

Nationally Significant Infrastructure Project

Tillbridge Solar Farm

Local Impact Report – November 2024

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1. Terms of Reference

1.1 Introduction

This report is the Local Impact Report (LIR) for Lincolnshire County Council (LCC). In preparing this LIR, regard has been made to the purpose of LIRs as set out in s60(3) of the Planning Act 2008 (as amended), Guidance for the examination of applications for development consent, the Planning Inspectorate's Advice Note One: Local Impact Reports, as well as the Planning Inspectorate's 'Example Documents'.

1.2 Scope

This LIR relates to the impacts of the proposed development of the Tillbridge Solar project as it affects the administrative area of Lincolnshire County Council.

1.3 This is the Local Impact Report (LIR) of Lincolnshire County Council one of the host authorities for the Project. Section 104 of the Planning Act 2008 (the 'Act') requires the Secretary of State to have regard to LIRs in deciding applications. The Act defines an LIR as "a report in writing giving details of the likely impact of the proposed development on the authority's area (or any part of that area)" (section 60(3)).

1.4. Provided that the LIR fits within this definition, its structure and content is a matter for the Local Authority. However, guidance is provided in the Planning Inspectorate's Advice Note One: LIRs (version 2, April 2012), which states that the LIR should set out the local authority's view of likely positive, neutral and negative local impacts, and give its view on the relative importance of different social, environment or economic issues and the impact of the scheme upon them.

1.5. This LIR has, therefore, been prepared in accordance with section 60(3) of the Planning Act 2008 (as amended) and having regard to the guidance in the Planning Inspectorate's Advice Note. Accordingly, it seeks to assist the Examining Authority (ExA) by presenting the Council's assessment of the likely impacts of the Project, based on local information, expert judgement, and evidence.

1.6. This LIR appraises the impacts likely to result from the Project and identifies whether the impacts are considered to be negative, positive or neutral, taking into account proposed mitigation measures. It also considers whether further work should be undertaken, including mitigation, to address negative issues identified, and raises any missed opportunities for enhancement measures.

1.7. This LIR appraises the DCO documents submitted by the Applicant at the submission stage. Any further submissions will be addressed through subsequent written evidence through the Examination process.

- 1.8. The topic areas covered in the LIR are set out in section 2 below. The topics covered do not reflect the full remit of those addressed in the Environmental Impact Assessment (EIA) but highlight what are considered by the Council to be the key issues within their remit.
- 1.9. The Council is the upper-tier local authority for the county of Lincolnshire as a whole and has a range of statutory responsibilities to provide services and discharge regulatory functions, which together affect a great many aspects of the built, natural, and social environment. These functions include acting as Local Highway Authority, Local Transport Authority, Waste Planning Authority, Waste Disposal Authority, Minerals Planning Authority, County Planning Authority, Lead Local Flood Authority, Fire Authority, Public Health Authority, Local Education Authority, and Social Services Authority.
- 1.10. The Council also holds responsibility for maintaining the Definitive Map and the Historic Environment Record.
- 1.11. The LIR does not reflect the views of West Lindsey District Council. In producing this LIR, the Council has not sought the views of the public or local interest groups as to any particular matters that should be reflected in the LIR.
- 1.12. The Council has experience of the Nationally Significant Infrastructure Project (NSIP) planning regime. The Council is a host authority for a number of projects that have been consented or at recommendation stage including the Boston Alternative Energy Facility, Mallard Pass Gate Burton, Cottom, West Burton, Heckington Fen and Viking Carbon Capture scheme.

2. Purpose and Structure of the LIR

- 2.1 The LIR Covers topics where the Council has a statutory function or holds expertise. The Council defers to West Lindsey District Council on all other matters.

The topics the subject of this LIR cover:

- Principle of the Development
- Climate Change
- Landscape
- Highways and Transportation
- Public Rights of Way (PROW)
- Flood Risk, Drainage and Surface Water
- Minerals and Waste
- Cultural Heritage - Archaeology
- Socio-economics - Jobs and Skills

- Health and Land Use - Loss of Agricultural Land
- Fire Safety; and
- Ecology.

2.2 The LIR is structured by first identifying the relevant national and local policies, secondly identifying the local impacts, and lastly addresses the extent to which the development proposals accord with these policies. For each topic area, the key issues are identified on the extent the applicant addresses these issues by reference to the application documentation, including the draft DCO articles, requirements and obligation, where relevant.

2.3 This LIR does not seek to duplicate material covered in the Statement of Common Ground (SoCG) which will be progressed through the Examination stage.

3. Overview of Proposed Development

3.1 A full description of the proposed development and various ancillary structures themselves is not detailed within this report as this is set out in the DCO application documents.

3.2 The scheme will comprise the construction, operation, maintenance and decommissioning of ground mounted solar photovoltaic (PV) generating stations with accompanying grid connection infrastructure and energy storage as well as cable route corridors. The scheme will be operational for 60 years.

3.3 The land within the order is entirely within the area governed by the County Council and within the administrative area of West Lindsey District Council area. The scheme is located approximately 5km to the east of Gainsborough and approximately 13km to the north of Lincoln. The scheme has two distinct elements:

- The Principal Site - which covers an area of approximately 1,400ha and is the location where ground mounted the solar PV panels, electrical sub-stations and BESS will be installed.
- The Cable Route Corridor - which covers an area of approximately 318ha which will comprise the underground electrical infrastructure required to connect the Principal Site to National Grid Cottam Substation.

4. Description of the Site and Surrounding Areas

4.1 The principal site comprises numerous field parcels used for arable farming. The fields are large with limited hedgerows and trees. There are also some small, scattered areas of woodland located within the principal site. The land within the

development site is primarily Agricultural Land Classification (ALC) Grade 3b although there are some isolated areas of Grade 2 and 3a land.

- 4.2 Most of the principal site is located within Flood Zone 1 and is at low risk of flooding. There are some watercourses within the northern, southern and western extent of the Principal Site including tributaries of the River Till with some areas at high risk of flooding (Flood Zone 3).
- 4.3 There are no Scheduled Monuments or Designated Heritage Assets located within the principal site. However, there are two Scheduled Monuments in close proximity to the Principal Site: Harpswell Hall 320m to the north east and Elm Tree Farm 550m to the west. There are no conservation sites within the principal site.
- 4.4 PRow are limited within the principal site. The only route is on the southern periphery which is a bridleway extending south from Kexby Road near Glentworth Grange towards Willingham Road. There is also a claimed bridleway that runs through the eastern extent of the Principal Site which has been assumed to become a definitive route in due course.
- 4.5 Mature hedgerows and trees line the northern boundary along the A631. To the west is predominantly open fields with some bordered by hedgerows. To the east the site is bordered by a sharp slope referred to as the Lincoln Cliff.
- 4.6 The Cable Route Corridor is located primarily within agricultural land with the land being Grade 3 land. Parts of the Cable Route Corridor are located within Flood Zone 2 and 3 where there is an increased risk from flooding. The River Trent and River Till and the tributaries are located within the Cable Route Corridor. There are also land drains, ponds and covered reservoirs located across the Cable Route Corridor.
- 4.7 There are no international, national or regional nature conservation sites within the Cable Route Corridor however locally designated nature conservation sites are present (Upton Grange Road Verges Local Wildlife Site (LWS), Willingham to Fillingham Road Verges LWS, Cow Pasture Lane Drains LWS). There are two SSSIs, one within 1.5km (Ashton's Meadow SSSI) and one within 6.5km (Lea Marsh SSSI).
- 4.8 There are no Scheduled Monuments, Registered Parks and Gardens or Conservation Areas within the Cable Route Corridor however one Scheduled Monument, Fleet Plantation Moated Site, is located to the immediate south of the Cable Route Corridor at the National Grid Cottam Substation. There are three PRow and three claimed PRow that cross the Cable Route Corridor
- 4.9 Planning History - A recent permission to grant planning permission for an oil exploration and production facility adjacent to the Order Limits at Glentworth *see minerals section below). In addition there are two nearby Solar Farms which have

been granted development consent orders (Cottam Solar Project and Gate Burton Energy Park), with another currently at the decision stage (West Burton Solar Project).

5 Policy Context

5.1 The Secretary of State (SoS) is required to have regard to any relevant national policy statement (NPS), amongst other matters, when deciding whether to grant a DCO. Where there is a relevant NPS in place DCO applications are determined in line with Section 104 of the PA2008. However, where there is no relevant NPS in place then Section 105 of the PA2008 takes effect and provides the legal basis for determining DCO applications. Section 105 requires the SoS to consider 'important and relevant' matters which includes this LIR and any matters which the SoS thinks are both important and relevant to its decision.

5.2 The following NPS's are considered relevant to the determination of this DCO application however neither explicitly cover solar powered electricity generation. Nevertheless, they set out assessment principles for judging impacts of energy projects and are still a material consideration that the SoS will need to consider. The NPS's are as follows:

5.3 EN-1 – Overarching National Policy Statement for Energy.

EN-1 (Overarching National Policy Statement for Energy) confirms the Government's commitment to the legally binding target to cut greenhouse gas emissions by 80% by 2050, compared to 1990 levels. It also identifies the need to increase dramatically the amount of renewable electricity generation capacity in order to meet the commitments under the EU Renewable Energy Directive and to improve energy security by reducing dependence on imported fossil fuels, decrease greenhouse gas emissions and providing economic opportunities. Solar is noted within the document as being an intermittent renewable technology.

5.4 EN-3 – National Policy Statement for Renewable Energy Infrastructure.

EN-3 was updated and adopted in January 2024.

Solar is a key part of the government's strategy for low-cost decarbonisation of the energy sector and that the government expects a five-fold increase in solar deployment by 2035 (up to 70GW). It is also stated that 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.

This NPS sets out the key considerations and factors that will need to be taken into consideration when selecting sites and these include irradiance and site topography, proximity of site to dwellings, agricultural land classification and land type,

accessibility, public rights of way, security and lighting and grid connectivity. The technical considerations are set out in and include capacity of the site, site layout design and appearance, project lifetimes and flexibility. Impacts that will need to be considered are set out and biodiversity and nature conservation, landscape, visual and residential amenity, glint and glare, cultural heritage, construction including traffic and transport noise and vibration.

5.5 EN-5 – National Policy Statement for Electricity Networks Infrastructure.

EN-5 (National Policy Statement for Electricity Networks Infrastructure) is also relevant as it recognises electricity networks as “transmission systems (the long distance transfer of electricity through 400kV and 275kV lines), and distribution systems (lower voltage lines from 132kV to 230V from transmission substations to the end-user) which can either be carried on towers/poles or undergrounded” and “associated infrastructure, e.g. substations (the essential link between generation, transmission, and the distribution systems that also allows circuits to be switched or voltage transformed to a useable level for the consumer) and converter stations to convert DC power to AC power and vice versa.” This is therefore relevant in so far as it relates to the proposed Grid connection.

5.6 The National Planning Policy Framework (NPPF) was published in 2012 and updated in 2018, 2019, 2021 and 2023. In December 2022 the Department for Levelling Up, Housing and Communities published a consultation on the Government’s approach to updating the NPPF; the consultation ending on 2 March 2023. A further consultation on the NPPF has recently concluded (September 2024). Paragraph 5 of the NPPF states that the document does not contain specific policies for NSIPs. These are to be determined in accordance with the decision-making framework set out in the Planning Act and relevant NPSs for nationally significant infrastructure, as well as any other matters that are considered both important and relevant (which may include the NPPF).

5.7 The NPPF does, however, state that the planning system should support the transition to a low carbon future and support renewable energy and associated infrastructure (paragraph 152) and that local planning authorities should, when determining planning applications for such development, approve the application if its impacts are (or can be made) acceptable. Applicants are not required to demonstrate the overall need for renewable or low carbon energy (paragraph 158(a)).

5.8 The National Planning Policy Guidance (NPPG) outlines guidance on the specific planning considerations that relate to large scale ground-mounted solar PV farms (013 Reference ID: 5-013-20150327). It states that one consideration amongst others should be whether land is being used effectively; recommending that large scale solar farms are focused on previously developed and non-agricultural land.

5.9 The NPPG advises that where a proposal involves greenfield land, decision making should consider whether (i) the proposed use of any agricultural land has been shown to be necessary and poorer quality land has been used in preference to higher quality land; and (ii) the proposal allows for continued agricultural use where applicable and/or encourages biodiversity improvements around arrays.

5.10 The potential impacts of large-scale solar farms were also addressed through a speech by the then Minister for Energy and Climate Change to the solar PV industry on 25 April 2013 and subsequent Written Ministerial Statements. The speech highlighted the importance of considering the use of low grade agricultural land which works with farmers to allow grazing in parallel with generation, and the WMS (dated 25/3/15 - UIN HCWS488) stressed that meeting our energy goals should not be used to justify the unnecessary use of high quality agricultural land, noting that ‘any proposal for a solar farm involving the best and most versatile agricultural land would need to be justified by the most compelling evidence’.

On 15 May 2024, a Written Ministerial Statement (“WMS”) was published on solar infrastructure and protecting food security and BMV land. The Council notes that the 15 May 2024 WMS captures elements of the 2024 NPSs. In particular, the 2024 WMS emphasises that when considering whether planning consent should be granted for solar development the cumulative impacts where several proposals come forward in the same locality should be considered

5.11 Notwithstanding, the NPSs provide the predominant policy context; and whilst the applicant’s DCO application has cross referred to the NPPF and NPPG where applicable, where there are any inconsistencies between the NPPF and the relevant NPS.

5.12 **Central Lincolnshire Local Plan:**

The Central Lincolnshire Local Plan 2023-2043 was adopted April 2023, replacing the Central Lincolnshire Local Plan adopted in 2017.

- **Policy S5: Development in the Countryside** - Specifically Part E: Non-Residential development in the country. Reason for this is because of the criterion to be considered that “The development is of a size and scale commensurate with the proposed use and with the rural character of the location”.
- **Policy S14: Renewable Energy** - Reason: “To consider if 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”.

- **Policy S21: Flood Risk and Water Resources** - Reason: some of the sites are in high flood risk zones.
- **Policy S47: Accessibility and Transport** - Reason: the development involves traffic on the highway network.
- **Policy S48: Walking and Cycling Infrastructure** - Reason: “protect, maintain and improve existing infrastructure, including closing gaps or deficiencies in the network and connecting communities and facilities”, this being relevant to the PROWs.
- **Policy S53: Design and Amenity** - Reason: “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”
- **Policy S54: Health and Wellbeing** - Reason: This policy seeks to ensure access to adequate access to nature might run counter to the development essentially “taking away” open green space.
- **Policy S57: The Historic Environment** - Reason: to protect archaeological interest on the sites.
- **Policy S58: Protecting Lincoln, Gainsborough and Sleaford’s Setting and Character** - Reason: “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”.
- **Policy S59: Green and Blue Infrastructure Network** - Reason: Relevant because of the nature the development itself or the development impacts on PROWs.
- **Policy S60: Protecting Biodiversity and Geodiversity** - Reason: Some of the woodlands near or bordering the order limit might be “irreplaceable habitats”.
- **Policy S61: Biodiversity Opportunity and Delivering Measurable Net Gains** - Reason: 10% biodiversity net gain is an ambition that all Development Consent Order projects are working towards as it will become mandatory for projects of this size to be comply with biodiversity net gain targets by 2025.
- **Policy S62: Area of Outstanding Natural Beauty and Areas of Great Landscape Value** - Reason: Relevant because of the development’s proximity to The Cliff to

the east with views from and to this designated Area of Great Landscape Value to the east.

- **Policy S66: Trees, Woodland and Hedgerows** - Reason: Relevant because of the hedgerows around the site boundaries but could again be relevant to the Woodland areas nearby.
- **Policy S67: Best and Most Versatile (BMV) Agricultural Land** - Reason: there is BMV land present within the application site.

5.13 Also of Relevance is the Corringham Neighbourhood Plan (2021), Glentworth Neighbourhood Plan (2019), Sturton by Stow and Stow Neighbourhood Plan (2022).

Relevant policies are:

- **(Corringham) Policy CNP1: Sustainable Development Principle** - Reason: Developments need to be appropriately located and scaled, as well as be of a high standard of design regarding the setting and character of the area.
- **(Corringham) Policy CNP5: Local Character and the Design of New Development** - Reason: developments need to complement the local character as described in the Corringham Character Assessment.
- **(Glentworth) Policy 3: Design and Character of Development** - Reason: Identical to the above, applied to Glentworth.
- **(Sturton by Stow, and Stow) Policy 1: Sustainable Development** - Reason: Supports developments that get us closer to net zero gas emissions.
- **(Sturton by Stow, and Stow) Policy 5: Delivering Good Design** - Reason: similar to those outlined above.
- **(Hemswell Cliff) Policy 2: Delivering Good Design** - Reason: similar to those outlined above.
- **(Hemswell and Harpswell) Policy 5: Protecting the Wider Landscape Character and Setting of the Neighbourhood Plan Area** - Reason: similar to those above in Corringham and Glentworth.
- **(Hemswell and Harpswell) Policy 6: Design Principles** - Reason: similar to those above.

5.14 **Lincolnshire Minerals and Waste Local Plan Core Strategy and Development Management Policies (2016):**

- **Policy DM1: Presumption in favour of sustainable development** - Reason: “the County Council will take a positive approach that reflects the presumption in favour of sustainable development contained in the National Planning Policy Framework”.
- **Policy DM4: Historic Environment** - Reason: potential archaeological interest.
- **Policy DM6: Impact on Landscape and Townscapes** - Required to give regard to the development’s impact on landscapes.
- **Policy DM12: Best and Most Versatile Agricultural Land** - Development proposals that involve significant amounts of best and most versatile agricultural land will only be permitted where the stated criteria are met.
- **Policy M11: Safeguarding of Mineral Resources.**
- **Policy W1: Future Requirements for New Waste Facilities.**
- **West Lindsey District Council Strategic Flood Risk Assessment (SFRA) Final Report - July 2019**

5.15 The SFRA has assessed the flood risk issues at a strategic scale to inform the spatial planning process.

5.16 **Lincolnshire County Council Energy Infrastructure Position Statement (December 2023)**

The County Council position statement notes that Nationally Significant Infrastructure Projects (NSIPs) cover a range of potential developments including solar farms and cable routes.

All new energy sources need to be connected to the grid and this creates a risk. The Council’s position is that any cabling required should be underground unless connecting to an existing overhead line.

The statement notes the advice contained in the NPPF that local planning authorities should take into account the economic and other benefits of best and most versatile agricultural land. Where significant development of agricultural land is demonstrated to be necessary Local Planning Authorities should require the use of areas of poorer quality land in preference to that of higher quality. Based on this the Council will object to development on Grade 1,2, 3a land.

In considering NSIP proposals the protection of Best and Most Versatile agricultural land is the starting point for the Council for projects that involve significant land take. This principle will be cross referenced with other topics of consideration such as local environment, landscape, historic and community impacts to come to a view if there is any justification to override the loss of agricultural land.

Finally, consideration should be given to the cumulative impact from proposals in combination for significant impact of numerous developments clustered within the same locality in a similar time period

5.17 West Lindsey Sustainability, Climate Change and Environment Strategy

The strategy outlines West Lindsey District Councils strategy to reach net zero emissions by 2050.

6. Assessment of Impacts and Adequacy of Response

6.1 The following sections identify, for each topic heading listed below, the relevant policies, the key issues and impacts raised by the proposed development and the extent to which the applicant has addressed these issues in the application document.

- Principle of the Development - Climate Change ;
- Landscape;
- Highways and Transportation;
- Public Rights of Way (PROW);
- Flood Risk, Drainage and Surface Water;
- Minerals and Waste;
- Cultural Heritage 0 Archaeology;
- Socio Economics;
- Land Use - Loss of Agricultural Land;
- Health and Fire Safety; and
- Ecology.

7. The Principle of the Development - Climate Change

7.1 Key Policy

- CLLP Policy S14 - Renewable Energy
- CLLP Policy S16 - Wider Energy Infrastructure
- CLLP Policy S53 - Design and Amenity.

7.2 Section 4.8 of NPS EN-1 addresses climate change adaptation and resilience in energy infrastructure development. It notes that the SoS should take the effects of

climate change into account when developing and consenting infrastructure, referring to the potential long term impact of climate change.

- 7.3 Paragraph 4.10.8 states that 'new energy infrastructure will typically need to remain operational over many decades, in the face of a changing climate. Consequently, applicants must consider the direct (e.g. site flooding, limited water availability, storms, heatwave and wildfire threats to infrastructure and operations) and indirect (e.g. access roads or other critical dependencies impacted by flooding, storms, heatwaves or wildfires) impacts of climate change when planning the location, design, build, operation and, where appropriate, decommissioning of new energy infrastructure'.
- 7.4 The SoS 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 and associated research and expert guidance available at the time the ES was prepared to ensure they have identified appropriate mitigation or adaptation measures. This should cover the estimated lifetime of the new infrastructure, including any decommissioning period (4.10.13).
- 7.5 EN-1 notes that we must continue to accelerate efforts to end our contribution to climate change by reaching Net Zero greenhouse gas emissions reiterates the need to minimise the most dangerous impacts of climate change. It also emphasises the need for adaptation, which is necessary to manage the impacts of current and future climate change.
- 7.6 Paragraph 2.3.5 notes the country's historic dependence of our energy system on fossil fuels, stating that this is still the case today. Although representing a record low, fossil fuels still accounted for just over 76 per cent of energy supply in 2020. It goes on to state that we need to dramatically increase the volume of energy supplied from low carbon sources.
- 7.7 Paragraph 2.3.6 acknowledges the need to transform the energy system, tackling emissions whilst continuing to ensure secure and reliable supply. Increasing the supply of clean energy is highlighted.
- 7.8 EN-5 notes that as climate change is likely to increase risks to the resilience of some of the infrastructure that falls under the umbrella of EN-5 (electricity networks). It refers to risks such as flooding it goes on to state that 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.
- 7.9 CLLP Policy S14 (Renewable Energy) states that proposals for renewable energy schemes, including ancillary development, will be supported where the direct, indirect, individual, and cumulative impacts of development on a number of considerations are, or will be made, acceptable.

