, nature and location of the development in the neighbourhood area:

The Grid Connection Corridor crosses the Neighbourhood Plan Area via an underground cable and therefore the introduction of new tall linear features in the landscape will be avoided.

PRoWs within, along or adjacent to the Scheme in the neighbourhood plan area include:

- a) development should take inspiration from the identified key characteristics and features as identified within the Rampton and Woodbeck Character Assessment;
- b) development should be designed to safeguard “views in both Rampton and Woodbeck” that contribute to the character and appearance of the area. These views include (but not limited to) the views, as identified on Maps 6 and 7, and applications shall include an assessment of the impact of the proposal on the positive qualities of such view(s), explaining the rationale of design choices used;
- c) development should respect existing plot boundaries, ratios, orientation and the historic or traditional forms and grain of development within its character area;
- d) development should respect the predominant materials used in the area;
- e) architectural design should reflect high quality standards and, where possible, reflect local design references in both the natural and built environment and reflect and reinforce local distinctiveness;
- f) the height of new buildings should be in-keeping with the height of neighbouring properties and demonstrate how heights of the development will not be over-bearing or dominant in the existing street-scene;
- g) existing private gardens in Woodbeck, should be protected from unsympathetic development where this would have an adverse impact on the spacious character of the existing properties within the settlement; and
- h) the development respects the character of the historic and distinct walling as identified on Map 6

- NT|Rampton|BOAT13 (Byway Open to All Traffic), along Torksey Ferry Road, is located south of Cottam Power Station. Approximately 1.3km are located within the Grid Connection Corridor;
- NT|Rampton|FP5 (footpath) starts east of the village of Rampton and links up with NT|Treswell|FP4 before it joins up with NT|Treswell|FP5 at the western boundary of Cottam Power Station. It runs for approximately 350m within the Grid Connection Corridor;
- NT|Rampton|FP20 (footpath) extends south from Torksey Ferry Road and joins the Order limits at Torksey Road; and
- NT|Rampton|BOAT12 (Byway Open to All Traffic) extends south from Torksey Ferry Road along Shortleys Road and joins the Order limits at Torksey Road.

Visual effects on PRow users resulting from construction works are considered to range between medium to high and their significance moderate – major adverse. Views from PRow along and across the Grid Connection Corridor and the wider PRow network beyond the Order limits will not experience significant effects resulting from operation at Year 1.

Visual effects resulting from decommissioning will not be similar to construction works as buried cables will either be removed or left in situ. Open cut trenching will therefore be minimised resulting in visual effects becoming localised to selected areas. In those areas temporary visual effects will range between medium to high and their significance moderate – major adverse. Areas previously affected by construction works but which are not required to be re-used during decommissioning works will experience either no visual effects or a low-very low magnitude due to partial visibility in the distance. Their significance is considered to range from minor to negligible / neutral.

Policy 6: Heritage Assets in Rampton and Woodbeck

1. Development will be supported where it conserves or enhances the significance of designated and non-designated heritage assets and their setting, through high quality and sensitive design, taking into consideration appropriate scale, siting and materials.

As concluded in Chapter 7: Cultural Heritage of the ES **[EN010131/APP/3.1]** there will be no significant effects on designated heritage assets or their setting within the neighbourhood plan area as a result of the Scheme.

Chapter 7: Cultural Heritage of the ES **[EN010131/APP/3.1]**

states that the magnitude of impact to non-designated archaeological asset Romano-British settlement site (AEC014) as a result of the Scheme has been assessed as medium, resulting in a moderate adverse significance of effect, which in the absence of additional mitigation, would be significant. Additional mitigation in the form of a programme of archaeological excavation and recording is proposed, as set out in the Archaeological Mitigation Strategy [EN010131/APP/7.6]. Archaeological excavation and recording would not minimise the physical impact to these assets, as the archaeological evidence would still be removed, but would compensate for their loss by preserving them by record. This would reduce the magnitude of impact on individual assets, resulting in a residual minor adverse effect, which is not significant.

In summary, the Scheme will not result in adverse impacts designated and non-designated heritage assets in the neighbourhood plan area, and therefore complies with this policy.

Policy 10: The Protection of the Parish Landscape

1. Insofar as they relate to the scale, nature and the location of the proposed development, proposals for new development within the wider Parish should demonstrate the following:

- a) Well-designed proposals which seek to enhance distinctive character, in particular the soft edges of the village, will be supported. All proposals for new development should integrate into the village's landscape setting and avoid creating unsatisfactory, overly hard edges to the villages. The retention of existing planting and vegetation will be particularly supported;
- b) Proposals which incorporate soft landscaping on boundaries will be supported in general, and southern and eastern boundaries of the Woodbeck Estate in particular;
- c) Development proposals should be designed to maintain the rural appearance of the villages' approaches through sensitive siting and the retention of existing roadside planting and important frontages, as identified on Map 11;
- d) Outside of the established settlements of Rampton and Woodbeck, new development forms, such as agricultural

The Grid Connection Corridor crosses the Neighbourhood Plan Area via an underground cable and therefore the introduction of new tall linear features in the landscape will be avoided. This will not therefore impact the parish landscape following the construction period.