- 7.10 Paragraph 3.3.4 of the supporting text to policy S14 sets out that the aim of the Joint Committee that prepared the CLLP is to maximise appropriately located renewable energy generated in Central Lincolnshire. Policy S14 sets no floor or cap on the scale of renewable energy targeted to be generated, preferring, instead, an approach which supports all appropriate proposals that meet the policy requirements set out.
- 7.11 Paragraph 3.3.19 recognises that in order to support a move to a zero carbon Central Lincolnshire, there is a need to move away from fossil fuels (gas, petrol, diesel, oil) towards low carbon alternatives and this transition needs to take place with increasing momentum in order to stay within identified carbon saving targets. Demand for electrical energy is forecast to increase by 165% in Central Lincolnshire over the next 30 years and so electrical infrastructure in particular will need to adapt and change to accommodate this increased need for the management and storage of electricity. Energy storage (including battery storage), consideration of existing and new electricity substation, and energy strategies for large developments are required to help support the future energy infrastructure needs for Central Lincolnshire.
- 7.12 CLLP Policy S16 (Wider Energy Infrastructure) states that the Joint Committee is committed to supporting the transition to a net zero carbon future and, in doing so, recognises and supports, in principle, the need for significant investment in new and upgraded energy infrastructure. 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 and upgraded or new electricity facilities or other electricity infrastructure. This policy however caveats that 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 (reference to policy S53) which minimises harm arising.
- 7.13 The theme of these policies centres around the desire to support developments that are sustainable/relate to renewable energy. The principle of this development is meeting a nation need for solar/renewable energy, so it should be assessed against these policies. Policy S14 requires the specific tests to be met:
- 7.14 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
- 7.15 The impacts are acceptable on aviation and defence navigation system/communications; and 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.

- 7.16 The Tillbridge Solar project would make a significant contribution towards renewable energy generation, generating 500MW of energy to power an equivalent of approximately 300,000 homes. This contribution aligns to key commitments at the national level and within the adopted NPS recognising the importance of the Government's commitments to cut greenhouse gases by 80% of 2050.
- 7.17 The Council recognises that solar energy development can help meet targets for reducing carbon emissions, reduce reliance on fossil fuels and provide local energy security. They can also provide economic diversification for farmers and landowners and support local employment opportunities. Therefore whilst the Tillbridge Solar Project, by its nature offers significant positive impacts in terms of the production of clean renewable energy and the transition and movements towards Net Zero, in order to be supported it must be demonstrated that there are no significant adverse environmental impacts that cannot be appropriately managed and/or mitigated through the DCO process. The Council's position is therefore that, adopting a 'whole life' approach to GHG emissions, there are no negative and neutral impacts and that significant **positive impacts** would accrue.
- 7.18 The sections below consider the potential impacts of the development on other factors/topics and the Examining Authority will need to balance these positive impacts against the negative impacts identified within this LIR and those raised by other host authorities and Interested Parties

8 Landscape

8.1 Key Policy:

- Policy S5: Development in the Countryside
- Policy S14: Renewable Energy
- Policy S53: Design and Amenity
- Policy S58 Protecting Lincoln, Gainsborough and Sleaford's Setting and Character
- Policy S62: Area of Outstanding Natural Beauty and Areas of Great Landscape Value
- Policy S66: Trees, Woodland and Hedgerows
- (Corringham) Policy CNP1: Sustainable Development Principle
- (Corringham) Policy CNP5: Local Character and the Design of New Development
- (Glentworth) Policy 3: Design and Character of Development
- (Sturton by Stow) Policy 5: Delivering Good Design
- (Hemswell Cliff) Policy 2: Delivering Good Design
- (Hemswell and Harpswell) Policy 5: Protecting the Wider Landscape Character and Setting of the Neighbourhood Plan Area
- (Hemswell and Harpswell) Policy 6: Design Principles.

- 8.2. EN-1 states that the ExA needs to consider the design of a scheme carefully. They should have 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.
- 8.3 Paragraph 5.10.35 EN-1 (2024) states that the ExA 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’. Paragraph 5.10.36 then sets out that the ExA 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’.
- 8.4 Paragraph 5.10.5 of the 2024 EN-1 states that ‘Virtually all nationally significant energy infrastructure projects will have adverse effects on the landscape, but there may also be beneficial landscape character impacts arising from mitigation’.
- 8.5 Paragraph 5.10.6 then states that projects need to be designed carefully, taking account of the potential impact on the landscape, and that they should have 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’.
- 8.6 The specific guidance relating to Solar Photovoltaic Generation in section 2.10 of the 2024 EN-3 notes at paragraph 2.10.94 that ‘Solar farms are likely to be in low lying areas of good exposure and as such may have a wider zone of visual influence than other types of onshore energy infrastructure’. Paragraph 2.10.95 states that ‘whilst it may be the case that the development covers a significant surface area, in the case of ground-mounted solar panels it should be noted that with effective screening and appropriate land topography, the area of a zone of visual influence could be appropriately minimised’.
- 8.7 CLLP policy S14 ‘Renewable Energy’ supports proposals for renewable energy schemes subject to the direct, indirect, individual and cumulative impacts of development on, amongst other things, landscape character and visual amenity being acceptable or capable of being made acceptable.
- 8.8 Policy S53 ‘Design and Amenity’ states all development must achieve high quality sustainable design which contributes positively to the local character and landscape. Development should, amongst other things, be based on a sound understanding of the context, integrating into the surrounding, relate well to the site, protect any important local views into, out of or through the site, reflect the identity of area and contribute to the sense of place and maintain landscape quality and minimise adverse visual impacts through high quality building and landscape design.

The Council commissioned AAH Landscape Consultants to assist in the consideration and review of the landscape and visual elements of the Tillbridge proposal and have engaged and provided feedback and advice to the Applicant's design team on behalf of the Council throughout the pre-application stage. A full copy of the report prepared by AAH is attached as an Appendix A which has reviewed the DCO application documentation and the following summary is based on those comments and should be read in conjunction with the full document.

- 8.9 By reason of its mass and scale, the proposed development would lead to significant adverse effects upon landscape character and visual amenity. The development has the potential to transform the local landscape by altering the character on a large scale. This landscape change also has potential to affect wider landscape character, at a regional or county scale, by replacing large areas of agricultural or rural land with solar development, affecting the current openness, tranquillity and agricultural character, that are identified as defining characteristics of the area. The Council are particularly concerned about the landscape character effects through changes to the land use over a large area. Significant landscape effects are subsequently identified within the LVIA chapter *"due to the change in land use and the massing of the panels and associated structures"*.
- 8.10 The scale and extent of development would also lead to significant adverse effects on views from receptors, changing from views within an agricultural or rural landscape to that of a landscape containing large scale solar development.
- 8.11 The development has been identified in the LVIA as resulting in a significant change to a variety of visual receptors, with *significant* residual visual effects identified from three viewpoints (and associated receptors), largely arising from open elevated views from the Cliff. The LVIA judges that the residual effects would be from *"higher-sensitivity receptors such as residents where it is not possible to sufficiently screen expansive views of the site due to elevation on the Cliff"*.
- 8.12 The cumulative landscape and visual effects of the proposed development are also of concern, particularly when assessed alongside the proposed Cottam, West Burton and Gate Burton Solar sites. The mass and scale of these projects combined would lead to adverse effects upon landscape character and visual amenity over an extensive area. The landscape character of the local, and potentially regional area, may be completely altered, particularly when experienced sequentially while traveling through the landscape.
- 8.13 The submission has provided detailed information regarding the retention and removal of hedgerows on the Hedgerow Removal Plans and, the Arboricultural Impact Assessment (AIA) details tree protection and removal. The considerations of vegetation removal and protection appear to consider wider highways works, which

can negatively influence vegetation such as for abnormal load access or improvements to the highway.

- 8.14 The proposal would evidently deliver landscape and ecological improvements through mitigation areas and planting. However, this will be dependent upon the information set out in the Framework Landscape and Ecological Management Plan and Indicative Landscape Masterplans which illustrate the mitigation, which should be further explored, and assume would be refined at the detailed design stages.
- 8.15 The DCO should include for approval of any subsequent detailed landscape and ecological mitigation scheme (planting works), as referenced in Schedule 2, Requirement 7. This should clearly link to any landscape mitigation scheme that is submitted as part of the DCO, and subsequently that which has been assessed as part of the LVIA.
- 8.16 Vegetation removal identified within the draft DCO (articles 39., 40., and Schedule 12) should be clarified, and processes put in place to ensure any vegetation loss is agreed with the relevant parties prior to any works being carried out. This should clearly relate to hedgerow removal plans and AIA, and this must also include vegetation removal or works to facilitate wider highways and access works, such as for abnormal loads.
- 8.17 The DCO should also include for an appropriate period of landscape maintenance, currently referenced at Article 31(11), that ties into the Framework Landscape and Ecological Management Plan, and would expect an initial 15 year period of management and maintenance as a minimum, which would align with the assessed residual landscape and visual effects, and then this would subsequently be regularly reviewed at a reasonable period, such as every three to five years.

9. Highways and Transportation

9.1 Key Policy:

- Policy S45: Strategic Infrastructure Requirements
- Policy S47: Accessibility and Transport.

- 9.2 Paragraph 5.14.18 of the 2011 EN-1 sets out that the SoS should consider the substantial impacts of traffic and therefore should ensure 'that the applicant has sought to mitigate these impacts, including during the construction phase of the development. Where the proposed mitigation measures are insufficient to reduce the impact on the transport infrastructure to acceptable levels, the IPC should consider requirements to mitigate adverse impacts on transport networks arising from the development'. Moreover, applicants may be willing to enter planning obligations for funding infrastructure and otherwise mitigating adverse impacts.

- 9.3 With regards to mitigation, EN-1 states that the SoS may attach requirements to a consent where there is likely to be substantial HGV traffic that 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 including to avoid prolonged queuing on approach roads and ensuring satisfactory arrangements for reasonably foreseeable abnormal disruption (paragraph 5.14.14).
- 9.4 CLLP Policy S47 (Accessibility and Transport) states that development proposals are required to contribute towards an efficient and safe transport network. All developments should demonstrate, where appropriate, that they have regard to the need to minimise additional travel demand by using travel planning, safe and convenient public transport, walking and cycling links, and integration with existing infrastructure. This policy also states that 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.
- 9.5 ES Chapter 16 Transport and Access and Appendix 16.2 - Transport Assessment. The methodology is reasonable, the impacts of LGVs and HGVs are fairly high in terms of percentages on the key routes (Table 8.10) with several links increasing by over 100%. However, these are for the development peak hours 6am-7am and 7pm-8pm; and the total flows in these hours would be less than current peak hour flows on the links. There is therefore not expected to be any traffic capacity concerns with regard to the development.
- 9.6 The above assessment is predicated on the shift patterns of workers for the developments being 7am-7pm; and it is therefore essential that this is secured through an appropriately worded requirement and monitored through the Framework Construction Traffic Management Plan (Section 5.3 states working hours and travel patterns etc).
- 9.7 Some small single track roads (Cow Lane, Fillingham Lane) will experience high volumes of construction vehicles and rather than provide numerous passing places the proposal is to close these roads for periods of weeks to enable construction activity to take place, a summary of the likely temporary traffic impact is in 16.8.24-16.8.38. This is acceptable in principle but will need agreement with the Highways Authority which is acknowledged in 16.8.35 - "Advance warning will be provided in line with local highway authority guidance".
- 9.8 The applicant needs to provide construction details for technical approval (at a later date) of vehicle access crossings and any minor works. Subsequently this would be subject to the approval of the Councils dedicated teams.

- 9.9 Any works on the highway need to follow the Councils Permitting Scheme procedures as is the case for any Statutory Undertaker.
- 9.10 The Draft DCO Part 3 Streets needs to ensure the above requirements are met.
- Article 9 – the Council need to technically approve the works in Paragraph 1
 - Article 10 - includes provision for Highways Authority approval
 - Article 11 - Temporary Prohibitions - this needs to follow the Councils Permitting scheme approvals
 - Article 16 - TROs - this needs to follow the Councils Permitting scheme approvals.
- 9.11 The Framework Construction Traffic Management Plan (ES Vol 7) needs to be captured as a requirement rather than a stand alone document. This document underpins many of the assumptions in the Transport Assessment, regarding staff hours (e.g. arrivals 06:00-07:00), use of shuttle buses etc. It also outlines the site accesses, and the detail which will need submitting (and approval) later. Vehicle routing, compounds and parking provision and also highway condition surveys. All the above will need monitoring throughout the construction period to ensure that the FCTMP is complied with.
- 9.12 In terms of traffic and transport effects, the Local Highway Authority, considers the assessment in the Transport and Access chapter to be reasonable. Subject to the clarification of the wording in the draft DCO for Articles and the imposition of a further requirement, the Council concludes that traffic and transport impacts during the construction, operation, and decommissioning would be **neutral**.

10. Public Rights of Way (PRoW)

- 10.1 Key Policy:
- Policy S48: Walking and Cycling Infrastructure
 - Policy S54: Health and Wellbeing
 - Policy S59: Green and Blue Infrastructure Network.
- 10.2 Section 2.10 of the 2024 EN-3 makes several recommendations in relation to accessibility and public rights of way, noting at 2.10.35 that the suitability of the access routes to the proposed site for both the construction and operation of the solar farm must be considered, with the former likely to raise more issues. With reference to public rights of way, the draft advises that applicants should keep, as far as is practicable and safe, all public rights of way that cross the proposed development site open during construction and protect users accordingly. They are also 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, and to provide enhancements to public rights of way and the adoption of new public rights of way through the site.

- 10.3 The theme of the CLLP policies relates to the protection, maintenance, and availability of public rights of way, specifically on the grounds that they provide public access to green/natural spaces as well as provide places for exercise, health, and wellbeing.
- 10.4 It is noted that the network of public rights of way (PROWs) and bridleways falls outside of the principal site and would, therefore, be unaffected in the long term. However, temporary impacts and re-routing for construction and cable laying (along the entire cable corridor route) must be considered. If the development goes ahead, opportunities to improve connections should be explored, including potential for a long-distance route along the cable corridor to Cottam. This could also act as a corridor for nature to support biodiversity. Subject to the above being captured the impact on Public Rights of Way would be **neutral**.

11. Flood Risk, Drainage and Surface Water

11.1 Key Policy:

- Policy S12: Water Efficiency and Sustainable Water Management
- Policy S14: Renewable Energy
- Policy S20: Resilience and Adaptable Design
- Policy S21: Flood Risk and Water Resources
- Policy S59: Green and Blue Infrastructure.

11.2 Section 5.16 of the 2024 EN-1 focuses on water quality and resources. In the decision-making process, the SoS should note that all activities that discharge to the water environment are subject to pollution control. Moreover, the SoS 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'.

11.3 EN-1 also states that the SoS 'should consider whether appropriate requirements should be attached to any development consent and/or planning obligations entered into to mitigate adverse effects on the water environment' (paragraph 5.16.16).

11.4 Paragraph 5.8.7 of the 2024 EN-1 notes that new energy infrastructure should only be permitted by exception in flood risk areas (for example where there are no reasonably available sites in areas at lower risk), and that it should be safe for its lifetime without increasing flood risk elsewhere and, where possible, should reduce flood risk overall. It should also be designed and constructed to remain operational

in times of flood. Paragraphs 5.8.9 and 5.8.10 confirm the requirement for the flood risk sequential and exception tests to be applied.

- 11.5 ES Appendix 10.3 Flood Risk Assessment and Appendix 10.4 Outline Drainage Strategy. These documents deal with the surface water flood risk satisfactorily. Run off rate will be kept to greenfield, and attenuation will be provided for 100-year event + 40% climate change. Impermeable areas have been identified (BESS, Substations) and indicative storage volumes calculated. The proposal is for swales to be provided on site to provide attenuation. The Surface Water proposals (Outline Drainage Strategy App10.4) is acceptable. To ensure that this issue is satisfactorily addressed the detailed drainage design needs to be submitted for approval by the Council as Lead Local Flood Authority and therefore a suitably worded requirement is necessary to secure this.
- 11.6 With the implementation of the outlined mitigation measures, the Applicant concludes that effects on the flood risk and drainage of the area would be negligible and therefore not significant. The Council as the lead local flood authority agrees with the principles of the FRA subject to a suitably worded requirement being imposed on any Consent granted, with this in place the Council concludes that the impacts in relation to flood risk and drainage will be **neutral**.

12 Minerals and Waste

12.1 Key Policy:

- Policy M2: Providing for an Adequate Supply of Sand and Gravel
- Policy M11: Safeguarding of Mineral Resources

- 12.2 Proposals for development within a mineral safeguarding area must be accompanied by a Minerals Assessment and will only be granted where it can be demonstrated that it would not sterilise a mineral resource. Where this is not the case then proposals will need to demonstrate compliance with a range of criteria.
- 12.3 The applicant includes an assessment of the proposals against the relevant policies of the LMWLP within a Planning Statement. No objections to this approach provided that appropriate and proportionate consideration is given to the matters raised in our original response to the EIA Scoping stage.
- 12.4 In terms of safeguarded mineral resources (Policy M11), it is acknowledged that the vast majority of the PV site itself does not lie within a Minerals Safeguarding Area (MSA), and the potential sterilisation of underlying mineral resources may therefore be very limited. Further consideration of the proposed grid connection corridor which passes through the sand and gravel MSA adjacent to the River Trent was requested.

- 12.5 Wherever possible the cable route should follow existing constraints and infrastructure corridors such as roads, railways, drainage routes or existing pipelines or cable routes or alternatively follow the edge of significant landscape features rather than directly crossing open fields. This would ensure minimal sterilisation of resources. An opportunity to share the cable corridor with other proposed solar schemes in the area was identified early in the project and it is positive that this has become a reality.
- 12.6 With regard to Policy M12, and in line with the broader agent of change principle, expect sufficient information to be provided and assessments undertaken to demonstrate that the proposed development would not prejudice or detrimentally impact upon the operation of the safeguarded Glentworth K oil site that is surrounded on three sides by the proposed DCO boundary. Relevant issues to consider may include (but are not limited to) access, health and safety (including fire safety), screening/boundary treatments, site buffers, and the need to protect any associated utilities and infrastructure/pipelines etc. The Council suggest contacting the site operator (Igas) and relevant experts such as the Environment Agency and local Environmental Health Officers to accurately determine the detailed matters that should be considered and any necessary mitigation. At this stage the Council has not seen any evidence that such engagement has been undertaken and would wish to see further evidence to confirm that such engagement has taken place and a satisfactory outcome achieved.
- 12.7 On 17 April 2023 the County Council's Planning and Regulation Committee resolved to grant planning permission (subject to pending legal agreement) for a further oil site to the west of Glentworth K and to be connected by pipeline. This permission was granted on 8th February 2024 and the existence of this permission needs to be safeguarded to enable this development to proceed without any encroachment caused by the proposed development. Whilst this permission has not yet been implemented appropriate safeguards need to be put into place as is the case for the existing oil production site. Subject to this being achieved the Council concludes that the impacts on minerals is **neutral**
- 12.8 The comments on waste impacts are provided from reviewing the following documents - Volume 6, Environmental Statement (ES) Chapter 17: Other Environmental Topics; Chapter 18: Cumulative Effects and Interactions
- 12.9 Volume 7, Framework Environmental Management Plans 7.8 Construction EMP; 7.9 Operational EMP; 7.10 Decommissioning EMP
- 12.10 Recycling (Particularly PV Panels): Whilst indicating that in line with the waste hierarchy, it is proposed to prioritise recycling over landfill, at this stage limited plans are identified to show how this will be achieved. The following concerns are:

- 12.11 (ES Ch17, 17.8.55) It is over-optimistic to assume that “the market (for solar panel recycling) will have expanded to meet demand as solar PV installations increase”.
- 12.12 (ES Ch17, Table 17-12) The Council has previously commented on the impacts of operational replacement, particularly in light of cumulative with other solar NSIPs in Lincolnshire. The ES points to OEMP as covering waste recycling & reuse but that (e.g. section 2.7.3) seems to assume that the necessary capacity will appear when needed without any explanation as to how this will be achieved.
- 12.13 (ES Ch18, 18.18.10a) Seems to imply that the Waste Planning Authority (WPA) is responsible for ensuring there’ll be sufficient facilities to recycle their panels. Whilst the WPA through its Waste Needs Assessment can identify what capacity is needed and make provision for developments to come forward, there’s no guarantee that the market conditions will exist for developers to deliver this.
- 12.14 (ES Ch18, 18.18.13/14) Whilst it’s true that processing capacity doesn’t have to be in Lincolnshire, it’s a big assumption that sufficient panel recycling capacity will appear somewhere in the UK and it would prove economically viable to transport such waste over long distances.
- 12.15 Landfill: Despite an ambition to minimise landfill, much of the detail provided indicates a reliance on landfill for example:
- 12.16 (ES Ch17, 17.8.8) “The landfill diversion rate for the Scheme will be more than 60%” - This seems high, particularly considering 17.8.12b (“good practice landfill diversion rate of 90%”) and of the repeated statements about following the waste hierarchy (e.g. 17.8.20/24/27).
- 12.17 (ES Ch17, 17.8.18) An assumption is made that current landfill capacity will remain available as the WPA will consent more if required given the move in direction away from landfill this is very unlikely.
- 12.18 (ES Ch17, 17.8.39/52/60) Whilst committing to prioritise recycling, only assess operational impacts against landfill capacity (see also Ch18, 18.18.10c re-cumulative impacts) - Is that correct as a “worst case” assumption?
- 12.19 Need for further documents/clarification: CEMP section 2.9 - Commit to producing Construction Resource Management Plan (CRMP) & Decommissioning Resource Management Plan (DRMP) (both aka Site Waste Management Plan).
- 12.20 As requested with other solar NSIPs, the OEMP must be accompanied by a Waste Management Strategy/Plan along the following lines. Separate sections covering waste from commissioning, operational and decommissioning phases. For each phase show the overall total *and* split by year:

12.21 Tonnage of each type of waste:

- Whether any of those waste type has specific status - e.g. hazardous.
- Preferred fate for each waste type of waste - e.g. reuse - including how they've considered the Waste Hierarchy.
- Hierarchy of backup plan(s) if proposed fate is not available – e.g. recycling.
- 'Worst case' fate – e.g. landfill.
- Proposed destination (host Waste Planning Authority) of each type of waste, including if this differs depending on 'fate'.

12.22 (ES Ch17, 17.8.10b) Study Area for waste management – Need to justify the areas selected as the Council would prefer to see a more local area to align with the proximity principle.

12.23 (ES Ch17, 17.8.62) Their statement that “All effects are not significant” needs further details to establish how this is determined based on that panels will be reaching end of life stage during operation and when combined with the other consented and proposed solar NSIPs in Lincolnshire consider this impact will be significant.

12.24 (ES Ch18, Table 18-1) The Scoping Opinion produced by PINS states “The ES should also consider the requirement for cumulative [waste] impacts to be assessed at decommissioning due to a number of solar farms in the local area also likely to be decommissioned at a similar timescale”. The ES refers to section 18.18, but this lacks detail about the provision of recycling facilities to process the discarded materials from the development.

12.25 In respect of Policy W1 of the Lincolnshire Minerals and Waste Local Plan this requires the Council to make provision for sites to meet predicted future capacity gaps for waste arisings. Currently there are no waste facilities to process discarded solar infrastructure as it is replaced during the lifetime of the development and at the decommissioning stage. When combined with the other solar projects in the this will present an issue that will need additional facilities to ensure these products are sustainably disposed of.

12.26 Therefore, it will be necessary for a mechanism to be incorporated on any DCO permitted that requires a waste management strategy to be submitted which demonstrates the expected quantity of solar infrastructure that will be discarded during the operational and decommissioning phases and the arrangements to be put in to ensure adequate facilities are available to sustainably dispose/recycle these items in the future. The Council does however wish to draw the ExA's attention to the point relating to not just the predicted decommissioning GHG emissions associated with the recycling or disposal of components and panels at specialist disposal facilities, but also the need for replacement infrastructure during the lifetime of the development which is unrestricted and therefore could result in the

infrastructure being replaced a number of times during the lifetime of the development. Therefore, in this regard it is assessed as having a **negative** impact.

13. Cultural Heritage - Archaeology

13.1 Key Policy:

- Policy S57: The Historic Environment
- CLLP Policy S57 (The Historic Environment)

13.2 Policy S57: The Historic Environment - Section 5.9.21 of the 2011 EN-1 National Policy Statement states that where there is high probability that a development site may include yet undiscovered heritage assets with archaeological interests then requirements should be considered to ensure that appropriate procedures are in place for the identification and treatment of such assets discovered during construction. This is largely carried through in National Policy Statement EN-3.

13.3 CLLP Policy S57 (The Historic Environment) - States that development proposals are required to protect, conserve, and seek opportunities to enhance the historic environment of Central Lincolnshire. Proposals will be supported where they protect the significance of heritage assets (including where relevant their setting) and consider the desirability of sustaining and enhancing non-designated heritage assets and their setting. In instances where a development proposal would affect the significance of a heritage asset (where designated or non-designated), the applicant will be required to undertake and provide information on the significance of the asset; the impact of the proposed development on the significance and special character of the asset; and a clear justification for the works so that the harm can be weighed against public benefits.

13.4 This policy also states that where development proposals 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. In addition to this, 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.

13.5 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, 25 provisions 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.

- 13.6 With respect to archaeology, this application has been characterised by effective engagement and reasonable and timely evaluation which has provided sufficient baseline evidence to understand the archaeological potential of the redline boundary and inform a proportionate and fit for purpose programme of site-specific mitigation to deal with the impact of the proposed development. The Archaeological Mitigation Strategy has been discussed and following minor amendments has been agreed.
- 13.7 The provision of sufficient baseline information to identify and assess the impact on known and potential heritage assets is in accordance with the National Planning Statement Policy EN1 (Section 5.8), the National Planning Policy Framework and the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 which states that *"The EIA must identify, describe and assess in an appropriate manner...the direct and indirect significant impacts of the proposed development on...material assets, cultural heritage and the landscape."* (Regulation 5 (2d)).
- 13.8 As stated in the AMS there will need to be an Archaeological Clerk of Works and the management strategy for the preservation in situ areas will need to be included in the CEMP to ensure the protection measures stay in place throughout the development.

Heritage Assets

- 13.9 Welcome the approach and methodology set out in the DBA and ES for assessing built heritage and historic landscape. Agree with the conclusions drawn for many of the built heritage assets affected within the study area with some amendments.

Designated and Non-Designated Assets

- 13.10 Refer to Historic England's comments for designated assets and have no further comments at this stage. The Council agree with much of the assessment for built heritage set out in the ES. This includes the decision to scope several farmsteads from the DBA to the ES. While welcome this approach, encourage further consideration regarding the impact of the proposed scheme on the experience of the historic landscape both in its own right and in terms of setting for the various farmsteads and associated assets within the order limits which are set out below.

- 13.11 Note the current criteria for determining the value of heritage assets set out in the Impact Assessment Methodology and shown in Tables 8-1, 8-2, and 8-3. A key concern is the consideration of historic farmsteads and their immediate setting. Based on the current assessment criteria, the current value, level and degree of impact is stated as a 'low' or 'negligible adverse' outcome for many assets. Given that a significant number will experience noticeable and significant changes to their setting, we would ask for great clarity on this determination where the level of change will result in the full and/or partial loss of setting.
- 13.12 An assessment of the cumulative effects of the scheme on historic farmsteads is not in the ES assessment criteria (Chapter 8, Cultural Heritage, 8.4.14 to 8.4.21). Installing solar panels on the agrarian landscape will compromise how these farmsteads are experienced and appreciated, both individually and collectively, as the viewer moves through the landscape, encountering associated assets such as barns and neighbouring farmsteads. The Council note that the cumulative effects of other solar projects are addressed in Chapter 18 (EN010142/APP/6.1); however, details on the cumulative impact of the scheme for particular asset types (in this case, farmsteads) would be helpful in supporting the individual assessments reached for each farmstead receptor discussed in the ES.
- 13.13 Regarding farmsteads assessed in the ES, we make the following comments:

Harpswell Low Farm (MLI118024/MLI97809)

- 13.14 The current proposals for the solar array will surround much of the farmstead, except for a parcel of grassland to the northeast between the farm and the A631. What specific measures are in place to reduce the visual effects due to the changes in the composition of views to and from the farmstead, such as the approach to the property? The scheme's integrated design and mitigation strategy offers various options to reduce intervisibility; what will be deployed for this receptor? The solar farm control centre and BESS may be located a short distance from the farm (Chap. 8 Cultural Heritage, 8.9.131). Please provide further details on its design and location and/or where this information is located in the document library.

Harpswell Grange (MLI118025)

- 13.15 The embedded mitigation plans for this asset are noted, such as retaining the grassland along the approach to the farm from the A631 on the western side of the track. To reduce harm to this asset, a similar setback to preserve the grassland on the eastern side of the track should be considered. ES Chapter 12 Landscaper and Visual Amenity, 12.6.116 Table 12-5 notes a view of the access track to the farm. Please confirm if representative viewpoints from the farmstead will also be considered. Please provide specific details of the proposed mitigation measures, such as screening or planting for this asset (if any).

Hermitage Low Farm (MLI118028)

- 13.16 The solar array will surround the original farmhouse except for a parcel of grassland adjacent to the farm to the east and a narrow strip of land to the rear of the property, some 250m in length and approximately 100m wide. While the inclusion of an area of biodiversity enhancement and setback buffer is noted, we encourage greater retention of the immediate grassland associated with the farmstead, which would help mitigate some of the harm caused to the setting of this receptor.

Billyards Farm (Low Farm) (MLI118029)

- 13.17 The solar array will surround the approach to the farm in all directions. Despite retaining a small parcel of grassland immediately to the east and to the rear of the asset, the current proposals will significantly affect the ability to appreciate this asset's significance. Introducing solar panels and infrastructure will harm the ability to appreciate the agrarian association with the farmstead. The erosion of this asset's setting is comparable in scale to Hermitage Low Farm (located approximately 1000m northeast of this site). We ask the applicant to consider further design mitigation to limit the impact on these assets.

Manor Farm Heapham (MLI118062)

- 13.18 Based on the current proposals, this asset's landscape and setting would change from agricultural to semi-industrial. To reduce the harm to this asset, we encourage additional considerations around setback options to avoid losing the ability to appreciate its heritage interests. The ES (Cultural Heritage 8.9.173) states that a solar station and BESS set out in the LEMP (EN010142/APP/7.17) are located to the east of this asset (Field 78). We have been unable to find further details in the LEMP. Details of the specific part of the LEMP which contains this information is required.

Heapham Cliff (MLI118063)

- 13.19 Details are required of the setback buffers applied as part of the embedded mitigation stated in 8.9.178. What representative LVIA viewpoints regarding intervisibility have been produced for this receptor (if any)? The solar boundary occupies the approach to this asset in both directions from the roadside and immediate grassland areas and parcels of land surrounding the farm. We ask that the current mitigation measures for this asset be reconsidered to determine if any further work can be done to reduce the harm caused to setting.

Grange Farm (Heapham Grange) (MLI118064)

- 13.20 The proposed development, including the solar boundary, borders land to the east of this asset. To reduce harm to the asset's setting and loss of its immediate rural landscape, a setback buffer should be considered for the field immediately east of the farm.

South View (MLI118065)

- 13.21 The fields running east towards Manor Farm and Heapham Cliff (MLI118063) and perpendicular to Common Lane should be excluded from the site boundary. This area has been part of the historic field system between the farms since the 1800s. Excluding it from the development would help preserve the historic landscape around these farmsteads and reduce the impact on their setting. Including this grassland for solar panels would significantly harm the significance of these assets. Reconsidering the solar boundary or detailing specific mitigation measures would lessen the impact on this area.
- 13.22 The above is based on our review of the assessment work conducted on several farmsteads abutting or within the order limits. While significant progress has been made, with many agreeable conclusions, there are still several points of concern regarding the treatment of historic farmsteads. Welcome the opportunity to discuss any of these points during the examination. In many cases, adding specific design mitigations or making small adjustments to the site boundaries would help the scheme better address changes to these heritage assets and manage the impacts on the historic environment as the project moves forward.
- 13.23 Concluding the scheme has the potential to impact a series of non-designated farmsteads located within the order limits. The cumulative heritage value of these farmsteads as a group is significant, reflecting a cohesive historic pattern of agricultural development within the area. Introducing large-scale infrastructure into this landscape will change the context in which these assets are experienced, harming their setting, visual amenity, and the overall character of the landscape. The social and historical connections between these assets and the surrounding land will also be diminished, resulting in the loss of both tangible and intangible heritage elements. This will undermine the area's historical coherence and weaken the local community's sense of place. The cumulative impact on the setting, character and wider significance of the farmsteads should be fully assessed and considered prior to any Development Consent Order being granted.
- 13.24 Without any reconsideration of the mitigation measures for the historic assets this will have a **negative** impact on the local heritage assets.

14 Socio-Economics, Land Use and Agriculture

14.1 Key Policy:

- Policy S14: Renewable Energy
- Policy S67: Best and Most Versatile Agricultural Land

14.2 Paragraph 5.11.12 of the 2024 EN-1 outlines 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) except where this would be inconsistent with other sustainability considerations’.

14.3 Paragraph 5.11.34 of the 2011 EN-1 states that the decision maker 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’.

14.4 The 2024 EN-1 states similar advice to applicants and the SoS that they should seek to minimise impacts on BMV (paragraphs 5.11.12 and 5.11.34 refer, with the later reiterating that ‘The Secretary of State should ensure that applicants do not site their scheme on the best and most versatile agricultural land without justification’). Where it is sited on BMV, it should duly justify as to why other land cannot be used. The SoS should also ‘take into account the economic and other benefits of that land’.

14.5 Under the heading of ‘Solar Photovoltaic Generation’, paragraph 2.10.29 of the 2024 EN-3 states 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)’.

14.6 Paragraph 2.10.30 notes that ‘Whilst the development of ground mounted solar arrays is not prohibited on agricultural land classified 1, 2 and 3a, or sites designated for their natural beauty, or recognised for ecological or archaeological importance, 28 the impacts of such are expected to be considered and are discussed under paragraphs 2.10.73 - 2.10.92 and 2.10.107 - 2.10.126’.

14.7 Paragraph 2.10.31 acknowledges that it is likely that applicants’ developments may use some agricultural land, however that ‘Applicants should explain their choice of

site, noting the preference for development to be on brownfield and non-agricultural land’.

- 14.8 Paragraph 2.10.32 - 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 the efficiency of land use.
- 14.9 Paragraph 2.10.145 of EN-3 reiterates that the SoS should take into account ‘the economic and other benefits of the best and most versatile agricultural land’ and that ‘The Secretary of State should ensure that the applicant has put forward appropriate mitigation measures to minimise impacts on soils or soil resources’.
- 14.10 On 15 May 2024, a Written Ministerial Statement (“WMS”) was published on solar infrastructure and protecting food security and BMV land. The Council notes that the 15 May 2024 WMS emphasises elements of the 2024 NPSs. In particular the 2024 WMS emphasises that when considering whether planning consent should be granted for solar development the cumulative impacts where several proposals come forward in the same locality should be considered
- 14.11 Under the subheading ‘additional matters for solar based energy proposals’, CLLP Policy S14 (Renewable Energy) states that proposals for ground-based photovoltaics and associated infrastructure, including commercial large scale proposals, will be under a presumption in favour unless, amongst other things, the proposal is (following a site specific soil assessment) to take place on BMV agricultural land and does not meet the requirements of Policy S67.
- 14.12 CLLP Policy S67 (Best and Most Versatile Agricultural Land) states that proposals should protect BMV agricultural land so as to protect opportunities for food production and the continuance of the agricultural economy. Significant development resulting in the loss of BMV agricultural land will only be supported if:
- The need for the proposed development has been clearly established and there is insufficient lower grade land available;
 - The benefits and/or sustainability considerations outweigh the need to protect such land, when taking into account the economic and other benefits of the BMV agricultural land;
 - The impacts of the proposal upon ongoing agricultural operations have been minimised through the use of appropriate design solutions; and
 - Where feasible, once any development which is supported has ceased its useful life, the land will be restored to its former use.

- 14.13 The Council commissioned a report to review the applicant's approach to agriculture and in particular the impacts of the development on Best and Most Versatile Agricultural Land, this report is attached at Appendix B. A summary of the findings of this report is set out below which should be read in conjunction with the full report. Lincolnshire is home to 10% of English agricultural production. Its combination of climate, soil type and topography make the county ideal for a variety of crops. There are significant proportions of wheat, oilseed rape, sugar beet and potatoes, with the county producing 12% percent of England's arable crops.
- 14.14 Lincolnshire is also home to around 25% of the UK's vegetable production, and 21% of ornamental crop production. This high level of production is vital to the county's economy, generating a Gross Value Added of £446m in 2012. To preserve fresh produce and minimise supply chain distance, highly productive food hubs have built up in the south of the county. The importance of this sector for the local economy is reflected in the number of jobs it generates: if this food supply chain is included alongside food retail and catering in the county, the number of employees exceeds 100,000.
- 14.15 The soils locally are described as Salop Association soils on the west of the site: Slowly permeable seasonally waterlogged reddish fine loamy over clayey, fine loamy and clayey soils associated with fine loamy over clayey soils with slowly permeable subsoils and slight seasonal waterlogging.
- 14.16 Beccles 1 Association soils on the north-west and east of the site: Slowly permeable seasonally waterlogged fine loamy over clayey soils, associated with similar clayey soils Ragdale Association soils on a small area on the northern boundary: Slowly permeable seasonally waterlogged clayey and fine loamy over clayey soils. Some slowly permeable calcareous clayey soils especially on slopes.
- 14.17 Wigton Moor Association soils in the far east: Permeable fine and coarse loamy soils variably affected by groundwater, the drier soils being on slightly raised sites. Generally flat land.
- 14.18 The augering of the site has been undertaken in line with TIN 049 and the MAFF 1988 Guidelines, one auger point per hectare and with occasional soil pits particularly where soil types vary.
- 14.19 Soil types have been laboratory analysed for textural assessment to provide accurate information that can be relied upon in calculating the ALC grade.
- 14.20 At a time when there are both food shortages across the globe and issues of food security, related to climate change and the weaponizing of food during the Ukraine conflict, the loss of productive farmland should be avoided, wherever possible. The NFU confirm that the UK is only 58% self-sufficient in food and the loss of this area of

strong agricultural production is therefore significant. The NFU believes that productivity should increase on UK farms.

- 14.21 Much of the land is arable and the loss to the local farming economy will be significant. Cereals and wider combinable crops are grown locally on similar soils.

Food Security and Food Imports

- 14.22 Nearly half of what we eat in the UK comes from abroad, and two-thirds of that has in recent years come from the EU. The NFU confirm that UK self-sufficiency is only at 58%. With the recent war in Ukraine and the uncertainty of supply of core commodities such as wheat, there have been both supply issues and huge price fluctuations. This has refocused attention on food security in the UK and the need to protect productive farmland from development and long-term decline.

- 14.23 "There are three cornerstones on which a prosperous farming sector must be built and which any government should use to underpin its farming policy. They are boosting productivity, protecting the environment, and managing volatility (source Minette Batters, NFU president). The country must "never take our food security for granted," she said.

- 14.24 The United Kingdom Food Security Report states:- *"Food security is a complex and multi-faceted issue. It is structured around five principal 'themes', each addressing an important component of modern-day food security in the UK. They are as follows:*

- *Global food availability, which describes supply and demand issues, trends and risk on a global scale, and how they may affect UK food supply;*
- *UK food supply, which looks at the UK's main sources of food at home and overseas;*
- *Supply chain resilience, which outlines the physical, economic, and human infrastructure that underlies the food supply chain, and that chain's vulnerabilities;*
- *Household-level food security, which deals with issues of affordability and access to food; and*
- *Food safety and consumer confidence, which details food crime and safety issues."*

- 14.25 The report notes that the biggest medium to long term risk to the UK's domestic production comes from climate change and other environmental pressures like soil degradation, water quality and biodiversity. Wheat yields dropped by 40% in 2020

due to heavy rainfall and droughts at bad times in the growing season. This is an indicator of the effect that increasingly unreliable weather patterns may have on future production. When UK production is reduced, we are more dependent on imported commodities. The war in Ukraine has highlighted the vulnerabilities of such a strategy.

14.26 The relevant ES chapter confirms that a soil survey has not yet been undertaken, but it should be a requirement that this is undertaken before any development commences..

14.27 Cable Route Corridor

“The Cable Route Corridor has not been subject to a soil survey to inform soil handling work for the cable construction. This survey will be conducted via a requirement of the DCO once the precise location of the cable trench path within the Cable Route Corridor is finalised. This approach to Cable Route Corridor surveying is precedented across the neighbouring solar farm projects and others including Sunnica Energy Farm. The soil survey can also record Agricultural Land Classification (ALC) grades for the cable trench path.”

14.28 From viewing the maps included in the report it seems likely that some of the cable route will be BMV. However, irrespective of the land quality there will be issues of concern to farmers and landowners including:-

- Land drainage
- Weed burden
- Biosecurity for plant diseases; and
- Timeliness of soil stripping and storage.

14.29 These matters will need to be addressed satisfactory and appropriate mitigation measure to be put in place if the scheme is to proceed to an acceptable level.

14.30 Soil structure can be significantly damaged during the construction phase of the process, particularly on heavy clay soils. There is inevitably a lot of trafficking of vehicles on the land to erect the panels and if this work is undertaken when soils are wet, there can be significant damage. Much of this damage can be remedied post construction, but not all and it is possible that long term drainage issues occur on the site due to the construction.

14.31 During the construction phase many of the areas will affect soil and water issues. A basic Soil Management Plan should be established as part of the Construction Phase, to minimise the impact on soil resources.

- 14.32 A separate soil management plan should be considered for the cable route to minimise the impact on soil structure, land drainage and ultimately soil quality. Guidance is available in published documents.
- 14.33 There are several largescale Solar PV schemes in Lincolnshire, with others planned or proposed. There are six known solar project NSIP schemes; specifically in relation to impacts on agricultural land. The situation is a moving picture as new proposals come forward from time to time. Most of these sites are proposed on farmland.
- 14.34 Lincolnshire is an agricultural area with substantial areas of land within the Best and Most Versatile category. Much of the non BMV land will be Grades 3b and some 4 but with very little Grade 5.
- 14.35 A county-level assessment should consider scope for connection into the National Grid at the locations proposed by the registered NSIP solar projects above, and with specific consideration of agricultural land impacts.
- 14.36 For a project of this scale there is an impact the project will tie up the land for up to 60 years, there will be an impact. The area is large locally and if the quantities of BMV are as stated then the impact will be reasonably small in BMV terms. Environmental Impact Assessments give guidance on the size and quality of Land Grade that is or can be affected by development proposals.
- 14.37 The loss of such a large area of land would normally be considered as significant at District level, even though the use is 'temporary'. Any permanent loss of land due either to construction or through biodiversity designation may affect this assessment.
- 14.38 A detailed ALC report has been commissioned and whilst some BMV land has been identified, over 90% of the site is found to be Grade 3b. Some areas of BMV have been excluded from development as part of the revised proposals.
- 14.39 The loss of such a large area of land is significant however with little of the land being BMV land the impact would be **negative**.

15. Health and Fire Safety

15.1 Key Policy:

- Policy 10: Supporting a Circular Economy
- Policy S21: Flood Risk and Water Resources
- Policy S53: Design and Amenity
- Policy S54: Health and Wellbeing

- 15.2 Paragraph 1(8) of Schedule 4 to the EIA Regulations requires consideration to be given to the risks of major accidents and disasters, but does not include a definition of these terms. Paragraph 4.4.1 of EN-1 states that ‘energy infrastructure has the potential to impact on the health and well-being (“health”) of the population. Access to energy is clearly beneficial to society and to our health as a whole. However, the construction of energy infrastructure and the production, distribution and use of energy may have negative impacts on some people’s health’.
- 15.3 EN-3 identifies the need for solar to meet Government targets. As such, it has been identified as a critical national priority. Paragraph 3.8.14 identifies the SoS’s approach to non-HRA residual impacts of CNP infrastructure, it states that ‘where there are residual non-HRA impacts, of any sort other than those that present an unacceptable risk to, or unacceptable interference with, human health, national defence or navigation, these are unlikely, in all but the most exceptional cases, to outweigh the urgent need for this type of infrastructure and are therefore unlikely to result in an application being refused’.
- 15.4 Paragraph 3.8.15 goes on to state that ‘as a result, the SoS will take as the starting point for decision-making that such infrastructure is to be treated as if it has met any test requiring a clear outweighing of harm, exceptionality, or very special circumstances within EN-1, EN-5 or any other planning policy’.
- 15.5 Paragraph 3.2.24 of the CLLP, relating to Policy S10 ‘Supporting a Circular Economy’, states that the policy aims to support development proposals which will contribute to the delivery of circular economy principles, including reducing material demands and enable building materials, components and products to be disassembled and re-used at the end of their useful life, along with the incorporating of sustainable waste management onsite.
- 15.6 Part (7) of CLLP policy S53 ‘Design and Amenity’ requires development to avoid adverse impacts associated with noise, dust and air quality, and part (9) requires schemes to minimise the need for resources both in construction and operation of buildings and be easily adaptable to avoid unnecessary waste production. One of the 15 objectives of the CLLP as set out in paragraph 1.5.2, under the heading of ‘Waste’ is ‘To minimise the amount of waste generated across all sectors and increase the re-use, recycling and recovery rates of waste materials’.
- 15.7 Policy S54 seeks to ensure that where any potential adverse health impacts are identified the developer will be expected to demonstrate how these will be addressed and mitigated.

Fire

- 15.8 In recognition of the emerging technology of Battery Energy Storage Systems (BESS) and the challenges this poses to Fire and Rescue Services the National Fire Chiefs

Council circulated a letter to all Chief Fire Officers on the 22 August 2023 drawing attention to the updating of Renewable and low carbon energy Planning Policy Guidance that was updated in August 2023 by the Department of Levelling Up, Housing and Communities to include reference to BESS.

- 15.9 This planning policy guidance encourages planning authorities to consult with their local Fire and Rescue Service as part of formal planning consultations and directing developers to the National Fire Chiefs Council guidance on BESS schemes. The 2023 guidance has recently been updated and being consulted on. From a Lincolnshire perspective whilst it is noted that the document offers more detail around the identified areas, and as such offers developers further support in the planning phase. After completing a gap analysis on the updated guidance, Lincolnshire Fire and Rescue are content that this updated guidance from the National Fire Chiefs Council doesn't conflict with the guidance produced by Lincolnshire Fire and Rescue in 2023, and as such there are no current plans to update the guidance so the details for Tillbridge BESS have been assessed in line will be in-line with current requirements.