The Cottam Wetlands LWS identified in Map 12 of the neighbourhood plan will not be impacted by the Scheme.

buildings, should be carefully sited and designed so as to minimise their visual impact on the landscape setting. New development should explore opportunities to utilise existing tree planting to partially screen the development and help it better integrate into its setting and/or introduce new tree planting as a means to mitigate against any potential harmful impacts on the landscape character;

e) The areas identified as local wildlife sites, as identified on Map 12 are safeguarded as areas for nature conservation. Development at these sites will not be supported unless other material considerations outweigh those of nature conservation or that its impact can be appropriately mitigated against on a new or adjoining site.

B.8 Lea Neighbourhood Development Plan made January 2018

The Lea Neighbourhood Development Plan was made by West Lindsey District Council, on 22 January 2018. The Neighbourhood Plan forms part of the statutory Local Development Plan for West Lindsey and contains policies that could be considered important and relevant by the Applicant, therefore the table below considers the extent to which the Scheme complies with these policies. The Plan area covers Lea Parish, including the settlement of Lea and surrounding countryside.

The ‘compliance with policy’ column demonstrates that the Scheme complies with all relevant policies in the Lea Neighbourhood Development Plan.

Relevant Paragraph/Policy Reference	Policy Requirement	Compliance with Policy
Policy 4: Design and Character	<p>All new developments must deliver good quality design. In order to achieve this all new development, where relevant, should accord with the following local design principles:</p> <p>a) should respect the linearity of settlement and the way the streets and spaces relate to the underlying land form;</p>	<p>The northern limits of the Solar and Energy Storage Park extend to the borders of the neighbourhood plan area. Embedded mitigation measured include to reduce the visual impact include:</p> <ul style="list-style-type: none"> - Careful siting of the scheme in the landscape with offsets from existing residential areas, vegetation patterns and road networks; - Conserving existing vegetation patterns; and

- b) recognise and reinforce the distinct local character in relation to scale, mass, form, character, density, landscape setting and materials;
- c) the scale of the development should be limited to a maximum of 2 storey throughout the development site to reflect local characteristics;
- d) provide a mix of housing types and tenures that suit local housing needs;
- e) provide clear and appropriate boundary treatments to provide screening;
- f) sustainable urban drainage should be incorporated into the design of the schemes and it must not cause any surface or foul water problems to existing properties;
- g) respect and protect listed buildings and their settings and the key views towards these important structures are retained;
- h) the views into and out of the settlement as identified in Appendix B should be retained; and
- i) sufficient parking must be provided for residents and visitors within the developments plot.

- Creating new Green Infrastructure (i.e., vegetation planting) within the Order Limits with extensive planting proposals.

These elements of good design are secured in the Outline Design Principles **[EN010131/APP/2.3]**.

The Scheme will have no adverse impact on heritage assets in the neighbourhood plan area.

Due to the location of the Scheme in relation to the plan area embedded mitigation, the Scheme accords with this policy.

Policy 5: Wider Green Infrastructure

Where appropriate development proposals should contribute towards the protection, enhancement and provision of new green infrastructure, public spaces and linkages for benefit of biodiversity and the community.

Developments that propose a 'net' loss of existing Green Infrastructure nodes, spaces and linkages will only be supported where it has been demonstrated that an appropriate alternative scheme will both benefit the community and the local environment without having any detrimental impact.

In line with the requirements set out in the most up to date local plan new development proposals should provide: a) functional on site open space and/or sports facilities; or b) contributions towards new or improved facilities elsewhere within the village.

Chapter 8:Ecology of the ES **[EN010131/APP/3.1]** identifies the Lea Marsh SSSI within 2km of the Order Limits. There would be no adverse effects on these SSSIs given the nature of the development and the separation distance.

Two areas of ancient woodland were identified within 2km of the Order limits. These are:

- Stag Wood – approximately 190m to the north of the Order limits;
- Thurlby / Castors Wood – approximately 825m to the north of the Order limits.

As concluded in Chapter 8, there will be no loss of ancient woodland or veteran trees as a result of the Scheme.

The Thurlby Wood LWS is contiguous with Caistor's Wood to the north at approximately 420 m north of the Order limits. As concluded in Chapter 8, The construction of the Scheme will not directly impact on habitat within the site. There will be no fragmentation of habitats, or of populations of species using habitats within the LWS during construction.

As illustrated above, the Scheme will have not result in a loss of existing green infrastructure and therefore accords with this policy.