From the applicants discussion with the Lincolnshire Fire Service a program of monitoring and risk assessment has been identified which will be necessary once the BESS has been established to ensure it complies with the Outline Battery Management Safety Plan and Emergency Response Plan.

- 15.10 The need for this monitoring and assessment will enable early engagement to ensure the required standards are being complied with; to ensure the BESS is constructed to the correct standards with support from the Fire Service; early development of emergency response plans; familiarisations of the BESS for local fire crews and overview by the Fire Service; development of on-going maintenance and updating risk information; and assurance for local residents and communities that the BESS are being independently inspected and monitored to reduce the risk of a fire.
- 15.11 To enable the Fire and Rescue Service to undertake the necessary monitoring to ensure the BESS is in accordance with the relevant requirement 6(2) a financial contribution is required via a Protective Provision for the Fire Service so that it has sufficient resources in places to undertake monitoring of the BESS connected to this project and potential nine additional BESS connection to other solar NSIP projects that are in the pipeline and if consented are likely to be in construction in similar timeframes and require this initial and on-going maintenance.
- 15.12 The risk of a battery fire in the BESS/substation is rated as 'low' and where the battery storage is itself containerised, thus reducing the risk of damage to the energy storage which may cause fires. An Outline Battery Storage Safety Management Plan has been submitted.

- 15.13 Having reviewed the Outline Battery Storage Safety Management Plan the Council is satisfied that the details meet the requirements the Council set out in Fire Safety Position statement issued at the pre-application stage of the process.
- 15.14 However, without further specific details, e.g. detailed plans etc, the response is based very much on the details within the application documents and note that a requirement is proposed for details of a fire safety plan to be submitted and approved by the relevant planning authority. The Fire Service wish to continue to be engaged and views sought during the examination and reserve the right to comment on specific details of the fire strategy including drafting of suitably worded requirements to ensure the correct level of information is available and assessed before any development commences. In addition to ensure battery energy storage system (BESS) risk of fire is minimised to reduce the risk to a level that makes the development acceptable in respect of safety and associated risk of pollution should a thermal outbreak take place. To achieve this it would be necessary for the applicant to enter into a Protective Provisions arrangement with Lincolnshire Fire and Rescue within the DCO to ensure the Fire Service has adequate resources to regularly inspect the BESS to ensure all the appropriate mitigation measures are in place and effective for the duration of the development. With this measures in place the impact of the development on fire safety and pollution is assessed to be **neutral**

Public Health

- 15.15 Public Health comments have focussed on the Environmental Impact Assessment (EIA) Scoping Report that informs the eventual Environmental Statement, particularly the human health chapter. These comments are notwithstanding any implications should the development be reducing availability of productive, high quality, farmland that is currently available for growing food to sustain the nation.
- 15.16 It is important that the cumulative effects of this development and others in the locality, county, and region are considered and that mental health effects, as well as physical health effects, are reflected.
- 15.17 Welcome the dedicated human health chapter, which should draw together all potential negative and positive human health impacts (including from other chapters such as landscape and visual amenity, noise, and air quality) into one place, along with proposed mitigation measures. But it should also highlight where positive enhancements can be made should the development go ahead. Our preference would be that a comprehensive health impact assessment (HIA) is conducted with public and stakeholder engagement and is provided for the commencement of the examination for consideration by the Examining Authority.
- 15.18 To establish the baseline, the applicant should refer to the Lincolnshire Joint Strategic Needs Assessment (JSNA) and the updated Joint Health and Wellbeing Strategy for

Lincolnshire (2024), rather than the 2018 version that is referenced. Information contained on Fingertips and Local Health websites will also be helpful. Human health should be assessed using evidence (from published research and best practice guidance, etc.) wherever possible as opposed to entirely subjective, professional judgement. It is recognised that many likely and potentially significant issues associated with the proposed development will be based on a preliminary judgment of significance.

15.19 Issues of concern related to solar impacting on health are as follows:

- Potential health impacts associated with electromagnetic fields around substations, powerlines, and cables. It needs to be demonstrated that potential actual exposure to radiation (which includes electromagnetic fields) will comply with exposure limits developed by the International Commission on Non-Ionizing Radiation Protection. We cannot see that evidence on potential exposure to radiation has been included in the ES which needs to be updated to capture this.
- Protection from fire that could be caused by faulty or overloaded on-site battery storage pending transfer to the National Grid.
- Scope for significant adverse visual effects resulting from the introduction of solar panels and associated infrastructure. The potential effects on mental health and wellbeing because of any reduction in landscape amenity and the potential sense of enclosure should be considered, and that this includes reference to how potential impacts across the range of identified sensitive receptors could change over time (i.e. during the different stages of the development and as landscaping matures) and during worst case periods.

15.20 Therefore, on balance the Council considers the impacts associated with matters on health are assessed to be **neutral**.

16. Ecology

16.1 Key Policies:

- Policy S60: Protecting Biodiversity and Geodiversity
- Policy S61: Biodiversity Opportunity and Delivering Measurable Net Gains.
- Policy S62: Area of Outstanding Natural Beauty and Areas of Great Landscape Value

16.2 Section 5.4 of NPS EN-1 covers biodiversity and geological conservation. The government's policy for biodiversity in England is set out in the Environmental Improvement Plan 2023, the National Pollinator Strategy and the UK Marine Strategy. The aim is to halt overall biodiversity loss in England by 2030 and then reverse loss by

2042, support healthy well-functioning ecosystems and establish coherent ecological networks, with more and better places for nature for the benefit of wildlife and people. Healthy, naturally functioning ecosystems and coherent ecological networks will be more resilient and adaptable to climate change effects. Failure to address this challenge will result in significant adverse impact on biodiversity and the ecosystem services it provides (5.4.2).

- 16.3 Paragraph 5.4.39 states that the 'SoS should have regard to the aims and goals of the government's Environmental Improvement Plan 2023 and any relevant measures and targets, including statutory targets set under the Environment Act or elsewhere'. Paragraph 5.4.41 goes on to state that '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 SoS may take account of any such net benefit in cases where it can be demonstrated'.
- 16.4 '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 SoS will give significant weight to any residual harm' (5.4.43).
- 16.5 EN-1 states that when considering proposals the SoS should maximise reasonable opportunities for building-in beneficial biodiversity or geological features as part of good design and give appropriate weight to environmental and biodiversity enhancements. As this can help towards delivering biodiversity net gain.
- 16.6 CLLP Policy S60 (Protecting Biodiversity and Geodiversity) states that development should protect, manage, enhance and extend the ecological network of habitats, minimize impacts on biodiversity and deliver measurable and proportionate net gains in biodiversity in accordance with Policy S61. There must be wholly exceptional reasons, and a suitable compensation strategy delivered in the event of the development causing the loss, deterioration or fragmentation of irreplaceable habitats, including ancient woodland and aged or veteran trees. This policy also states that any 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. This policy states that development should seek to preserve, restore and re-create 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.
- 16.7 CLLP Policy S61 (Biodiversity Opportunity and Delivering Measurable Net Gains) states that 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 and the Local Nature Recovery Strategy, 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. The policy states that proposals for major and large-scale development should seek to deliver wider environmental net gains where feasible.

- 16.8 CLLP Policy S62 (Area of Outstanding Natural Beauty and Areas of Great Landscape Value), states that proposals within, or within the setting of, AGLV should conserve and enhance the qualities, character and distinctiveness of locally important landscapes and protect, and where possible enhance, specific landscape, wildlife and historic features which contribute to local character and landscape quality.
- 16.9 The Council has reviewed the submitted information concerning the assessment of potential ecological effects of the proposed development. (APP-040): 6.1 Chapter 9 Ecology and Nature Conservation and associated appendices set out the the biodiversity and ecological elements of the Applicant's Environmental Statement. The Council considers that information included in (APP-040) and its appendices provides a reasonable summary of ecological interest features and likely significant effects, mitigation, and residual effects of the proposed development.

Statutory Designated Sites

- 16.10 There are no internationally important sites designated for biodiversity within 10km of the proposal, however, the cable route crosses the River Trent meaning it is in hydrological continuity with the Humber Estuary SSSI, SAC and Ramsar site. The Applicant considers the potential impacts on designated features of the Humber Estuary in (APP-094).
- 16.11 There is one site nationally important site (Ashton's Meadow SSSI in Nottinghamshire) designated for biodiversity importance within the 2km of the proposal. Appropriate mitigation for potential construction effects including from vehicle pollutants and dust deposition is proposed to ensure the features of the SSSI are not impacted.

Non-Statutory Designated Sites

- 16.12 There are 13 non-statutory sites designated for biodiversity importance within 2km of the Order limits. The locations of statutorily designated sites is set out in Table 9.9 in (APP-040) and their locations in relation to Order Limits are displayed in (APP-165:) 6.3 Figure 9-2: Non Statutory Sites Designated For Nature Conservation Value. Where necessary appropriate avoidance and mitigation measures are proposed.

16.13 The Council notes that (APP-040) Para 9.8.3 states that *“The Scheme design has evolved to avoid all sites statutorily designated for their biodiversity importance and to avoid or minimise impacts on sites that are non-statutorily designated for their biodiversity importance. Measures embedded within the Scheme design will ensure that designated sites are not adversely impacted during construction, operation or decommissioning e.g., through siting construction routes away from designated sites, incorporating suitable buffer zones and erection of temporary construction fencing to avoid incursion into exclusion zones.”* The Council welcomes this approach.

Habitats Regulations

16.14 The proposed cable route crosses the River Trent and cables are proposed to be installed via non-intrusive methods under the riverbed at a depth of between 5m and 25m. The River Trent is in hydrological continuity with the Humber Estuary SSSI, SAC and Ramsar site and potential impacts of the development on designated features, and in particular River and Sea Lamprey, are considered in (APP-094): Habitats Regulations Assessment.

16.15 The report concludes that there will be no Likely Significant Effect on river or sea lamprey. The Council has no reason to disagree with the Applicant’s conclusions, however, the ExA as Competent Authority will need to satisfy itself that sufficient information has been submitted by the Applicant to enable this conclusion to be reached.

Existing Biodiversity Value

16.16 A range of both desk-based studies and field surveys has been undertaken to establish the suite of habitats present within the DCO site boundary. These are described in APP-040 and associated appendices. A suite of habitat types of local importance and above were identified. The Council is of the opinion that the level of survey effort, survey methods and desk-study research undertaken to identify important habitats and establish the baseline biodiversity value is appropriate.

16.17 In addition to the above, the Applicant has worked collaboratively on ecological data collection with the developers of other nearby large scale solar developments. The Council commends the Applicant for this approach as the use of a common datasets and methodologies will help to ensure consistency of ecological data between applications. APP-040 identifies a range of ecological impacts. These potential impacts include both permanent and temporary or damage to habitats, including the potential for the spread of invasive non-native species (INNS). The Project is reliant on a package of avoidance, mitigation and enhancement measures to address the ecological impacts. To this end, the Applicant has prepared a Framework Construction Environmental Management Plan (CEMP) a Framework Landscape and Ecological Management Plan (LEMP), a Framework Operational Environmental

Management Plan (OEMP) and a Framework Decommissioning Environmental Management Plan (DEMP). Measures proposed in the CEMP, LEMP, OEMP and DEMP will need to be secured in the DCO.

- 16.18 A Register of Environmental and Commitments (APP-209) has been prepared which provides a helpful summary of the mitigation identified for the Project including embedded mitigation measures, which have been designed into the project. The Council agrees with the Applicant's approach and considers that impact avoidance and mitigation measures are appropriate and that they should be secured in the DCO.

Protected and Priority Species

- 16.19 A suite of both desk-based studies and field surveys has been undertaken to identify protected and priority species likely to occur within the DCO Site Boundary. These are described in (APP-040) and associated appendices. The Council has reviewed the application in accordance with Natural England's standing advice for protected species. Having considered (APP-040) the Council considers that the survey methods used, and the survey effort deployed were appropriate.
- 16.20 Without mitigation, the proposed development has the potential to result in negative effects on the populations of a number of species / species groups. Impact avoidance measures, mitigation measures and enhancement measures are proposed to avoid significantly negative effects. Where protected species will be affected by the proposed development, a licence from Natural England will be sought and mitigation will be secured as part of the licensing process. The Council agrees with the approach and considers that impact avoidance and mitigation measures currently proposed are appropriate and that they should be secured in the DCO.

Biodiversity Net Gain (BNG)

- 16.21 The delivery of at least 10% BNG is not currently mandatory for NSIPs however it is considered best practice. Given the scale and nature of the proposed development the Council will expect the project to deliver significantly more than 10% Biodiversity Net Gain (BNG). The Applicant has set out their approach to BNG in (APP-226): 7.14 Biodiversity Net Gain Report and makes a voluntary commitment to providing a 10% net gain in biodiversity (Para 1.4.6). This document identifies the opportunities of the Scheme to deliver BNG and states that the detailed design has not yet been finalised.
- 16.22 Based on current plans, the Scheme is predicted to result in a net gain of 64.55% for area-based habitat units, 17.33% for hedgerow units, and 22.94% for watercourse units. The Council notes however that the trading rules set out in the Statutory BNG metric user guide are not currently being met. This is specifically in relation to

medium distinctiveness habitats due to the loss of arable field margins and rural trees. The Applicant has set out a case justifying the failure to meet the trading rules in relation to arable field margins which the Council considers acceptable given the predicted increase in other grassland habitat types.

16.23 The Council encourages the applicant to continue to make progress with this work to provide confirmation of what the project will deliver for biodiversity at the earliest possible stage. LCC also encourages the Applicant to work with other developers and stakeholders in the area to identify opportunities to deliver BNG strategically. The Council welcomes ongoing engagement with the Applicant in relation to BNG.

16.24 The Council welcomes the Applicant's commitment to delivering BNG. These commitments will need to be secured in the DCO and the applicant will need to demonstrate that the commitments made to delivering BNG are achievable.

Cumulative Effects

16.25 There are a number of development proposals of varying scales in the vicinity of this proposal. This includes other NSIP scale solar energy developments. A list of projects is included in APP-124 and the locations of other nearby solar NSIP proposals are presented in APP-125. A detailed assessment of the cumulative impacts of these proposals on sensitive ecological receptors in the area will be required.

16.26 Details of the applicant's approach to cumulative effects are presented in APP-049. The applicant's assessment concludes that there will be no significant adverse effects on ecology arising from cumulative impacts. In addition to this, APP215, 216 and 217 reports on the interrelationships of nearby solar NSIPs.

16.27 The Council welcomes the clearly set out approach to this complex but important area of the assessment and considers the applicant's approach to the assessment of Cumulative Effects appropriate.

Ecological Steering Group

16.28 The Council suggests that consideration is given to the establishment of an Ecological Steering Group or similar for the Proposed Development. This group should consist of key ecological stakeholders (both statutory and non-statutory). The remit of the group would be to receive updates on project progress and to advise on issues encountered during construction as well as to refine delivery of required mitigation and enhancement measures. Meetings should be held at an appropriate frequency to ensure good communication between both the developer and stakeholders.

16.29 Establishing such a group is also likely to yield benefits by assisting with the identification of opportunities for strategic working with other solar NSIP developers in the vicinity. This is particularly the case in relation to the delivery of BNG where strategic delivery could result in significant benefits for species groups such as ground nesting birds.

Overall Impact of the Development on Biodiversity and Ecology

16.30 The Applicant's Environmental Statement identifies a series of potential impacts on ecology arising from the development. These range from minor adverse impacts to significant adverse impacts depending on the species, habitat or site concerned. Measures to address these impacts are proposed and should be secured in the DCO. If the mitigation measures are secured and delivered as proposed the Council considers that the development would have a **minor negative** impact on ecology.

16.31 With regard to BNG, the Applicant has signalled an intention to deliver BNG. Levels currently being predicted are subject to confirmation of final scheme designs, however, if these levels are delivered, the Council considers that overall, the development could have a **positive** impact in terms of BNG. Commitments to deliver a minimum of 10% BNG should be secured in the DCO.

17. Other Topics

17.1 The Council may wish to make further representations as appropriate during the examination and at issue specific hearings relating to matters that are not contained within this LIR particularly with regard to the draft DCO. Therefore, the comments contained above are provided without prejudice to the future views that may be expressed by the Council in its capacity as an Interested Party in the examination process.

Summary

17.2 This LIR has undertaken an assessment of the likely issues and impacts that the Council considers will arise from the construction and operation of the Tillbridge Solar project. The LIR has identified the predicted positive, neutral and negative effects during the construction and operational stage based on the information that is available at the time the LIR was prepared.

Appendix A: Landscape and Visual Review of the Development Consent Order (DCO) Application for Tillbridge Solar

Appendix B: Soils and Agricultural Land Classification Report for Tillbridge Solar



LANDSCAPE AND VISUAL REVIEW
OF THE DEVELOPMENT CONSENT ORDER (DCO) APPLICATION
FOR THE TILLBRIDGE SOLAR PROJECT
FOR
LINCOLNSHIRE COUNTY COUNCIL

October 2024

AAH Planning Consultants
1 Bar Lane, York

Landscape & Visual Review
Lincolnshire County Council, Tillbridge Solar Project

Landscape and Visual Review

Quality Assurance – Approval Status

Version	Date	Prepared by	Checked by	Approved by	Version Details
1	30/09/2024	Oliver Brown	John Brodie	Oliver Brown	Initial Draft for comment
2	10/10/2024	Oliver Brown	John Brodie	Oliver Brown	Issued to LCC

Landscape and Visual Review

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Appendices:

Appendix A: Previous AAH Consultation documents:

- AAH TM01 Scoping 25-10-22
- AAH TM02 Viewpoint Comments 24-11-22
- AAH TM03 Viewpoint Comments 01-03-23
- AAH TM04 PIER Comments 04-07-23

Appendix B: Landscape Institute Technical Guidance Note 1/20 (10 Jan 2020): *Reviewing Landscape and Visual Impact Assessments (LVIAs) and Landscape and Visual Appraisals (LVAs)*.

1.0 Introduction

Purpose of the Landscape and Visual Review

- 1.1 AAH Consultants (**AAH**) has been commissioned to prepare a review of the Landscape and Visual elements of the Development Consent Order (**DCO**) Application for the Tillbridge Solar Project (the '**Development**'), submitted to the Planning Inspectorate in April and accepted for Examination in May 2024, on behalf of Lincolnshire County Council (**LCC**). This follows on from AAH providing landscape and visual consultation with the developer and design team on behalf of LCC at the Pre-Application stage of the project, with AAH correspondence (in the format of Technical Memos) provided within **Appendix A**.
- 1.2 The purpose of this report is to carry out an independent review of the landscape and visual elements of the DCO submission, with a focus on a review of the Landscape and Visual Impact Assessment (**LVIA**) chapter of the Environmental Statement (**ES**), which is based on the guidance provided within the Landscape Institute *Technical Guidance Note 1/20 (10 Jan 2020): Reviewing Landscape and Visual Impact Assessments (LVIAs) and Landscape and Visual Appraisals (LVAs)*, which is included within **Appendix B** for reference.
- 1.3 This report will be utilised to inform and guide LCC input into further stages of work through the Examination of the application, which is for a Nationally Significant Infrastructure Project (**NSIP**). This is likely to include input into Local Impact Reports (**LIR**) and Statements of Common Ground (**SoCG**), as well as formal requests for information or responses to questions that may be required through the Examination or at any associated hearings.

About AAH Planning Consultants and The Author

- 1.4 AAH Consultants comprises professional and accredited individuals. Our consultants are Chartered Members of the Landscape Institute (**CMLI**) and the Royal Town Planning Institute (**RTPI**).
- 1.5 This review has been prepared by Oliver Brown, who is a Chartered Landscape Architect within AAH with over 20 years' experience in landscape design and assessment, and considerable experience in landscape and visual matters associated with solar NSIP and associated DCO Applications.

Relevant Documents

1.6 The Landscape and Visual review is based on the following documents (including sub-appendices) submitted to the Planning Inspectorate, which are available at: <https://national-infrastructure-consenting.planninginspectorate.gov.uk/projects/EN010142/documents>

- **Volume 2: Plans**
 - Location Plan EN010142/APP/2.1
 - Land and Crown Land Plans EN010142/APP/2.2
 - Works Plan EN010142/APP/2.3
 - Streets, Rights of Way and Access Plans EN010142/APP/2.4
 - Hedgerow Removal Plans EN010142/APP/2.9
- **Volume 3: Draft Development Consent Order**
 - Draft Development Consent Order EN010142/APP/3.1
- **Volume 6: Environmental Impact Assessment**
 - Environmental Statement Chapter 0: Contents and Glossary EN010142/APP/6.1
 - Environmental Statement Chapter 1: Introduction EN010142/APP/6.1
 - Environmental Statement Chapter 2: Scheme Location EN010142/APP/6.1
 - Environmental Statement Chapter 3: Scheme Description EN010142/APP/6.1
 - Environmental Statement Chapter 4: Alternatives and Design Evolution EN010142/APP/6.1
 - Environmental Statement Chapter 5: EIA Methodology EN010142/APP/6.1
 - Environmental Statement Chapter 9: Ecology and Nature Conservation EN010142/APP/6.1
 - Environmental Statement Chapter 12: Landscape and Visual Amenity EN010142/APP/6.1
 - Environmental Statement Chapter 16: Transport and Access EN010142/APP/6.1
- **Environmental Statement Appendices**
 - Appendix 12-1 – LVIA Legislation, Policy and Guidance EN010142/APP/6.2
 - Appendix 12-2 – LVIA Methodology EN010142/APP/6.2
 - Appendix 12-3 – LVIA Landscape Baseline EN010142/APP/6.2
 - Appendix 12-4 – LVIA Representative Viewpoint Descriptions EN010142/APP/6.2
 - Appendix 12-5 – LVIA Assessment of Landscape Effects EN010142/APP/6.2
 - Appendix 12-6 – LVIA Assessment of Visual Effects EN010142/APP/6.2
 - Appendix 12-7 – Arboricultural Impact Assessment (Part 1 of 3) EN010142/APP/6.2
 - Appendix 12-7 – Arboricultural Impact Assessment (Part 2 of 3) EN010142/APP/6.2
 - Appendix 12-7 – Arboricultural Impact Assessment (Part 3 of 3) EN010142/APP/6.2
- **Environmental Statement Figures**
 - Figure 2-2 – Environmental Constraints Plan EN010142/APP/6.3
 - Figure 3-1 – Indicative Principal Site Layout Plan EN010142/APP/6.3
 - Figure 3-2 – Indicative Solar Station and BESS Station Layout EN010142/APP/6.3
 - Figure 3-3 – Indicative Solar Station and BESS Station Elevation EN010142/APP/6.3
 - Figure 3-4a – Indicative Substation A Layout EN010142/APP/6.3
 - Figure 3-4b – Indicative Substation A Elevation EN010142/APP/6.3
 - Figure 3-5a – Indicative Substation B Layout EN010142/APP/6.3
 - Figure 3-5b – Indicative Substation B Elevation EN010142/APP/6.3
 - Figure 3-6 – Indicative Construction Compound Locations EN010142/APP/6.3

- Figure 3-7 – Access Locations EN010142/APP/6.3
- Figure 3-8 – Principal Site Internal Cable Route Corridor EN010142/APP/6.3
- Figure 3-9 – Cable Route Corridor Width Reduction from Preliminary Environmental Information Report to ES EN010142/APP/6.3
- Figure 3-10 – Typical Trenched Crossings Cross Sections EN010142/APP/6.3
- Figure 3-11 – Indicative Cable Route Corridor Trenched and Trenchless Crossing Locations EN010142/APP/6.3
- Figure 3-12 – Typical Trenchless Crossings Cross Sections EN010142/APP/6.3
- Figure 3-13 – Typical 400kV Jointing Bay EN010142/APP/6.3
- Figure 3-14 – Indicative Construction Compound Layout EN010142/APP/6.3
- Figure 12-1 – Initial Site Appraisal Plan (Originally Issued June 2022) EN010142/APP/6.3
- Figure 12-2 – Initial Site Constraints and Opportunities Plan (Originally Issued June 2022) EN010142/APP/6.3
- Figure 12-3 – LVIA Study Area EN010142/APP/6.3
- Figure 12-4 A-H – Zones of Theoretical Visibility EN010142/APP/6.3
- Figure 12-4 I-J: ZTVs Combined Solar Panels, Solar Stations/BESS and Substations EN010142/APP/6.3
- Figure 12-5 – Topography and Watercourses EN010142/APP/6.3
- Figure 12-6 – Designations with Relevance to LVIA EN010142/APP/6.3
- Figure 12-7 – Public Rights of Way EN010142/APP/6.3
- Figure 12-8 – National Landscape Character Areas EN010142/APP/6.3
- Figure 12-9 – Regional Landscape Character Areas EN010142/APP/6.3
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- Figure 12-11 – Local Landscape Character Areas (Defined by the Applicant) EN010142/APP/6.3
- Figure 12-12 – Representative LVIA Viewpoints: Principal Site Only (With Bare Earth ZTV) EN010142/APP/6.3
- Figure 12-13 – A-P Reference Viewpoint Photography EN010142/APP/6.3
- Figure 12-13 – Q-CC Reference Viewpoint Photography EN010142/APP/6.3
- Figure 12-14 – A-J Visualisations (Photomontages) EN010142/APP/6.3
- Figure 16-2 – Site Access Plan – Principal Site and Cable Route Corridor EN010142/APP/6.3
- Figure 16-3 – Proposed HGV Routes – Principal Site and Cable Route Corridor EN010142/APP/6.3
- Figure 16-10 – Abnormal Indivisible Load Routes – Principal Site and Cable Route Corridor EN010142/APP/6.3
- Figure 18-1 – Cumulative Developments EN010142/APP/6.3 Reg 5(2)(a)
- Figure 18-2 – Combined ZTV of the Schemes Solar Panel Area Barrier ZTV within 5km Buffer and West Burton’s Solar Panel Area ZTV Within 5km Buffer EN010142/APP/6.3
- Figure 18-3 – Combined ZTV of the Schemes Solar Panel Area Barrier ZTV within 5km Buffer and Cottam’s Solar Panel Area ZTV Within 5km Buffer EN010142/APP/6.3
- Figure 18-4 – Combined ZTV of the Schemes Solar Panel Area Barrier ZTV within 5km Buffer and Gate Burton’s Solar Panel Area ZTV Within 5km Buffer EN010142/APP/6.3
- **Environmental Statement Non-Technical Summary**
 - Non-Technical Summary EN010142/APP/6.4
- **Volume 7: Other Documents**
 - Planning Statement EN010142/APP/7.2
 - Design and Access Statement EN010142/APP/7.3
 - Outline Design Principles Statement EN010142/APP/7.4

- Framework Construction Environmental Management Plan EN010142/APP/7.8
- Framework Operational Environmental Management Plan EN010142/APP/7.9
- Framework Decommissioning Environmental Management Plan EN010142/APP/7.10
- Framework Public Rights of Way Management Plan EN010142/APP/7.16
- Framework Landscape and Ecological Management Plan (Part 1 of 3) EN010142/APP/7.17
- Framework Landscape and Ecological Management Plan (Part 2 of 3) EN010142/APP/7.17
- Framework Landscape and Ecological Management Plan (Part 3 of 3) EN010142/APP/7.17

Previous Consultation

1.7 As part of the DCO process, as stipulated by *The Planning Act 2008 (PA2008)*, AAH have carried out pre-application landscape and visual consultation with the applicant and relevant members of their design team, on behalf of LCC, over approximately a 12-month period. This has included discussion and consultation on:

- Expectations of the LVIA, including content and reflection of current best practice and guidance
- LVIA Methodology;
- ZTV parameters;
- Study Area extents (distance);
- Viewpoint quantity and locations;
- Accurate Visual Representations (AVRs), including the quantity and location, as well as type and Level.
- Mitigation Measures/Landscape Scheme/Site Layout;
- Cumulative landscape and visual effects, including identification of sites/projects; and
- Residential Visual Amenity Assessment (RVAA) if there are residential properties with receptors likely to experience significant effects to their visual amenity.

1.8 Section 12.5 and Tables 12-2 and 12-3 of the LVIA summarise consultation carried out, and for additional landscape and visual matters, AAH have subsequently issued four Technical Memos (**AAH TMs**) summarising comments and consultation through the Pre-application period, including a focus on proposed viewpoints and review of the Preliminary

Environmental Information Report (**PEIR**). For reference, the AAH Technical Memos from the Pre-Application stage are included within **Appendix A**.

2.0 Presentation of the LVIA

The following section provides a review of the presentation of the LVIA, based on the following criteria (where applicable):

- *Is the LVIA appropriate and in proportion to the scale and nature of the proposed development;*
- *Are findings of the assessment clearly set out and readily understood;*
- *Is there clear and comprehensive communication of the assessment, in text, tables and illustrations;*
- *Are the graphics fit for purpose and compliant with other relevant guidance and standards; and*
- *Are landscape and visual effects considered separately;*
- *Are receptors and all likely effects comprehensively identified;*
- *Does the LVIA display clarity and transparency in its reasoning, the basis for its findings and conclusions; and*
- *Is there a clear and concise summation of the effects of the proposals.*

LVIA Chapter

- 2.1 The LVIA and associated figures, appendices and documents provide a thorough analysis of landscape and visual effects of the Development, and the level of information and detail is appropriate for the scale and type of development. The assessment is detailed and laid out in a logical manner, and the process of assessment is thorough and well explained. It has been carried out to best practice and guidance, primarily the *Guidelines for Landscape and Visual Impact Assessment (GLVIA3)* by the *Landscape Institute*, by a team of competent Chartered Landscape Architects.
- 2.2 The LVIA clearly draws a distinction between **landscape effects** and **visual effects**, with the main chapter focussing on likely '**significant**' effects. Paragraph 12.1.3 clarifies *major* or

moderate effects generally being considered ‘significant’, which is aligned with standard practice and is typical for LVIAs .

- 2.3 The LVIA presents an assessment of a ‘worst case’ scenario of the Development, based on design parameters presented in *Chapter 3: Scheme Description*. Paragraph 12.3.2 of the LVIA clarifies the ‘Rochdale Envelope’ approach has been applied with the maximum, or minimum, design parameters being assessed, which aligns with an assessment of ‘worst case’. However, if proposed mitigation areas and existing retained vegetation proposals are changed in later, detailed design stages, the findings of the LVIA are likely to also change. Landscape mitigation, and vegetation retention and protection, needs to be clarified and guaranteed as the assessment relies heavily upon it to mitigate the effects of the Development.
- 2.4 The LVIA assesses landscape and visual effects at four main phases: **construction; year 1, year 15 and decommissioning**. These phases are detailed within the section of the LVIA on Assessment Scenarios (Paragraphs 12.3.6 to 12.3.13 of the LVIA). The LVIA considers the Development in isolation, but also **cumulatively** with similar type and scale schemes in the local area (notably recently consented Cottam Solar and Gate Burton Solar schemes, and the proposed West Burton Solar scheme which is still awaiting a decision following the close of the DCO Examination).

LVIA Appendices

- 2.5 The Appendices produced as part of the LVIA provide very detailed supporting information relating to the assessment. The appendices are clearly laid out and easy to follow and locate pertinent detailed information relating to the main chapter. The appendices are listed within section 12.1.8 of the LVIA, and are referenced throughout the report to support the findings and provide additional information.

LVIA Figures

- 2.6 The Figures produced as part of the LVIA are appropriate in the level of detail provided and clarity of information presented. The figures are clearly listed within section 12.1.9 of the LVIA, and are referenced throughout the report to support the findings.

3.0 Methodology and Scope

The following section provides a review of the LVIA Methodology based on the following criteria (where applicable):

- *Has the LVIA been prepared by ‘competent experts’;*
- *Is the methodology in accordance with relevant guidance and meets the requirements of the relevant Regulations;*
- *Does the methodology and scope of the LVIA meet the requirements agreed in discussions at the pre-application stage during scoping and consultation;*
- *Has the methodology been followed in the assessment consistently;*
- *Are the levels of effect clearly defined, and have thresholds and approach to judging significance been clearly defined;*
- *Is detail about various development stages provided and appropriately assessed;*
- *Have cumulative landscape and visual effects been addressed.*

LVIA Methodology

- 3.1 The LVIA Methodology is presented in Section 12.4 of the LVIA and *Appendix 12-2: LVIA Methodology*. Reference is made in section 12.4.21 to industry best practice, including GVLIA3. It clarifies in Section 12.4.22 compliance with GVLIA3 guidance by assessing both **landscape effects** and **visual effects** as interrelated but separate components.
- 3.2 The process and stages of assessment are clearly presented, including a baseline assessment, the detailing and review of the design, assessment of sensitivity (by assessing value and susceptibility), an assessment of magnitude of impact (in relation to size, scale, geographical extent, duration and reversibility) of the development on the baseline conditions, and a determination of the significance of effects at all phases of the scheme (construction, year 1, year 15 and decommissioning).
- 3.3 The study area selection and establishment are explained in detail within paragraphs 12.4.8 to 1.4.18 of the LVIA. The Study area is illustrated in Figure 12-3. The radius of the study

area of 5km for the principal site and 1km along the cable route are justified and appropriate.

- 3.4 The baseline conditions have been determined following a mix of desk and field studies alongside consultation with appropriate consultees. Desk research has included the prevailing policy framework and fieldwork carried out by qualified (Chartered) and experienced landscape architects.
- 3.5 The methodology is clear, and sections 1.2 and 1.3 of *Appendix 12-2* clarify how landscape and visual sensitivity is determined (by combining judgements on value and susceptibility). Tables provide criteria for assessment of value, and susceptibility, and subsequently how these have been combined to provide a judgement on sensitivity.
- 3.6 Tables 1-7 and 1-8 of *Appendix 12-2* provide clear indicative criteria of the assessment of magnitude of landscape and visual effects. Table 1-9 of *Appendix 12-2* provides a matrix to determine the classification of landscape and visual effects, by combining the sensitivity of the receptor with magnitude of change. The utilisation of professional judgement is promoted within the methodology, should an effect be different to that presented within Table 1-9. Significant effects are generally identified as major and moderate, which is consistent with accepted practice. The methodology confirms that significant effects can be *adverse* or *beneficial*, and that effects assessed as *minor, negligible and neutral* are 'not significant'.
- 3.7 The assessment methodology has been carried through into the main assessment and used consistently.

ZTV Methodology

- 3.8 The process of modelling Zones of Theoretical Visibility (ZTVs) is described within paragraphs 12.4.12 and 12.4.13. These paragraphs are not explicit regarding what parameters the proposals have been modelled to and it has been assumed that the ZTV is generated using the maximum parameters provided within *Chapter 3: Scheme Description*, as this would provide a 'worst case' ZTV. However, this needs to be clarified.

Visualisation Methodology

The process of delivering visualisations is presented within section 1.7 of *Appendix 12-2*, which states that they were prepared in accordance with the Landscape Institute *TGN 06/19 Visual Representation of Development Proposals*. However, this is not explicit regarding what parameters the proposals have been modelled to. Therefore, it has been assumed that the photomontages have been presented to the maximum allowed parameter heights, and the proposals modelled and presented using visualisations generated with the maximum parameters provided within *Chapter 3: Scheme Description*, as this would provide a 'worst case' visualisation. However, this needs to be clarified.

4.0 Appraisal of Landscape Baseline and Effects

The following section provides a review of the Landscape Baseline and Effects, based on the following criteria (where applicable):

- *Has the methodology been followed in the landscape assessment?*
- *Are all landscape receptors and all likely effects comprehensively identified and assessed?*
- *Has the value and susceptibility of landscape resources been appropriately addressed and at appropriate scales (e.g., site, local, regional, and national)?*
- *Is there a clear and concise summation of the landscape effects of the proposals? and*
- *Are potential cross-over topics, such as heritage or ecology, addressed?*

Landscape Baseline

- 4.1 The Landscape Baseline is considered in section 12.6 of the LVIA, with Figures 12-5 to 12-11 illustrating the Scheme Location and Order limits. The Site covers 1,670 hectares of predominantly agricultural land, which includes 1,350 hectares for the Principal Site (containing panels and associated infrastructure) and 320 hectares for the Cable Route Corridor.
- 4.2 The baseline follows the LVIA methodology and begins by describing the underlying landscape conditions identifying the characteristics and elements of the Site and study area. This is summarised in the LVIA chapter and further detail is provided in Appendix 12-3. Paragraphs 12.6.4 to 12.6.18 provide a clear narrative on the existing landscape and visual baseline of the Site, and this is followed by a summary of the baseline of the Principal Site (5km study area) in paragraphs 12.8.19 to 12.8.31, with the cable route corridor covered in paragraphs 12.6.32 to 12.6.39. Two relevant Areas of Great Landscape Value (AGLV) are identified in paragraph 12.6.44 (Lincoln Cliff and an area south of Gainsborough) and the LVIA acknowledges that these areas are “*subject to a greater level of policy protection*”.
- 4.3 The LVIA acknowledges the generally flat, rural and expansive character of the Site and Study area, however, it also notes the rising landform of the Lincoln Cliff, directly to the east,

which creates a backdrop to views from the west, and also a raised vantage point for panoramic views across the Site and the landscape looking to the west.

- 4.4 The baseline landscape character identified within published character assessments is considered in detail from paragraphs 12.6.55 to 12.6.74 and illustrated in Figures 12-8, 12-9 and 12-10. However, these assessments, which include National Character Areas and District Level assessment, are all at a large scale. Therefore, in line with guidance within GLVIA3, and a request at the pre-application stage: more detailed, or fine grain, assessments have been carried out as part of the LVIA. Subsequently, a Local Landscape Character Assessment identifies local landscape character areas defined by the client, and this is summarised within paragraphs 12.6.96 to 12.6.100 and Table 12-4 of the LVIA. The justification and process for this finer grained landscape character assessment is also provided within paragraphs 12.6.96 and 12.6.97.
- 4.5 This process, undertaken by the applicant, resulted in thirteen Local Landscape Character Areas (LLCAs) being identified as landscape receptors for the assessment of effects on them by the Development. These LLCAs are generally based on the character areas in the *West Lindsey Landscape Character Assessment (1999)*, but many of these character areas have been reduced further into a finer grain to provide an increased and improved level of detail for the landscape receptors more compatible with the current landscape baseline as defined by the LVIA author.
- 4.6 Further detail of the landscape baseline is provided within Appendix 12-3: LVIA Landscape Baseline, with the LVIA chapter providing a clear summary.

Landscape Assessment

- 4.7 The Landscape Assessment is detailed within *Appendix 12-5: LVIA Assessment of Landscape Effects*; which includes a clear assessment of Value and Susceptibility, and subsequently the Sensitivity of the landscape receptors, which is aligned with the criteria provided within the methodology. The landscape assessment is summarised within section 12.8 of the LVIA, with residual landscape effects (following the implementation of mitigation) summarised within section 12.10 of the LVIA.

- 4.8 As agreed at the pre-application stage, the National Character Areas have not been assessed and are referred to for context only. In line with the methodology, the assessment of the landscape effects considers the change to the identified landscape receptors.
- 4.9 The baseline identified a variety of sensitive landscape receptors, with only *LLCA 2B: Lincoln Cliff – Harpswell*, and *LLCA 2E: Lincoln Cliff – Fillingham*, assessed as being of high sensitivity, with neither experiencing direct effects from the development.
- 4.10 Seven landscape receptors are assessed as being of medium sensitivity: *LLCA 1A: Open Limestone Dip Slopes – Hemswell Cliff*; *LLCA 2A: Lincoln Cliff – Hemswell*; *LLCA 2C: Lincoln Cliff – Open Farmland*; *LLCA 2D: Lincoln Cliff – Glentworth*; *LLCA 3C: Till Vale Villages*; *LLCA 3a: Till Vale Open Farmland*; and *LLCA 5A: Trent Valley – Meadowlands*. All other landscape receptors are assessed as being of low sensitivity.
- 4.11 The LVIA identifies significant landscape and visual effects at the four phases of **construction, operation (year 1), operation (year 15), and decommissioning**. The following significant effects are identified in the LVIA:
- At **Construction** the following landscape receptors were assessed as having significant effects:
 - *LLCA 2B, Lincoln Cliff – Harpswell*. **Moderate Adverse:** Significant (temporary)
 - *LLCA 2C Lincoln Cliff – Open Farmland*. **Moderate Adverse:** Significant (temporary)
 - *LLCA 3A Till Vale – Open Farmland*. **Moderate Adverse:** Significant (temporary)
 - At **Operation (Year 1)** the following landscape receptors were assessed as having significant effects:
 - *LLCA 2B, Lincoln Cliff – Harpswell*. **Moderate Adverse:** Significant (temporary)
 - *LLCA 3A Till Vale – Open Farmland*. **Moderate Adverse:** Significant (temporary)
 - At **Operation (Year 15)** the following receptors were assessed as having significant effects:
 - *LLCA 3A Till Vale – Open Farmland*. **Moderate Adverse:** Significant (temporary)
- 4.12 These ‘significant’ effects represent direct effects on the medium sensitivity landscape of *LLCA 3A Till Vale – Open Farmland*, and indirect effects on the more sensitive (high

sensitivity) landscapes of LLCA 2B, Lincoln Cliff – Harpswell; and LLCA 2C Lincoln Cliff – Open Farmland.

- 4.13 At year 15 LLCA 3A Till Vale – Open Farmland, which accounts for the majority of the land within the Principal Site boundary, has been assessed as having a **Moderate Adverse residual** effect even when mitigation planting has established.
- 4.14 With reference to *Table 1-10: Significance of Effect* within the LVIA methodology in Appendix 12-2, the **Moderate Adverse** effects to these landscape receptors comes from: *“Alterations that result in a partial deterioration of the existing landscape resource. Valued characteristic features would be largely lost.”*
- 4.15 Access, and the wider highways elements of the scheme, do not appear to be fully considered in the LVIA beyond increased traffic during construction and decommissioning phases. This is despite the potential adverse effects on the rural landscape highways works may have, including potential vegetation loss, urbanisation and reduced visual amenity. Consequently, the landscape effects during construction may be underestimated within the LVIA through the impact of, or loss of, vegetation. Localised removal of vegetation is identified in the assessment of landscape effects; however, it is unclear whether this includes vegetation works on the wider highways network, and what this would entail. We strongly recommend limiting vegetation loss along site boundaries for access or sight lines, or along construction access routes, because this has the potential to change the character of the local landscape beyond the limits of the Principal Development.

5.0 Appraisal of Visual Baseline and Effects

The following section provides a review of the Visual Baseline and Effects, based on the following criteria:

- *Has the methodology been followed in the visual assessment?*
- *Are all visual receptors and all likely effects comprehensively identified and assessed?*
- *Has the value and susceptibility of visual resources been appropriately addressed?*
- *Is there a clear and concise summation of the visual effects of the proposals?*
- *Are the viewpoints that have been used appropriate and meet the number, location and requirements agreed in discussions at the pre-application stage during scoping and consultation?*
- *Are the Visualisations/Photomontages that have been used appropriate and meet the number, location and requirements agreed in discussions at the pre-application stage during scoping and consultation?*

Visual Baseline

- 5.1 The Visual Baseline is considered in section 12.8 of the LVIA, and describes in paragraph 12.8.23 that the visual assessment: *“has been undertaken with reference to the representative viewpoints and photomontages”*. This process started with the Zone of Theoretical Visibility (ZTV) analysis, used to assist and identify potentially sensitive receptors. Figures 12-4a to 12-4h show this ZTV information, both as bare earth and with surface features (woodland and buildings).
- 5.2 Following fieldwork, utilising the information presented within the ZTVs, visual receptors likely to experience views of the construction, operation or decommissioning of the Development were identified. Viewpoints were subsequently selected to represent views from these receptors. The selection of viewpoints formed part of the pre-application consultation and includes locations recommended as part of this process.

- 5.3 Paragraphs 12.6.104, 12.6.106, and 12.6.109 summarise the identified receptor groups (residential locations, PROW, and from roads) with likely views of the Principal Site. Associated representative viewpoints are laid out in table 12-5 within paragraph 12.6.116 which summarises the description and value of the view.
- 5.4 Paragraphs 12.6.120, 12.6.122, 12.6.124, 12.6.125, and 12.6.126 summarise the identified receptor groups (residential locations, PROW, roads, railways, and river traffic) with likely views of the cable route. Associated representative viewpoints are laid out in table 12-6 within paragraph 12.6.128 which summarises the description and value of the view.
- 5.5 The baseline follows the LVIA methodology and considers the consultation undertaken at the pre-application stage. Further detail of the visual baseline is provided within *Appendix 12-6* and a clear summary of the visual baseline is provided within paragraphs 12.6.101 to 12.6.134 of the LVIA.

Visualisations/Photomontages

- 5.6 Viewpoints representative of the visual receptors were identified through consultation and agreed upon (refer **Appendix A**). This baseline process resulted in the identification of twenty-nine viewpoints, including cumulative viewpoints, to represent the views of the visual receptors. Figures 12-13 and 12-14 illustrate these views.
- 5.7 Photographs have been prepared as Type 1 (annotated photographs) and presented on Figure 12-13, and visualisations as Type 3 (photomontages) and presented on Figure 12-14. A methodology for photography and visualisations is provided in section 1.7 of the LVIA methodology in Appendix 12-2.