B.9 Sturton by Stow and Stow Neighbourhood Development Plan made July 2022

The Sturton by Stow and Stow Neighbourhood Development Plan was as formally adopted by West Lindsey District Council on the 4 July 2022. The Neighbourhood Plan forms part of the statutory Local Development Plan for West Lindsey and contains policies that could be considered important and relevant by the Applicant, therefore the table below considers the extent to which the Scheme complies with these policies. The plan area covers the settlements of Stow and Sturton by Stow to the southeast of the Order Limits (Energy and Storage Park).

The 'compliance with policy' column demonstrates that the Scheme complies with all relevant policies in the Sturton by Stow and Stow Neighbourhood Development Plan.

Relevant Paragraph/Policy Reference

Policy Requirement

Compliance with Policy

Policy 1: Sustainable Development

1. To support and enhance the sustainability of the Parishes of Sturton by Stow and Stow, development will be supported where it is consistent with the following principles as appropriate to the proposal's scale, nature and location within the neighbourhood area:
 - a. new homes are of size, type and tenure that meet local housing requirements;
 - b. through local provision of commercial, public and community services of suitable types and scale, Sturton by Stow and Stow's residents are enabled to meet a large proportion of their daily requirements within the Parishes;
 - c. any necessary physical or social infrastructure or improvements to such infrastructure that may be required to make a particular development proposal acceptable in planning terms are delivered in association with that development;
 - d. development outside the existing or planned built-up areas of Sturton by Stow and Stow villages will only be supported if it:
 - i. is required for agricultural purposes; or
 - ii. is required to support an existing agricultural or non-agricultural use; or
 - iii. makes sustainable use of a previously developed site; or
 - iv. is infrastructure provision required by a utility provider and consistent with the objectives and policies of this Neighbourhood Plan;
 - e. development does not increase the risk of flooding and should reduce such risk where possible;
 - f. developments in Sturton by Stow and Stow are located, designed, constructed and operated so as to be consistent with the national target of bringing the United Kingdom's greenhouse gas emissions to net zero by 2050;

Whilst the Scheme is not located within the neighbourhood plan area, as explained in the Statement of Need **[EN010131/APP/2.1]**, and summarised in Section 4 of the PDAS, the Scheme is a substantial infrastructure asset, capable of delivering large amounts of low-carbon electricity to help meet the UK's commitments to decrease carbon emissions and reach net zero by 2050. The Scheme will deliver a substantial reduction in greenhouse gas emissions over its lifetime, as explained by Chapter 6: Climate Change, of the ES **[EN010131/APP/3.1]**. In addition, it has taken other opportunities to provide enhancements, including by providing substantial BNG and habitat creation. As such, the Scheme will contribute to the overall objectives of this policy.

g. development is located and designed so that any potential negative impact on climate change such as increased carbon emissions or flood risk is mitigated.

h. developments should incorporate clear measures for adaptation and resilience to climate change.

Policy 5: Delivering Good Design

1. As appropriate to their scale, nature and location, developments should demonstrate good quality design and respect the character and appearance of the surrounding area. All development proposals will be assessed to ensure that they effectively address the following matters, as described in detail in each Character Area chapter of the Neighbourhood Profile:

- a. siting and layout;
- b. density, scale, form and massing;
- c. detailed design and materials;
- d. landscaping and streetscape.

2. Development proposals will be supported if it is demonstrated that their design solutions:

- a. apply principles of good design to ensure that both neighbouring users and occupiers of the proposed development will benefit from reasonable standards of amenity, unimpaired by unacceptable overlooking, loss of privacy, loss of light, pollution (including contaminated land, light pollution or emissions), odour, noise and other forms of disturbance;
- b. promote safe and secure neighbourhoods, with natural surveillance and protection, following Secure by Design principles;
- c. minimise the waste of resources (e.g. electricity, gas and water) and promote renewable energy generation and energy efficiency, minimise risk of flooding, the design of all aspects of the development should mitigate for climate change impacts and incorporate climate change adaptation and resilience measures that ensure there is no increase in carbon emissions (preferably a reduction), they promote renewable energy generation and energy efficiency and do not increase the risk of local and nearby flooding (including the use of Sustainable Urban Drainage Solutions, permeable surfaces etc).;

Whilst no components of the Scheme will be situated within the neighbourhood plan area, good design has been a key consideration from the outset. The LVIA has informed the iterative design process, guided by the Outline Design Principles **[EN010131/APP/2.3]** and in response to policy requirements, published landscape character assessment guidance and fieldwork analysis. With reference to the Outline Landscape and Ecological Management Plan **[EN010131/APP/7.10]** and Figure 10-23: Outline Landscape Masterplan of the ES **[EN010131/APP/3.2]**, the design mitigation has been embedded in the Scheme to minimise effects on landscape character and visual amenity.