Visual Assessment

- 5.8 The Visual Assessment is detailed within *Appendix 12-6*, including an assessment of value and susceptibility, and subsequently the sensitivity of visual receptors and viewpoints, which is aligned with the criteria provided within the methodology. The visual assessment is summarised within paragraphs 12.8.23 to 12.8.40, with residual visual effects (following the implementation of mitigation) summarised within paragraph 12.8.36 of the LVIA.

5.9 The susceptibility to change and resultant sensitivity of each representative viewpoint is detailed within Appendix 12-6, which includes twenty-nine viewpoints of the Principal Site and nine viewpoints of the Cable Route Corridor. Fifteen viewpoints have been assessed as being of high sensitivity:

- **Viewpoint 3:** Green Space, Harpswell Hall; Recreational, residential receptors;
- **Viewpoint 5:** Kexby Road, West of Glentworth; Road, recreational, residential receptors;
- **Viewpoint 7:** B1398 Middle Street, Glentworth Cliff Farm; Road, Residential, Recreational receptors;
- **Viewpoint 8:** B1398 Middle Street, above Fillingham; Road, Residential, Recreational receptors;
- **Viewpoint 9:** Kexby Road, west of Glentworth Grange; Residential, recreational, road receptors;
- **Viewpoint 11:** Bratt Field Middle Road, Sturgate;
- **Viewpoint 10:** Kirton Gate Lane (by-way); Recreational receptors; Residential, recreational receptors;
- **Viewpoint 13:** Public footpath (Hems/787/2) on Lincoln Cliff, Hemswell (Millfield); Residential, recreational receptors;
- **Viewpoint 14:** Harpswell Moat; Residential, recreational receptors;
- **Viewpoint 16:** Weldon Road, Hemswell, PRoW Hems/19/1; Residential, recreational receptors;
- **Viewpoint 21:** Corringham Village Hall; Residential, recreational receptors;
- **Viewpoint 23:** Cow Lane - Grove Farm Cottage; Residential, recreational, road receptors;
- **Viewpoint 26:** Bridleway (Gltw/85/1) North of Willingham Road; Recreational receptors;
- **Viewpoint 27:** Willingham Road, Bridleway Fill/85/2; Residential, recreational receptors;
- **Viewpoint 28:** Yawthorpe; Residential, recreational receptors;

- 5.10 The visual baseline within Appendix 12-6 is structured around viewpoints rather than receptors, and recent LI guidance does confirm that the “*focus of the visual assessment should be the visual receptors*”, and that viewpoints are for the “*illustration of the visual effects*”. However, the assessment in Appendix 12-6 of each viewpoint does identify the visual receptors being represented by the view, and paragraphs 12.6.104, 12.6.106, and 12.6.109 summarise the receptors likely to have views of the site and /or development, which provides some clarity, and goes some way to ensure receptors are the main focus of the LVIA chapter.
- 5.11 The LVIA identifies significant visual effects at the **construction, operation (year 1), and operation (year 15)** phases, however no significant visual effects were identified at the **decommissioning** stage.
- 5.12 **Viewpoint 13** is judged within Appendix 12-6 as having Major Adverse effects at construction, operation year 1 and year 15, however, in the LVIA chapter it is only identified as having **Moderate Adverse** effects at construction (paragraph 12.8.27) and year 1 (paragraph 12.8.33). We assume this is a typo, however, it needs clarification.
- 5.13 **Viewpoint 19** is judged within Appendix 12-6 as having **Moderate Adverse** effects at operation year 1, however, in the LVIA chapter it is identified as having **Major Adverse** effects at year 1 (paragraph 12.8.33). We assume this is a typo, however, it needs clarification.

The following significant effects are identified in the LVIA, summarised in paragraphs 12.8.27 (construction), 12.8.33 (year 1 – winter), 12.8.36 (year 15 – summer) and 12.8.40 (decommissioning) within the LVIA:

- **At Construction:**
 - Construction activities are assessed as resulting in **Major adverse** (significant) visual effects for **Viewpoint 2b** (view west from Common Lane, Harpswell), **Viewpoint 9** (Kexby Road, west of Glentworth Grange), and **Viewpoint 13** (Public footpath, Millfield, Hemswell).
 - Further significant adverse effects (**Moderate Adverse**) are identified for receptors with open, elevated views from the Cliff; or where receptors are in close proximity to the Principal Site with limited or absent screening.

- These **Moderate** and **Major adverse** effects are considered to be significant and would result from the proposed construction activity seen at close range across a wide extent of a view.
- **At Operation (Year 1):**
 - Operation phase effects (year 1) are assessed as resulting in **Major adverse** (significant) visual effects for **Viewpoint 2b** (view west from Common Lane, Harpswell), **Viewpoint 9** (Kexby Road, west of Glentworth Grange), and **Viewpoint 13** (Public footpath, Millfield, Hemswell).
 - Further significant adverse effects (**Moderate Adverse**) are identified for receptors with open, elevated views from the Cliff; or where receptors are in close proximity to the Principal Site with limited or absent screening, and where any mitigation planting is yet to establish and is subsequently providing limited screening or integration of the development.
 - These **Moderate** and **Major adverse** effects are considered to be significant and would result from the Development being seen at close range and/or across a wide extent of a view.
- **At Operation (Year 15):**
 - Operation phase effects (year 15) are assessed as resulting in a small number of adverse visual effects.
 - The effects are considered to be significant and would result from the development being seen at close range and/or across a wide extent of a view.
 - The receptors and viewpoints with remaining significant effects (based on the LVIA findings) are:
 - **Viewpoint 7** (B1398 Middle Street, Glentworth Cliff Farm)
 - **Viewpoint 9** (Kexby Road, west of Glentworth Grange)
 - **Viewpoint 13** (Public footpath, Millfield, Hemswell)

5.14 The views and visual receptors with significant effects are typically those with close range views of the development, however views from the elevated land of the Lincoln Cliff also have significant effects due to the extent of solar development within the extensive and often panoramic view. Eleven of these sensitive receptors or viewpoints were assessed as having significant effects prior to any mitigation planting maturing (at operation year 1). This reduces to three receptors or viewpoints experiencing significant residual effects at year 15 which suggests a potential over reliance upon mitigation planting to screen the proposals without full attention to the potential impact of this screening on the landscape.

5.15 It is recommended that the following viewpoints are reviewed (presented in Figures 12-13 and 12-14) because the assessment presented within the LVIA potentially underplays the Magnitude of visual effect, and subsequently Significance of effect:

- **Viewpoint 2b:** The current view is open and across open fields, which is a characteristic of this landscape character area. While we agree the magnitude of visual effect at construction and operation will be **high**, we disagree that this would drop to **low** at year 15 with the introduction of screen planting. The planting, while connecting vegetation along the carriageway, will alter the view by completely screening and foreshortening the existing view. We judge this to be a **medium magnitude** of Visual Effect, and subsequently this would likely increase the level of visual effect and significance.
- **Viewpoint 4:** The current view is an open panorama across an agricultural landscape, which is a characteristic of this landscape character area. The Development will result in large scale change to this view firstly with construction activity and then at operation with panels and structures. This will be experienced along several sections of the B1398, at a scale not present in the existing landscape, and we would judge the magnitude of visual effect at construction and operation year 1 will be **high**. This is identified on page 14 of Appendix 12-6, which states: *“the massing of panels, alongside the BESS and Solar Stations, will introduce a more industrial, functional character to the view, with the largely unvarying, grey panel colours contrasting with the baseline browns and greens of winter field patterns”*. The development is conspicuous in an extensive part of the view.
- **Viewpoint 20:** The current view is open and across open fields, which is a characteristic of this landscape character area. While we agree the magnitude of visual effect at construction and operation will be **high**, we disagree that this would drop to **low** at year 15 with the introduction of screen planting. The planting, while connecting vegetation along the carriageway, will alter the view by completely screening and foreshortening the existing view. We judge this to be a **medium** magnitude of visual effect, and subsequently this would likely increase the level of visual effect and significance.

5.16 As previously identified, while visual receptors are considered in the LVIA, the focus of the visual assessment is on viewpoints. A clear summary of the effects on the visual receptors would be useful, listing out the receptors with significant effects and providing a brief narrative on the change of their view. Often changes to receptors will be more transient and

sequential in nature such as along a stretch of road or PROW, where receptors would have a varying experience and exposure to potential views of the development. This is in contrast to a viewpoint which is more fixed and static in nature, and often not fully representative of the experience of a receptor.

- 5.17 Access, and the wider highways elements of the scheme, do not appear to be fully considered in the LVIA beyond increased traffic during construction and decommissioning phases. This is despite the potential for adverse effects on the views of the rural landscape including potential vegetation loss, urbanisation and reduction of visual amenity. Consequently, the visual effects during construction may be underestimated within the LVIA due to the unconsidered impact of loss of vegetation. We recommend limiting vegetation loss along site boundaries, for access or sight lines, or along construction access routes, as this has the potential to change the character of the local landscape beyond the limits of the development. Clarification on this matter by the applicant should be provided.

6.0 Appraisal of Cumulative Landscape and Visual Effects and Residential Visual Amenity Assessment

The following section provides a review of the cumulative effects and Residential Visual Amenity Assessment (RVAA), based on the following criteria:

- *Have cumulative landscape and visual effects been addressed?*
- *Are the RVAA and cumulative effects methodologies in accordance with relevant guidance and meet the requirements of the relevant Regulations?*
- *Does the methodology and scope of the assessment of cumulative effects and RVAA meet the requirements agreed in discussions at the pre-application stage during scoping and consultation?*
- *Has the methodology been followed consistently?*
- *Are residential and cumulative receptors and all likely effects comprehensively identified?*
- *Are any residential properties (receptors) likely to experience significant effects to their visual amenity?*

Cumulative Methodology

6.1 Cumulative landscape effects are considered in *Chapter 18: Cumulative Effects and Interactions*, and not summarised in the LVIA chapter. It would have been useful to bring all the landscape and visual assessment matters together in one document, however the cumulative landscape and visual effects section within ES Chapter 18 is dealt with separately in Section 18.13 and provides a clear assessment of the cumulative landscape and visual effects.

6.2 Other schemes that are considered for the cumulative assessment are identified within *Appendix 18-1: List of Cumulative Developments* and illustrated on Figure 18-1. Paragraph 18.4.5 clarifies that landscape and residual visual effects during operation at year 1 are considered to ensure a robust worst-case assessment. *Table 18-4: Zol extents for assessment*

of cumulative effects, within paragraph 18.4.11, clarifies that a 10km area has been considered for the Principal Site, and 2km for the Cable Route Corridor.

- 6.3 The identified schemes most relevant to potential cumulative Landscape and Visual Amenity effects are identified as the three nearby NSIP solar DCO schemes of the consented Gate Burton Energy Park and Cottam Solar Project and proposed West Burton Solar Project. Cumulative Zones of Theoretical Visibility (ZTV) of these schemes are presented in Figures 18-2, 18-3 and 18-4 which present each identified schemes ZTV (bare earth) separately with the Tillbridge scheme, clearly identifying potential locations where both may be seen in the same view. In addition to the DCO solar schemes, Tables 18-11 and 18-12 identify additional developments that have been considered. Of these developments, only the *Glentworth Oil Well - ID 76* (Ref: 146100/ PL/0135/22) has been considered further in the cumulative assessment along with the DCO Solar sites.

Cumulative Landscape and Visual Effects

- 6.4 Regarding Cumulative effects (Cumulative landscape and visual effects are those that: “*result from additional changes to the landscape or visual amenity caused by the proposed development in conjunction with other developments*”), Table 18-12 to Table 18-18 identify that there will be adverse cumulative effects between the following schemes :
- a. The development alongside the **Cottam Solar Project** will extend the presence and perception of solar infrastructure affecting:
 - i. **LLCA 3a Till Vale Open Farmland** at all stages: and
 - ii. visual receptors along **Middle Street** (VP7 and VP13): Glentworth Cliff Farm and Public footpath Hems/787/2 near Hemswell.
 - b. The development alongside the **ID 76 Glentworth oil well** will increase the presence of energy infrastructure at **Kexby Road**, west of Glentworth (VP9);
 - c. The development alongside **all solar DCOs** in combination along the **Cable Route Corridor**, where receptors are of a higher sensitivity and elements development elements will be in close proximity. However, this will only be at the (temporary) construction stage.

- 6.5 Sequential views from users of PROW and local roads are considered in paragraphs 18.13.23 to 18.13.28. These appear well considered and acknowledge the effect of panels spread across an extensive area.

- 6.6 The cumulative change to the landscape will be considerable, and the combination of two or more sites has the potential to change the local landscape character at a large scale. The cumulative impact of the four adjacent NSIP solar schemes has the potential to affect the landscape at a regional scale through predominantly a change in land use: from arable to solar, creating what may be perceived as an ‘energy landscape’ as opposed to rural or agricultural one at present. As clarified within GLVIA3, changes to the landscape do not necessarily need to be seen to have an adverse effect.
- 6.7 Effects are likely to be exacerbated when travelling through the area either along PROW or local roads, with the sequential effects of multiple large scale solar sites, spread over extensive, often fragmented redline boundaries, creating the perception of being surrounded by solar development. Several significant cumulative views have been identified in the LVIA, and these identified views do not have to be extensive and open to create the perception of a changed character over a wide area. Regular, sequential, glimpsed views will also create this effect and change the experience of the visual receptors as they pass through the area.

Residential Visual Amenity

- 6.8 The methodology for assessing Residential Visual Amenity is outlined within Section 1.6 of the landscape methodology *Appendix 12-2*. This correctly references the Landscape Institute’s Technical Guidance Note *2/19: ‘Residential Visual Amenity Assessment’*, which identifies in paragraph 1.6.3 that the Residential Visual Amenity Threshold (RVAT) is reached when: *“the effect of the development on Residential Visual Amenity of such nature and / or magnitude that it potentially affects ‘living conditions’ or Residential Amenity.”*
- 6.9 Sections 12.4.27 to 12.4.36 of the LVIA provides a narrative on the relationship of residential visual amenity to the LVIA. This section clarifies that Significant adverse effects on views and visual amenity may be experienced by residential receptors, and if so a Residential Visual Amenity Assessment (RVAA) may be prepared to assist in making judgements as to whether the RVAT has been reached.
- 6.10 Paragraph 12.8.45 states: *“...it is concluded that whilst significant effects will arise beyond Operation Year 15 on representative views that reflect the outlook for residential receptors, these will not reach a threshold where residential visual amenity is a consideration.”*

6.11 Paragraph 12.8.41 clarifies that the layout of the scheme has considered reducing the visual effects from settlements. It is our understanding that the findings of the initial three stages of a residential visual amenity survey have been used to inform the layout and mitigation in these potentially affected areas, with visualisations for Viewpoints 7, 9 and 13 referenced within paragraph 12.8.44.

7.0 Mitigation and Design

The following section provides a review of the Mitigation and Design, based on the following criteria:

- *Is there evidence of an iterative assessment-design process and it is clear that this has informed the site redline, layout and primary and secondary mitigation?*
- *How appropriate is the proposed mitigation?*
- *Are potential cross-over topics, such as heritage or ecology, addressed and incorporated within the mitigation?*
- *Is the long-term management of existing and proposed vegetation properly addressed in any management plans to promote establishment?*

Evidence of Iterative Process

7.1 The masterplan has been presented as evolving through an iterative process, with the landscape and visual findings feeding back into the design. This is clarified in paragraph 12.7.2, and illustrated on Figures 12-1 and 12-2: *“the design of the Principal Site has been influenced from the outset by preliminary appraisal exercises and high-level constraints and opportunities plans”*. This approach has promoted a landscape led Site design, with built elements placed in less sensitive locations from a landscape and visual perspective (as listed in paragraphs 12.7.5 and 12.7.6).

7.2 The design appears to have responded to the consultation process with a clear evolution through different stages of the masterplan. The mitigation has responded to the recommendations of the local landscape character area reports.

Mitigation Measures

7.3 Section 12.7 of the LVIA describes the embedded mitigation measures of the scheme which avoid, where practicable, adverse effects on the landscape and views. This process is described in more detail within ES Chapter 3 and Chapter 4. These mitigation proposals reference a series of documents within the DCO package.

- 7.4 The *Framework Landscape and Ecological Management Plan* provides information regarding the establishment and maintenance of the planting associated with the Development, as shown on the *Indicative Landscape Masterplan*, within Appendix A of the *Framework Landscape and Ecological Management Plan*.
- 7.5 The success of the landscape mitigation to meet the objectives laid out in the management plan - to integrate and screen proposals, promote conservation and protection of the environment, and encourage ecological and habitat diversity - is highly dependent upon the successful management and maintenance of the new planting, as well as the protection of existing trees and hedgerows. The maintenance operations provide an initial overview of operations; however, we would expect the management plan to be developed further beyond the initial 5-year period, particularly if landscape and visual effects are being assessed at 15 years. The long-term reduction in landscape and visual effects, presented in the LVIA, are based on the long-term success of the landscape mitigation. Similarly, any early planting (pre-construction) should be included in the maintenance plan as the reduction in effects described in the LVIA are also based on the assumption that this too will have established as planned.
- 7.6 Monitoring of the proposals is a key aspect of the mitigation plan and is something which needs further development to ensure there is sufficient robustness to deal with the challenging climatic conditions when it comes to establishing new planting. The updating of the management plan every 5 years after the initial establishment period will go some way to ensuring that it is kept valid and can respond to issues and trends effectively.
- 7.7 There is a potential over reliance within the LVIA upon planting to mitigate the visual effect of the development; the character of the area is relatively open, and too much planting to screen the development without due care for the location, could have detrimental impacts. The PROW and local roads in the study area enjoy an open aspect across some areas of the study area, for example along Willingham Road at the southern Site extents where there are extensive long-range views north across the Site. Therefore, care needs to be taken to prevent the loss of this character through an overbearing set of mitigation proposals.

8.0 Conclusions and Recommendations

The following section provides an overall summary and conclusion on the suitability of the Landscape and Visual elements of the DCO Application and whether they are sufficient to support an informed decision. This includes the adequacy of the LVIA, reviewed in accordance with the Landscape Institute *Technical Guidance Note 1/20 (10 Jan 2020): Reviewing Landscape and Visual Impact Assessments (LVIAs) and Landscape and Visual Appraisals (LVAs)*.

Finally, there are recommendations for further information that should be provided to assist in the examination of the DCO Application.

Summary and Conclusions on the LVIA

- 8.1 The LVIA and the associated figures, appendices and documents provide a thorough analysis of the Development and is appropriate to the scale and context of the Site. The process of assessment is thorough and well explained in the volumes, which include a clear summary of findings and identification of significant effects on the landscape and visual baseline.
- 8.2 By reason of its mass and scale, the Development would lead to significant adverse effects on landscape character and visual amenity at all phases of the scheme (construction, operation year 1, operation year 15, and decommissioning). The Development has the potential to transform the local landscape by altering its character on a large scale. This landscape change also has the potential to affect a wider landscape character, at a regional scale, by replacing large areas of agricultural or rural land with solar development, affecting the current openness, tranquillity and agricultural character that are identified as defining characteristics of the area.
- 8.3 The scale and extent of development would also lead to significant adverse effects on views from receptors, by altering from views within an agricultural or rural landscape to that of a landscape with large scale solar development.
- 8.4 The cumulative landscape and visual effects of the Development will also bring about significant landscape and visual effects, particularly when assessed alongside the proposed West Burton and consented Cottam and Gate Burton schemes. The mass and scale of these projects combined would lead to adverse effects on landscape character and visual amenity

over an extensive area. The landscape character of the local, and potentially regional area, may be completely altered over a 60-year operational period, particularly when experienced sequentially while travelling through the landscape.

8.5 Tree and vegetation removal associated with the Development, including wider highways improvements and access for construction, must be clarified through the examination process, and subsequently any works (such as lopping or pruning), or removal of trees and hedgerows must be agreed prior to any works commencing. Prior to any construction activities, all tree and hedgerow protection methods associated with that phase of construction should also be clarified and subsequently agreed with the appropriate authority (in this case the local planning authority). This would be to BS:5837 Trees in Relation to Construction and any subsequent arboriculture method statements, again this should be approved by the appropriate authority. In particular this should ensure existing trees, and associated root protection areas, are suitably protected throughout the entire construction period. This would also likely include areas within the order limits, but away from construction activity, such as storage areas for materials which may suffer from tracking by plant that would damage tree root protection zones.

8.6 While the submission includes landscape proposals, these are of a high level and it would be expected that if the project proceeds much more detailed plans would to be submitted and subsequently agreed with the appropriate authority (in this case the local planning authority) prior to the commencement of any works. This would include clear detail of the areas of landscape mitigation, location and types of planting (species), as well as number, density and specification. The mitigation illustrated on the Framework Landscape and Ecological Management Plan has been utilised to assess the landscape and visual effects of the scheme, therefore we would expect any detailed landscape proposals to consist of the area and extent shown on these plans as a minimum.

APPENDIX A

Previous AAH Consultation documents:

- AAH TM01 Scoping 25-10-22
- AAH TM02 Viewpoint Comments 24-11-22
- AAH TM03 Viewpoint Comments 01-03-23
- AAH TM04 PIER Comments 04-07-23

Technical Memorandum 1: AAH TM01

Lincolnshire County Council, Tillbridge Solar Project

Landscape and Visual Scoping Opinion

This Review has been carried out by AAH Consultants on behalf of Lincolnshire County Council (LCC) and relates to landscape and visual issues and elements only. It is based upon a review of the relevant sections of the following document:

- *Tillbridge Solar EIA Scoping Report Tillbridge Solar Ltd, Prepared by AECOM, September 2022.*

An initial site visit was carried out on 20th October 2022 to understand the landscape context of the site and provide a general understanding of the visual amenity of the site and surrounding area. Further site visits will be carried out throughout the course of the consultation period.

Overall, we would expect that the assessment of potential Landscape and Visual matters and evolving proposals relating to the Tillbridge Solar Project, as a Nationally Significant Infrastructure Project (NSIP), follow an iterative process of engagement and consultation to ensure the following are not fixed at this stage and are discussed, developed and agreed at subsequent technical meetings:

- Landscape and Visual Impact Assessment (LVIA) Methodology;
- Development, and subsequent ZTV, parameters;
- Study Area extents (distance);
- Viewpoint quantity and locations;
- Photomontage/Accurate Visual Representations (AVRs):
 - Quantity and location;
 - Phase depiction;
 - AVR Type and Level.
- Mitigation Measures/Landscape Scheme/Site Layout;
- Cumulative effects, including surrounding developments to be considered; and
- The extent as to which a Residential Visual Amenity Assessment (RVAA) should be considered (based on the Landscape Institute TGN 2/19) if there are residential properties with receptors likely to experience significant effects to their visual amenity.

We would also expect the production of the Landscape and Visual chapter of the Environmental Statement (ES), which would be in the form of a Landscape and Visual Impact Assessment (LVIA), and any supporting information (such as plans or figures) reflect current best practice and guidance from, as a minimum, the following sources:

- *'Guidelines for Landscape and Visual Impact Assessment'*, (GLVIA3), April 2013 by the Landscape Institute (LI) and Institute of Environmental Management and Assessment (IEMA);
- *'An Approach to Landscape Character Assessment'*, Natural England (2014);
- *'Technical Guidance Note (TGN) 06/19 Visual Representation of Development Proposals'*, 17th September 2019 by the Landscape Institute (LI);
- *'Technical Guidance Note (TGN) 1/20 Reviewing Landscape and Visual Impact Assessments (LVIAs) and Landscape and Visual Appraisals (LVAs)'*, 10th January 2020 by the Landscape Institute (LI); and

- 'Technical Guidance Note (TGN) 2/21 Assessing landscape value outside national designations', May 2021 by the Landscape Institute (LI).

While the focus of this review is on Landscape and Visual matters, information provided within chapters 1 to 6 have also been considered, providing background and context to the site. At this initial stage of the NSIP process, the content and level of information provided by the developer within *Chapter 13* (Landscape and Visual Amenity) are generally considered satisfactory, however, as stated previously, we would expect to discuss this content and approach as part of the iterative process, and the following should be considered in the evolving assessment and layout:

Viewpoints

There are fifteen draft representative viewpoints identified within paragraph 13.46/Table 13-1. However the final locations are to be reviewed and agreed with LCC and other relevant stakeholders. The final viewpoint selection should also consider views of taller and more conspicuous elements, such as battery storage or sub-stations once the layout is more developed, the cable route (once refined) as well as several "key views" identified within relevant Neighbourhood Plans.

Photomontages

To gain an understanding of the visibility of the development and how the panels and infrastructure would appear in the surrounding landscape, Photomontages/Accurate Visual Representations (AVRs) should be produced. The number and location of the agreed viewpoints to be developed as Photomontages/AVRs should be agreed with LCC and other relevant stakeholders and produced in accordance with *TGN 06/19 Visual Representation of Development Proposals*. At this stage, it is deemed appropriate that these should be produced to illustrate the proposals at different phases: Existing Situation (baseline), Operational (year 1) and Residual with planting established (10 to 15 years). The Photomontage/AVR Level and Type is to be discussed and agreed.

Methodology

As stated previously, the LVIA should be carried out in accordance with the GLVIA3 and undertaken by suitably qualified personnel. The methodology provided at *Section 13.62 to 13.90* is typical of those used for ES Chapters and standalone LVIA's where potential significant effects can be considered and reflects the guidance in GLVIA3. We would request that the most up to date technical guidance also be used, for example paragraph 13.72/Table 13-2 should be based on LI *TGN 2/21 Assessing landscape value outside national designations*.

Under Landscape Value (paragraph 13.72/Table 13-2), it is potentially implied that only designated landscapes may have a medium or high value. This is not the case, and GLVIA3 paragraph 5.19 states that "value can apply to areas of landscape as a whole, or to the individual elements, features and aesthetic or perceptual dimensions which contribute to the character of the landscape" and that "the value attached to undesignated landscapes also needs to be carefully considered and individual elements of the landscape – such as trees, buildings or hedgerows – may also have value."

Table 13-6 provides classifications of Visual Susceptibility; many of the surrounding lanes and tracks within the study area are also well used by dog walkers, horse riders and leisure cyclists, and subsequently the assessment should consider views (and susceptibility) from these groups from these locations who would likely be more susceptible to change than motorists.

Scope of the Study Area:

It is acknowledged that a Study Area (shown on Figure 13.1) covering 3km has been allowed for initially based on desktop and field study, and paragraph 13.6 indicates that views beyond 2km are limited to “along Middle Street, above Glentworth and Harspswell, where longer-range views are likely to be available.”. However, this appears to be based upon 3.5m high panels across the site and omits potential longer distance views of taller, more conspicuous elements such as such as battery storage or the substation (up to 12m in height).

Consequently, the ZTV at this stage may be unrepresentative of the full extent of potential visibility of the development, which would be updated once these elements are known (as stated within paragraph 13.5) and the study area should not be fixed until the full extents of visibility are known.

Once the study area has been defined, the LVIA should also provide a justification for the full extent/distance, which would be further refined as part of the iterative process.

We do not feel we can provide more detailed feedback at this stage on the Cable Route Corridor until further information is provided, and would expect the LVIA to provide a clear evaluation and likely impacts of any route. The scoping report details cables would be underground, however if there are any sections of overhead cable or other associated above ground equipment or features, this should be clearly identified and considered within the LVIA to understand the extent of this and where any potential viewpoints may be required. We would encourage any overhead cables be avoided or reduced to minimise visual intrusion.

Landscape

Published landscape character areas have been identified, however to align with GLVIA3 the LVIA should include an assessment of landscape effects at a range of scales and likely need to include a finer grain landscape assessment that includes the Site and immediate area that also considers individual landscape elements or features that make up the character area.

It would be useful to take into account the information collated as part of the Historic landscape characterisation project: *The Historic Character of The County of Lincolnshire (September 2011)*, to ensure that the development is sensitive to the historic landscape. The project documents and the mapping can be accessed here: [\[REDACTED\]](#)

An HLF funded Landscape Partnership was carried out in the Trent Vale area in 2007-2013: the archived website is here: [\[REDACTED\]](#). While the principle site is outside of this area, the cable route would cross the area and it would be useful to consider any effects that development of both the principle site and cable corridor may have on this area and the relevant priorities outlined in the reports:

- Trent Vale Landscape Conservation Management Plan (June 2013).
- Trent Vales Landscape Character Assessment:

Visual

The visual assessment should take account of the 'worst case scenario' in terms of winter views, and effects associated with landscape mitigation at the Operational Phase (year 1), Residual Phase with planting having established (10 to 15 years), and at the Decommissioning Phase.

The LVIA should ensure all elements associated with the development are considered and assessed, such as battery storage, sub-stations, CCTV poles and boundary fencing, which may be more visible than panels due to height, mass and extent.

We would expect that the visual assessment would include for identification of visual receptors, and not just an assessment of any agreed viewpoints, which would clearly cross reference viewpoints to associated receptors.

Cumulative impacts

Cumulative Landscape and Visual effects should be assessed, particularly in regards to the Cottam Solar Project, West Burton Solar Project and Gate Burton Energy Park, which are in close proximity.

Mitigation and Layout

As this is an iterative process, at this stage it is not relevant to comment on any potential mitigation or layout of the development. However, best practice guidance, relevant published landscape character assessment's and Local and County Council Policy and Guidance shall be referred to and implemented as appropriate. We would also expect the landscape and planting scheme is coordinated with other relevant disciplines, such as ecology, heritage or civils (e.g. SuDS features), to improve the value of the landscape and reflect appropriate local and regional aims and objectives. Any Landscape Scheme and associated Outline Management Plan should accompany the ES.

Oliver Brown CMLI

AAH Landscape

Mob: 





26 October 2022

Technical Memorandum 2: AAH TM02

Lincolnshire County Council, Tillbridge Solar Project

Visual Amenity: Initial Viewpoint Comments

A Site visit was carried out by AAH on 20th October 2022 which involved a Site walkover and then meeting with AECOM to discuss the scheme and progress to date, followed by driving to each of the fifteen proposed viewpoints. Following our site visit and discussions, AECOM have forwarded additional viewpoints information on 9th November 2022 which includes five additional views. AAH subsequently visited site on the 14th November 2022 to walk the site and surrounding area and visit all twenty viewpoints currently proposed by AECOM and subsequently provide comments on proposed viewpoints.

Therefore, we have the following general comments and requests:

1. Comments provided are based on the information provided to AAH and subsequent AAH fieldwork carried out to date. Therefore any comments are based on the layouts currently provided, which are confirmed as illustrative and undergoing development. This is to be expected as part of an iterative process. While we understand that the information provided to date is not intended to undergo wholesale changes, the layout is undergoing design development and subject to the final layouts presented, additional viewpoints or information may be requested. This is particularly pertinent for taller/larger elements such as sub stations or battery storage which due to their mass will likely be more conspicuous in the landscape;
2. The locations of ancillary elements, such as fencing, Battery Storage, Inverters, Transformers and Switchgears will be important in reducing visual impacts as these could appear more conspicuous than uniform PV arrays – their location should be carefully considered in relation to visual receptors, but also relating to the PV Arrays. The final size and location of all these ancillary elements should be provided and indicated on the layouts when available to enable their impact to be understood; and
3. We do not feel we can provide more detailed feedback or suggested viewpoint locations at this stage on the Offsite Cabling Corridors until further information is provided. However, we would expect the LVIA to provide a clear evaluation and likely effects of any route.

The following comments are in regards to visibility of the site from general groups of receptors and viewpoints, and the plan attached to this memo should be referred to for these target notes, which we would suggest are discussed further prior to finalising. If it is considered that suggested views of the site and development are not attainable from the identified areas below, or viewpoints not appropriate, a statement to this effect should be provided to aid transparency. Once a more detailed viewpoint list is produced, we will review and can provide further comments. All viewpoint photography should provide the most advantageous views of the site and proposed development:

- A. **Potential additional viewpoint included from along Hemswell Lane and/or the Cemetery at edge of settlement of Hemswell.** While a hedgerow runs along the southern carriageway, there are a few sections where this is low, or there are gaps allowing potential views to the

site. There are potential views from the cemetery, and this is identified within the Neighbourhood plan as a “key view”;

- B. **Potential additional viewpoint from southern edge of Hemswell at PROW Hems/19/1 and Weldon Road.** It is unclear whether vegetation would screen views of the development from this location;
- C. **Potential additional viewpoint included from along Dog Kennel Road or from section of B1398 opposite section of proposed mitigation.** While the falling landform will likely screen most views of the site from Dog Kennel Lane, taller elements or development in central and western areas may be visible. A view from the B1398 in this location would demonstrate the value of any proposed mitigation (once established);
- D. **Potential additional viewpoint included from south of site from along PROW Fill/85/1, Fill/767/1 and/or Fill/85/2.** Unclear as to whether views of the development would be available from these locations as the southern areas of the site are currently shown as mitigation (no panels or other development). If site and development is potentially visible from this location, this would provide potential cumulative views with sections of the proposed Cottam Solar development;
- E. **Potential additional viewpoint included from intersection PROW Fill/86/1 and Willingham Road.** Unclear as to whether views of the development would be available from these locations as the southern areas of the site are currently shown as mitigation (no panels or other development). If the site and development are visible from this location, this would provide potential cumulative views with sections of the proposed Cottam Solar development;
- F. **Potential additional viewpoint included from along Kexby Road along southern site boundary.** Unclear as to whether views of the development would be available from this location as the southern areas of the site are currently shown as mitigation (no panels or other development);
- G. **Potential additional viewpoint included from along Cow Lane.** Intermittent vegetation does provide screening; however it is likely some locations along this section of Cow Lane will provide views of the development, particularly taller elements;
- H. **Potential additional viewpoint included from along Cow Lane.** Intermittent vegetation does provide screening; however it is likely some locations along this section of Cow Lane will provide views of the development, particularly taller elements. The landscape is particularly open from areas adjacent to the Airfield;
- I. **Potential additional viewpoint included from along Common Lane adjacent to Airfield.** The landscape is particularly open from areas adjacent to the Airfield.
- J. **Potential additional viewpoint included from along Common Lane east of Heapham.** Unclear as to whether views of the development would be available from this location as the adjacent areas of the site are currently shown as mitigation (no panels or other development), however would demonstrate potential visibility from settlement edge; and
- K. **Potential additional viewpoint included from along Yawthorpe/Willoughton Road.**

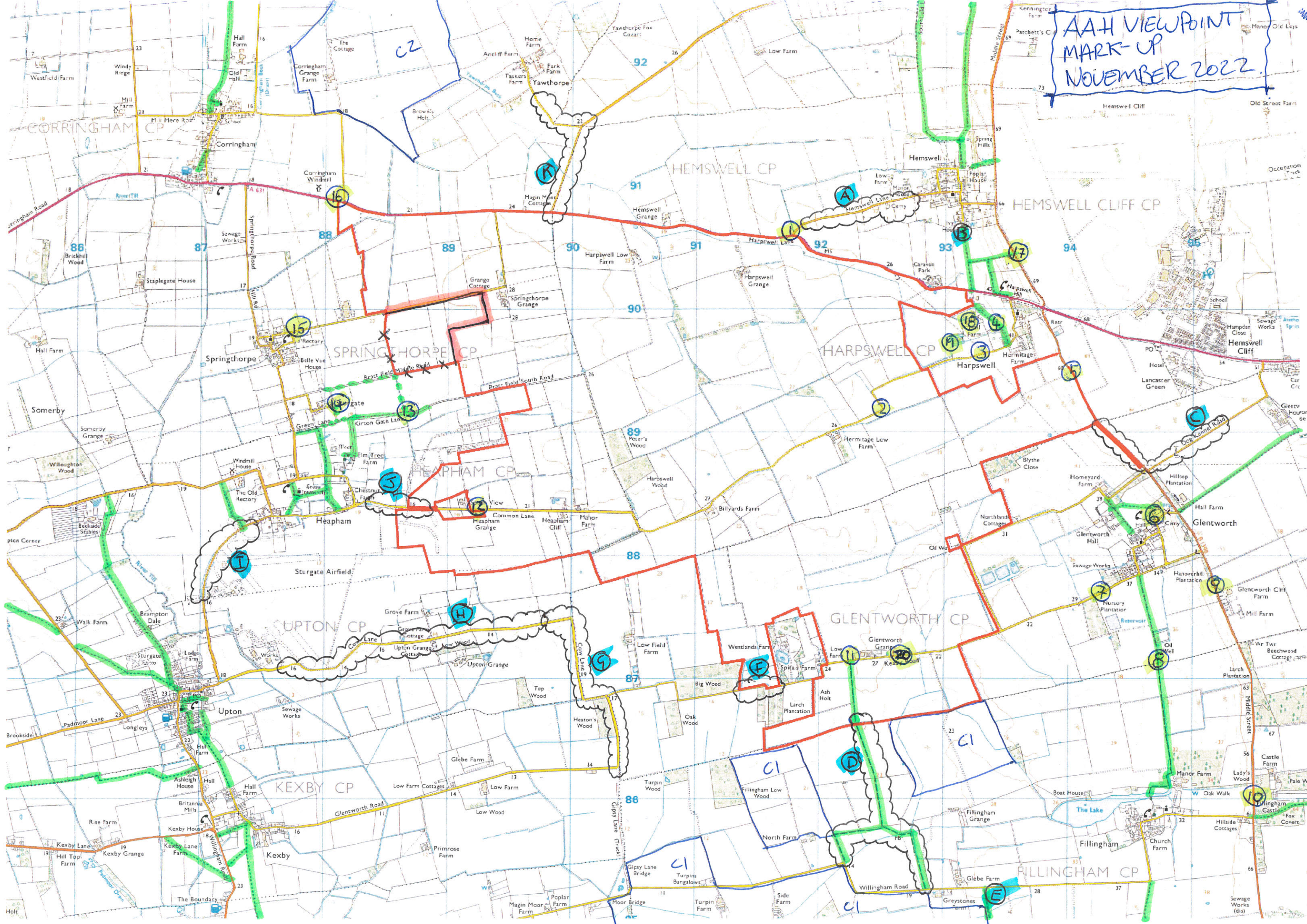
As stated, at this stage we do not have details on the location and appearance/extent of taller/larger elements that for part of the development which would likely have visual impacts that may require additional viewpoints beyond those initially identified.

Oliver Brown CMLI
AAH Landscape

Mob: [REDACTED]
[REDACTED]
[REDACTED]

24th November 2022

AAH VIEWPOINT
MARK-UP
NOVEMBER 2022



CORRINGHAM CP

HEMSWELL CP

HEMSWELL CLIFF CP

SPRINGTHORPE CP

HARPSWELL CP

HEAPHAM CP

GLENTWORTH CP

UPTON CP

KEXBY CP

FILLINGHAM CP

Technical Memorandum 3: AAH TM03

Lincolnshire County Council, Tillbridge Solar Project

Visual Amenity: Viewpoint Comments

Following issuing AAH TM02 (Initial Viewpoint Comments), AECOM provided follow up email correspondence on 15th February 2023 which contained a memo (providing commentary) and accompanying plan with viewpoints proposed to be taken forward to the ES stage, as well as those proposed to be developed as visualisations. This was subsequently followed up with two file transfer links, sent via email on the 27th February 2023, containing the site photography referenced in the AECOM memo. AAH on behalf of Lincolnshire County Council have subsequently reviewed the information and provide comments as follows:

General Comments:

1. The viewpoints proposed provide a good spread of representative views that is proportional to the project and extent of potential visual receptors. While there is the potential for selecting additional viewpoints, the selected views allow for a balanced understanding of the visual amenity of the site and development.
2. Regarding the visualisations proposed, it would be beneficial to understand the rationale on selecting these: is it on a view by view basis or an approach as to where those that are expected to have significant or cumulative effects?
3. Could it be confirmed if cumulative viewpoints been considered/identified yet? Obvious locations include along high ground of the ridge (e.g. VP4). AAH comments on individual potential cumulative views are provided below.
4. Comments on the cable route viewpoints will follow once these have been provided.

Comments on individual viewpoints:

1. VP1: As this is now from a less used location, albeit more sensitive due to residential receptors, it is important to note this view also represents users on A931 as there is now only one viewpoint proposed along the entire length of this busy A Road (VP25).
2. VP4: would this include views further to south (left of image), as there are potential cumulative views (Cottam to South and Gate Burton Beyond)?
3. VP5: Would this view include the edge of Cottam 2 as a cumulative view?
4. VP6: Visibility would need to be verified, however we assume views of proposed taller elements of the development have been considered and not just views of the Site?
5. VP7: Potential cumulative view (Cottam to South and Gate Burton and West Burton in long range views beyond).

6. VP8: Potential cumulative view (Cottam to South and Gate Burton and West Burton in long range views beyond).
7. VP9: Cottam 2 may also be visible to receptors when looking to the south and south east from this location; so while not in the photography of the view, would be potentially visible from these receptors. However, we assume mitigation to South of Tillbridge Solar may screen this development once established (subject to mitigation planting).
8. VP13: Potential cumulative view.
9. VP25: Cottam 2 may be visible to north (off viewpoint photograph to left), which should be considered in regards to receptors represented by this viewpoint.
10. VP26: Cottam 2 may also be visible here (cumulative).
11. X15: Fine with this viewpoint being omitted, as it could be argued this view would be similar to that presented VP02, and VP23 has been identified as an alternative. However, the view would demonstrate the extent of the scheme and the openness of this landscape while traveling along Common Lane, particularly east of Harpswell Wood, and how planting would establish to mitigate.

Oliver Brown CMLI
AAH Landscape

Mob: 





1st March 2023

Technical Memorandum 4 (AAH TM04)

Lincolnshire County Council, Tillbridge Solar: PEIR Landscape and Visual Comments

Introduction

AAH Consultants have reviewed the Tillbridge Solar: *Preliminary Environmental Information Report* (PEIR), on behalf of Lincolnshire County Council (LCC), in relation to Landscape and Visual matters. Information downloaded from: <https://tillbridgesolar.com/documents-library/> and the documents that have been referenced, are as follows:

- **PEI Report - Volume I:**
 - Chapters 0 to 5 (not formally reviewed, but used to provide context to the site, development layout and proposals that would form the parameters for assessment);
 - Chapter 9 Ecology and Nature Conservation (not formally reviewed, but to provide ecology context to the layout and landscape and visual matters).
 - Chapter 12 Landscape and Visual Amenity (main focus of AAH review);

- **PEI Report - Volume II:**
 - Appendix 3-1 Framework CEMP
 - Appendix 3-2 Outline LEMP
 - Appendix 12-1 LVIA Legislation and Policy
 - Appendix 12-2 LVIA Methodology
 - Appendix 12-3 LVIA Landscape Baseline
 - Appendix 12-4 LVIA RVD
 - Appendix 12-5 LVIA AoLE
 - Appendix 12-6 LVIA Assessment of Visual Effects
 - Appendix 16-1 Glint and Glare Assessment

- **PEI Report - Volume III:**
 - Figure 2-1 Scheme Location
 - Figure 2-2 Environmental Constraints Plan
 - Figure 3-1 Indicative Site Layout Plan
 - Figure 3-2 Proposed HDD Crossing Assumptions
 - Figure 4-1 Comparison of Scheme Boundaries
 - Figure 2-1 Scheme Location
 - Figure 2-2 Environmental Constraints Plan
 - Figure 3-1 Indicative Site Layout Plan
 - Figure 3-2 Proposed HDD Crossing Assumptions
 - Figure 4-1 Comparison of Scheme Boundaries
 - Figure 8-1 Designated Heritage Assets
 - Figure 8-2 Non-designated Heritage Assets
 - Figure 9-1 Statutory Designated Sites for Nature Conservation
 - Figure 9-2 Non-Statutory Sites Nature Conservation
 - Figure 9-3 Phase 1 Habitat Map
 - Figure 12-1 Example Initial Site Appraisal Plan
 - Figure 12-2 Example Site Constraints-Opportunities Plan

- Figure 12-3 Study Area
- Figure 12-4a ZTV Panels Bare Earth
- Figure 12-4b ZTV Panels Barriers
- Figure 12-4c ZTV Solar Stations Bare Earth
- Figure 12-4d ZTV Solar Stations Barriers
- Figure 12-4e ZTV Substation 1 Bare Earth
- Figure 12-4f ZTV Substation 1 Barriers
- Figure 12-4g ZTV Substation 2 Bare Earth
- Figure 12-4h ZTV Substation 2 Barriers
- Figure 12-5 Topography and Watercourses
- Figure 12-6 Designations
- Figure 12-7 PROW
- Figure 12-8 National Character Area
- Figure 12-9 Regional Character Area
- Figure 12-10 County and District Landscape Character Areas
- Figure 12-11 Draft Local LLCA
- Figure 12-12 Viewpoints
- Figure 12-13 Type 1 Representative Views
- Figure 17-5 230314 Cumulative Figures Landscape and Visual

The review takes into account previous AAH comments (Refer to Tillbridge Technical Memos *AAH TM01*, *AAH TM02* and *AAH TM03*), as well as meetings/workshops held with AECOM and subsequent meeting minutes. The comments provided are intended to assist in guiding the next (final) stage of the development pre-application process, refinement of the content of the LVIA chapter and the overall development proposals. It is not a review of any of the preliminary findings or initial assessments.