The overall objective of the landscape design is to integrate the Scheme into its landscape setting and avoid or minimise adverse landscape and visual effects as far as practicable. The design has been developed in collaboration with the wider design team and other specialists to achieve a solution that achieves this objective whilst maximising opportunities to deliver net gains in biodiversity. Accordingly, the landscape design aims to achieve the following:

- To integrate the Scheme into the existing landscape pattern as far as possible by retaining and following existing features, including vegetation, where practicable;
- To replace vegetation lost because of construction of the Scheme through areas of new planting;
- To filter and screen more prominent components of the Scheme in views from visual receptors; and
- To apply appropriate offsets to residential properties to mitigate/reduce views of the Scheme in views from visual receptors.

The Scheme will have no adverse impacts on heritage assets within the plan area.

d. avoid adversely impacting on Heritage Assets listed in Policy 6 and/or the Protected Views of Policy 9

e. ensure off-street vehicle and cycle parking is adequate for the needs of the proposed development (ensuring that where garages are proposed, they are able to accommodate a vehicle leaving sufficient space for the driver to step in and out of the vehicle);

f. where practicable, provide for the introduction of electric car charging points in off-street parking spots;

g. promote safe access by vehicles, pedestrians, wheelchair users and cyclists, and promote connectivity across and around the development for pedestrians, pushchairs, wheelchair users, cyclists and mobility vehicles;

h. will secure as many green lights and as few red lights as practicable against Building for A Healthy Life design code.¹⁰

3. All development proposals will need to consider the following aspects in terms of infrastructure provision and impact on community facilities:

a. ensuring that infrastructure (gas, electricity, water, drainage and sewerage, internet, road capacity and parking) is adequate for each new development, or that firm, approved and funded plans are in place for delivery in a timely manner, to serve the development without overall unacceptable impact on Sturton by Stow and Stow;

b. having no overall unacceptable impact on existing community services, and, where necessary, delivering additional ones to meet any need created by the development;

c. having no overall unacceptable impact on existing outdoor play areas and open amenity space and where necessary deliver additional ones;

d. ensuring that, taking account of on-street parking, streets are sufficiently wide to allow for emergency vehicles to proceed in a safe and acceptable manner.

It is therefore considered that the Scheme accords with this policy.

Policy 6: Historic Environment

1. Proposed developments will be supported where they preserve or enhance the character or appearance of the historic settlements, listed buildings and their settings and any features of

As detailed in Figure 7-1 and Figure 7-2 of ES Chapter 7: Cultural Heritage, designated and non-designated assets in the neighbourhood plan area have been considered.

special architectural or historic interest, including locally important heritage assets, all as identified in Policy Map 6.

2. When considering the impact of a proposed development on the significance of a designated and non-designated heritage asset (as shown on Policy Map 6), great weight will be given to the asset's conservation. The more important the asset, the greater the weight will be.

Chapter 7: Cultural Heritage of the ES [EN010131/APP/3.1] concludes that there will be no significant effect on designated heritage and non-designated assets relevant to this policy or their setting as a result of the Scheme.

Policy 9: Protected views

The Plan identifies Protected Views as shown on Policy Maps 9.1 and 9.2. Development proposals should be located and designed to take account of the identified Protected Views and, where practicable, to enhance or provide greater accessibility to the views concerned. Development proposals which would have an unacceptable impact on a Protected View will not be supported.

No Protected Views relevant to this policy will be impacted by the Scheme.

Policy 12: Environmental Protection

1. Development proposals will be supported where the primary objective is to conserve or enhance biodiversity or geodiversity of the environment.

2. All developments, projects and activities will be supported which:

- a. provide a practicable level of protection to legally protected sites and species;
- b. protect irreplaceable habitats, such as ancient woodlands and ancient or veteran trees, except where there are wholly exceptional reasons and a suitable compensation strategy exists;
- c. maintain and where practicable enhance conditions for priority habitats;
- d. maintain and where practicable enhance recognised geodiversity assets;
- e. maintain and where practicable enhance other sites, features, species;
- f. identify, protect, maintain and expand as appropriate networks of ecological interest and provide for appropriate management;
- g. identify measures to avoid and/or reduce any potentially adverse impacts on the natural environment to acceptable levels

The Scheme will not impact the quality of the local environment covered by the plan area and as demonstrated above, complies with policy LP21 of the CLLP.

(commensurate with the status of specific sites where applicable);

- h. mitigate against any necessary impacts through appropriate habitat creation, restoration or enhancement on site or elsewhere.
- i. seek and exploit opportunity to conserve, augment and reinstate the stock of trees, hedges, woodlands, wetlands and countryside as wildlife habitat and for aesthetic enjoyment, in both the rural and urban environment;

3. As appropriate to their scale, nature and location, development proposals should incorporate environmental protection measures, which clearly demonstrate mitigation, adaptation and resilience to climate change.