PEIR Landscape and Visual Comments

A. Main Overarching Comments on the PEIR:

1. The proposed development is subject to EIA, and a Scoping Report was issued by the developer: *Tillbridge Solar EIA Scoping Report Tillbridge Solar Ltd, Prepared by AECOM, September 2022*, which contained a section on LVIA. Subsequently, a Scoping Report Review was carried out by AAH on behalf of LCC, which was appended to the *Scoping Opinion* issued by PINS dated: 04 November 2022. Overall the PEIR and subsequent scope of the LVIA is generally aligned with the scoping report and scoping opinion, as well as other AAH comments (*TM01*, *AAH TM02* and *AAH TM03*), and meetings/workshops held with AECOM.
2. As outlined within Chapter 3 of the PEIR, the development proposals are still being developed. This includes the type of PV panel and location of taller/larger elements such as substations and battery storage. While it is understood that a number of design aspects of the scheme cannot be confirmed as they would be dependent upon individual contractors selected at the tender stage (para. 3.7.2) we would expect that the final ES would clearly set out the maximum parameters of the development, such as heights and locations of elements that have been used in the assessment, which would subsequently be based on a 'worst case' scenario through the use of the Rochdale Envelope approach (para. 3.7.3) to ensure any effects are not underplayed. This is particularly important for larger and taller elements such as the substation or battery storage.

3. It is requested that further landscape and visual consultation is carried out between AAH/LCC and District Authority landscape specialists and the developer team (AECOM) following the conclusion of this second formal consultation phase. This would likely cover the PEIR comments as well as development proposals and mitigation scheme, including the cable route corridor and location of any larger structures or buildings such as the substations, extent of vegetation loss for highways works, and also subsequent knock-on effects such as any requirement for additional viewpoints or visualisations.

B. Detailed Comments on PEI Report - Volume I:

1. In regards to the landscape and visual matters of the design proposals (**Chapter 3 (Scheme Description) of the PEIR**):
 - Comments on the ***Design Parameters*** (provided within Section 3.3) are as follows:
 - As stated in previous correspondence, at this stage, the final location and appearance/extent of taller/larger elements that form part of the development such as the sub station are indicative at this point. Table 3-2 within Chapter 3 of the PEIR usefully provides indicative details of the design parameters used for the PEIR, and paragraph 3.2.2 clarifies that the EIA is undertaken adopting the principles of the Rochdale Envelope to ensure: *“the maximum (and, where relevant, minimum) parameters or limits of deviation for the Scheme where flexibility needs to be retained.”*
 - While this is a reasonable approach for the PV panels, we have concerns in regards to the larger and taller elements, such as Electrical compound (substation) (approximately 106m Width by 120m length and up to 10m in height), Control Centre (up to 6m in height), and more conspicuous elements such as energy storage and conversion units/inverters. The final location and layout of these elements will likely have greater visual effects in this flat, rural landscape than PV panels.
 - We would expect the location and “worst case” extent (footprint) of these elements to be identified for the LVIA to allow for a better understanding of the potential landscape and visual effects, an updated ZTV based upon these parameters and an understanding of the likely requirement for additional viewpoint photographs to capture views of the taller/larger elements.
 - Regarding Overhead/ground lines: Could it be clarified if any above-ground lines and associated poles are proposed. Paragraphs 3.3.22 to 3.3.26 identifies on site cabling which is stated would be in trenches, however it is not explicit as to whether any cables will be installed above ground (e.g. between racks) on site, and if so further detail would be required to understand the potential visibility of these.
 - Regarding vegetation loss:
 - The extent of any vegetation loss to facilitate construction access or the permanent site access points identified in paragraphs 3.3.37 and 3.3.38, is not identified. Also, any vegetation loss to facilitate any potential wider highways works is not identified. We would expect this all to be clearly illustrated and included within any assessment as this has the potential to remove existing features (that make up the character area) and open up views into or across the site. We would expect any proposed vegetation removal to be surveyed to *BS:5837 Trees in Relation to Design, Demolition and Construction to Construction* so it is clear what the arboricultural value is (to aid assessment) and subsequently is appropriately mitigated against if required. It is recommended that vegetation loss to facilitate development is kept to a minimum.

2. In regards to the landscape and visual matters of the Alternatives and Design Evolution (**Chapter 4 of the PEIR**):
 - A refinement of the cable route corridor has been carried out from the scoping stage, and the PEIR section 4.7 identifies the opportunity to develop a “*Shared Grid Connection Corridor*” with the proposed Gate Burton, Cottam and West Burton Solar schemes. This would include a combined crossing of the River Trent, which also seeks to combine this crossing with Cottam and West Burton. This crossing is indicative at this stage and due to the context has potential landscape and visual effects, as well as potential ecological effects. It is requested AAH/LCC, as well as other relevant stakeholders, are involved and consulted further in regards to the crossing, and cable corridor, once further design and surveys have been carried out. Also, subject to the final design solution and location of the crossing and cable corridor, additional viewpoints and potentially AVR’s of the crossing may need to be included within the LVIA to assess and illustrate any potential visual effects.

3. In regards to the landscape and visual chapter (**Chapter 12 of the PEIR**):
 - The PEIR Landscape and Visual Amenity chapter (Chapter 12) has been written at a ‘point in time’ and as such any assessed effects upon baseline receptors are subject to change through the ongoing design process. As such, the landscape and visual chapter provides a good high level overview of the potential significant effects, therefore the AAH/LCC PEIR comments do not cover the detailed assessments, focussing more on process and approach, as well as areas indicated to have potential significant effects. As clarified within paragraph 12.2.1, the landscape and visual chapter is a preliminary assessment based on information available at the time of preparation, and that a: “*final assessment will be undertaken as part of the EIA and reported in the ES that will accompany the DCO application for the Scheme*”. The paragraph goes on to clarify that the assessment is based upon the *Indicative Site Layout Plan*, however many elements will be subject to change.
 - The PEIR identifies the extent of the Study Area of the development in paragraphs 12.4.7 to 12.4.19. The of 5km study area is illustrated on the accompanying figures, and at this stage we feel is appropriate, despite the majority of views of the Site and Development being limited to up to 1km (as stated in paragraph 12.4.16), with views from the eastern areas are very limited. A 1km study area has been included for the cable route, which is also deemed appropriate at this stage. The LVIA Chapter should include a clear statement on the justification for the extent of the final Study Areas.
 - Paragraphs 12.4.29 to 12.4.35 cover the relationship of the LVIA with residential amenity assessments. Paragraph 12.4.35 goes on to clarify that effects on residents visual amenity is ongoing, and if required a RVAA should be carried out as part of the landscape and visual assessment. If one is deemed not required, the justification of this should be clearly stated within the LVIA.
 - The PEIR in section 10.5 identifies that consultation in relation to landscape and visual matters has been carried out, and AAH/LCC and other relevant stakeholders have held meetings and workshops with AECOM, summarised in table 12-2. Within Table 12-2, on page 12-25, it is referenced that: “*Additional representative viewpoints will be included further to those identified at PEI Report stage, including those suggested by LCC where deemed appropriate*.”. These additional viewpoints should be included as agreed with

AAH/LCC and any other consultees with reference to be made in the LVIA to specific consultation comments, such as *AAH TM01*, *AAH TM02* and *AAH TM03*, as well as this set of PEIR comments (*AAH TM04*).

- It is requested that further landscape and visual consultation is carried out between AAH/LCC and District Authority landscape specialists and the developer team (AECOM) following the conclusion of this second formal consultation phase. This would include visualisation locations and type/level.

Identification of receptors:

- The PEIR identifies a range of landscape and visual receptors within the Study Area.
- Several landscape receptors at varying scales are identified for consideration in the LVIA within section 12.7. The correct National, County and District Landscape Character Areas (LCA) have been referred to within the PEIR and cover a range of scales, and there is potential to scope out character areas that would not be affected by the development.
- Paragraph 12.7.42 identifies that AECOM have undertaken their own Local Landscape Character Area assessment. It would be useful if the LVIA clarifies how they reflect (or are different than) published character assessments, which in some cases may be old documents but still provide relevant information.
- The visual receptors and viewpoints were previously discussed with AAH/LCC, as were the potential locations of Photomontages. Paragraph 12.8.10 PEIR states that thirteen viewpoints have been used for the preliminary assessment, which due to program constraints have not incorporated previous consultation comments. However, the ensuing paragraphs suggest these previous comments will be incorporated into the final LVIA. Once the final viewpoint photographs are obtained that include consultation comments, we request the opportunity to review and discuss with AECOM to hopefully reach an agreement.
- Section 12.11 provides a preliminary assessment of landscape effects and section 12.12 provides a preliminary assessment of visual effects. In regards to landscape effects, we would note that in the assessment the scale or size of a character area (such as Region or District) should not be a determining factor in assessing effects – if it were then any character area larger than a “local” level would result in minimal change. We would urge caution in regard larger landscape character areas, which often are assessed as having limited magnitudes of change as the change would be small scale and/or extent (development site) would only affect a small percentage of the overall, much larger, character area. We would encourage the LVIA assess what the change would be in that part of the character area and what identified key elements identified within the character areas are impacted, and how development change would affect those: The baseline should identify the key elements and features that make up the character area, and the assessment should look at how these would be affected, not just the scale of the project in relation to the character area.

Cumulative Effects

- Cumulative effects have not been considered separately within the landscape and visual chapter, however paragraph 12.15.1 references *PEI Report Volume I Chapter 17: Cumulative Effects* where cumulative effects are presented. Section 17.14 of Chapter 17 goes on to provide an assessment of the cumulative Landscape and Visual Amenity effects. A summary of Cumulative landscape and visual effects would be useful to be included within the LVIA as a minimum, extracting the pertinent information from Chapter 17 to identify the key findings.
- Section 17.7 of *Chapter 17* identifies Cottam Solar Project; Gate Burton Energy Park; West Burton Solar Project as main schemes to be considered collectively with Tillbridge Solar. The cumulative effects of the four NSIP solar sites of Tillbridge, Cottam, West Burton and Gate Burton, which are all in close proximity, must be thoroughly considered within any assessment as there are concerns regarding the scale of these developments when considered together, which have the potential to transform the local, and potentially regional, landscape character significantly from that of an agricultural or rural landscape into that of an 'energy' or solar landscape. Visually, receptors will likely experience a change in views, particularly when experienced sequentially travelling through this landscape on PROW or local roads, with potential cumulative sequential views over several miles.

C. Detailed Comments on PEI Report - Volume II:

Review of Appendix 3-1 Framework CEMP

1. No comments in relation to landscape and visual matters at this stage.

Review of Appendix 3-2 Outline LEMP

2. The Outline LEMP provides information regarding the establishment and maintenance of the planting associated with the Development. The success of the landscape mitigation to meet the objectives laid out in the management plan to integrate and screen proposals, promote conservation and protection of the environment and ecological and habitat diversity is highly dependent upon the successful management and maintenance of the new planting.

The maintenance operations provide an initial overview of operations; however, we would expect the management plan be developed further and also last well beyond the initial period, particularly if landscape and visual effects are being assessed at 15 years: the reduction of landscape and visual effects presented in the LVIA will likely be based on the success of landscape mitigation. Similarly, any early planting proposed should be secured and implemented at the earliest opportunity as effects are also reduced in the LVIA based upon any assumption these are in place and have established as planned.

Monitoring of the proposals over the period of the scheme is a key aspect of the mitigation plan and is something which needs further development to ensure there is robustness to deal with the challenging climatic conditions when it comes to ensuring the planting thrives in its location. The regular updating of the management plan will go some way to ensuring that is kept valid and can respond to issues and trends effectively. The updating every 5

years following the initial establishment and maintenance period will also ensure that the management plan can adapt to varying conditions.

Review of Appendix 12-1 LVIA Legislation and Policy

3. No comments in relation to landscape and visual matters at this stage.

Review of Appendix 12-2 LVIA Methodology

4. The methodology notes in para 1.1.1 that the LVIA has been undertaken in accordance with relevant guidance, including GLVIA3, and paragraph 1.1.2 confirms the assessment has been undertaken by a Chartered Landscape Architect.
5. A brief overview of the assessment process and stages would be useful at the front of the methodology to set the scene as well as explain for non-technical readers who may not be familiar with the process.
6. The different phases of assessment are not mentioned in the methodology (Construction, operation yr1 and yr15, and decommissioning). This should be explicit, and also the conditions of each phase, e.g. winter or summer, and also an explanation of the condition of any mitigation planting should be added, e.g. yr 15 assumes planting established.
7. The method of defining the study area is not included within the methodology. It should be explicit in regards to how this was, or will be judged and agreed.
8. How the baseline was established is not included within in the methodology, which would include desk study and fieldwork. We would also expect a clear methodology for the production of any ZTVs to be included, which should clearly identify what design parameters have been used.
9. Visual Receptor identification and subsequent establishment of viewpoints is not mentioned in the methodology.
10. Section 1.2 covers the sensitivity of landscape receptors and correctly identifies that this is derived from *“combining of the value of the landscape (undertaken as part of the baseline study) and the susceptibility to change of the receptor to the specific type of development being assessed”*.
11. Landscape Value is detailed within paragraphs 1.2.3, 1.2.4 and *Table 1-1: Landscape Value Criteria*. Landscape value is, correctly, intended to be guided by Landscape Institute *Technical Guidance Note 02/21*. *Table 1-1* potentially implies that only designated landscapes may have a medium or high value. This is not the case, and GLVIA3 paragraph 5.19 states that *“value can apply to areas of landscape as a whole, or to the individual elements, features and aesthetic or perceptual dimensions which contribute to the character of the landscape”* and that *“the value attached to undesignated landscapes also needs to be carefully considered and individual elements of the landscape – such as trees, buildings or hedgerows – may also have value.”*
12. Landscape Susceptibility is detailed in paragraphs 1.2.5 to 1.2.7 and *Table 1-2: Susceptibility to Change of Landscape Receptors*.

13. Subsequently Landscape Sensitivity is detailed in paragraphs 1.2.8 to 1.2.7 and *Table 1-3: Landscape Sensitivity*. Again, the descriptions imply that only designated landscapes may have higher sensitivity.
14. Section 1.3 covers the Sensitivity of Visual Receptors and correctly identifies that the sensitivity of visual receptors is derived from “*the susceptibility to change in views and visual amenity and also the value attached to particular views*”.
15. Visual Value is detailed within paragraphs 1.3.3, 1.3.4 and *Table 1-4: Landscape Sensitivity* (which we assume is incorrectly titles and should be “*Visual Value*”).
16. Landscape Susceptibility is detailed in paragraphs 1.3.5 to 1.3.7 and *Table 1-5: Visual Susceptibility*. Table 1-5 provides classifications of visual susceptibility; however, we would re-iterate the point in regards many of the surrounding lanes and tracks within the study area are also well used by dog walkers, horse riders and leisure cyclists, and subsequently the assessment should consider views (and susceptibility) from these groups from these locations. This is supported by the Neighbourhood Plan supporting documents of Corringham Character Assessment (summarised in paragraph 12.7.25) and Neighbourhood Character Profile for Glentworth (summarised in paragraph 12.7.26 and 12.7.30). This is also acknowledged within paragraph 12.8.8 of the landscape and visual chapter of the PEIR.
17. Subsequently Visual Sensitivity is detailed in paragraphs 1.3.8 and *Table 1-6: Sensitivity of visual receptors*.
18. Section 1.4 covers Assessing magnitude (nature) of landscape and visual effects. And provides a description of the process which is supported by tables of criteria to aid judgements.
19. Section 1.5 covers the ‘significance’ of effect, and paragraph 1.5.5 identifies that “*Residual effects found to be ‘moderate’ or ‘major’ are deemed to be ‘significant’ and may be important or relevant to the decision-making process.*”
20. Cumulative Effects have not been covered in the methodology and we would expect this to be part of the final LVIA. The cumulative effects of schemes in the local area are an important consideration in this process, and we would expect a methodology to be provided as well as a robust assessment of cumulative landscape and visual effects.
21. The relationship of the LVIA to Residential Visual Amenity is not covered within the methodology, and we would expect a reference to be made and how this relates to the LVIA.
22. Visualisations are proposed within the PEIR. These will be required for the LVIA and we recommend this is subject to further consultation to agree the Type and agree the AVR Level that would be most appropriate to illustrate the proposals, which we would assume would be Level 2 or Level 3, however photo wire (Level 0 or Level 1) may be more appropriate in some long distance or fully screened views. We would expect a full visualisation and photography methodology is provided within the ES.

Review of 12-3 LVIA Landscape Baseline:

23. No comments on the landscape baseline appendix at this stage.

Review of Appendix 12-4 LVIA RVD

24. Paragraph 1.1.1 identifies 13 preliminary representative viewpoints have been selected to assist in illustrating the effects on visual receptors. These have been discussed previously with AECOM, and AAH/LCC have visited the viewpoints on site and comments on individual images/views have been provided.

Review of Appendix 12-5 LVIA AoLE

25. No comments on the assessment of landscape effects appendix at this stage.

Review of Appendix 12-6 LVIA Assessment of Visual Effects

26. No comments on the assessment of landscape effects appendix at this stage.

D. Detailed Comments on PEI Report - Volume III:

1. Generally: Figures are well presented and on the whole read well. However, due to the scale of the figures @A3, some may benefit from enlarged sections that focus on the site and immediate context, such as viewpoints and PROW information.

The base mapping for figures appears to be OS Explorer 1:25,000 Scale, resized to the presented scale, which provides a suitable level of detail for the base.

2. Figure 3-1 Indicative Site Layout Plan: These plans illustrate the site proposals and mitigation areas in the context of existing infrastructure, features, heritage and environmental designations. Due to the evolving nature of the layouts, there are currently no Landscape and Visual Comments on the layout itself. However, it is requested that additional meetings and workshops be held with AAH/LCC as appropriate so that a continued dialogue is maintained in regards to the development proposals, including the cable route corridor, location of any larger structures or buildings such as the substations and mitigation.

We would expect the final submission would include further detail on the landscape mitigation proposals, and as a suggestion, having the plan enlarged and broken into several sheet may assist in providing additional detail. Indicative typical sections would also assist in conveying the landscape proposals and minimum offsets from features such as boundaries or PROW.

3. Figure 12-1 Example Initial Site Appraisal Plan and 12-2 Example Site Constraints and Opportunities Plan: These are very useful figures and demonstrate use of considered design and an iterative approach. The LVIA and potentially supporting documents such as D&A statement would benefit from their inclusion, and any subsequent updates.
4. Figures 10-4a to 10-4h ZTV: The production of the ZTVs provides a clear illustration of potential locations that the proposals would be visible. The parameters that the ZTV have been based upon are clearly stated within the drawing Notes. The ZTVs produced for the LVIA should be updated as required to illustrate the maximum parameters of all elements, and also reflect the location of taller elements such as the substation.

5. Figure 12-6 Designations with Relevance to LVIA: The figure appears to illustrate no designations within the Scheme Boundary of the Principle Site or immediate context. Please confirm as at the scale presented small designations may not be visible.
6. Figure 12-7 PROW: Four Potential Site Access points for the Principle Site are shown. The LVIA text should clearly indicate the extent of vegetation loss at the final locations, both to provide access, but also wider clearance for sight lines or highways improvements.
7. Figure 12-11 Draft Local Landscape Character Areas (defined by the Applicant): This illustrates a more detailed character assessment provides more useful, finer grained information, and is aligned with GLVIA3.
8. Figure 12-12 Preliminary Representative LVIA Viewpoints: Principal Site only (with Bare Earth ZTV): This represents viewpoints as discussed at the pre-application stage, and viewpoints overlaid on the ZTV assists with clarity.
9. Figure 12-13 Type 1 Representative Views: Thirteen viewpoints have been included within Figure 12-13. These provide useful context, however these views are not aligned with consultation comments and subsequent dialogue that has been held due to program constraints. However once the final viewpoint photographs are obtained that include consultation comments, we request the opportunity to review and discuss all the views with AECOM to hopefully reach agreement.

Figure 15-3 Local PRoW Network: The plan only shows PROW within the Scheme boundary. Suggest the PROW in the wider area are also shown on this plan, as it could be misleading only showing a limited network.

Figure 17-5 Landscape and Visual Amenity Zone Of Interest: The plan shows cumulative sites in the local area that have been considered within the cumulative assessment. This correct indicates the main schemes to be considered: West Burton, Gate Burton, and Cottam Solar.

Oliver Brown CMLI
AAH Landscape

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04th July 2023

APPENDIX B

Landscape Institute Technical Guidance Note 1/20 (10 Jan 2020): Reviewing Landscape and Visual Impact Assessments (LVIAs) and Landscape and Visual Appraisals (LVAs)

Reviewing Landscape and Visual Impact Assessments (LVIAs) and Landscape and Visual Appraisals (LVAs)

Technical Guidance Note 1/20 (10 Jan 2020)

The purpose of this guidance is to establish a framework for carrying out reviews of LVIAs and LVAs, analysing in a structured and consistent way if the assessment reflects the approach advocated in GLVIA3 and has led to reasoned and transparent judgements. Use of this framework should in due course further raise the standard of assessments

1. Introduction

The third edition of the *Guidelines for Landscape and Visual Impact Assessment* (GLVIA3) was published in April 2013. It has been widely welcomed, accepted and adopted for use in assessing the effects of projects on landscape and visual amenity and since publication been promoted by Landscape Institute (LI) training events.

GLVIA3 sets out that assessment of effects on the landscape and visual resource that may result from a development proposal may be undertaken formally as Landscape and Visual Impact Assessment (LVIA) typically as part of an Environmental Impact Assessment (EIA) or less formally as a Landscape and Visual Appraisal (LVA). The LI strongly recommends that GLVIA 3 is followed when undertaking these assessments and that the resulting LVIAs and LVAs should be objective with clear thinking, easy to follow, and demonstrate how they have informed appropriate siting, design, and mitigation.

The main difference between an LVIA and LVA is that in an LVIA the assessor is required to identify 'significant' effects in accordance with the requirements of Environmental Impact Assessment Regulations 2017, as well as type, nature, duration and geographic extent of the effect whilst an LVA does not require determination of 'significance' and may generally hold less detail.

In the case of LVIAs, The Regulations have further implications for landscape professionals:

- Reg. 18 (5) stipulates that the developer must ensure that the ES is prepared by '*competent experts*' and that the developer must include a statement "*outlining the relevant expertise or qualifications of such experts*".
- Reg 4 (5) places obligations on the relevant planning authority or the Secretary of State because they "*...must ensure they have, or have access as necessary to, sufficient expertise to examine the Environmental Statement.*"

Note that the terms 'competent expert' and 'sufficient expertise' are not defined in the EIA Regulations. The Landscape Institute, in the absence of formal certification of specific competence, considers that a 'competent expert' would normally be a Chartered Member of the Landscape Institute who, has substantive experience of undertaking and reviewing LVIAs. This may be evidenced by the assessor's CV, by reference to previous assessments, and by endorsement by other senior professionals.

Following on from GLVIA3, which focusses on how to *undertake* LVIAs/LVAs, this document provides guidance on how to *review* LVIAs or LVAs prepared by others. Such review may be undertaken from within the organisation which produced the LVIA/LVA, e.g. as part of a QA process, or by third parties on receipt of LVIAs and LVAs, such as landscape and or planning professionals in public sector bodies.

This guidance sets out a framework for carrying out such reviews in a structured and consistent way that reflects the approach to assessment advocated in GLVIA3 and use of it should further raise the standard of assessments.

2. Existing advice and guidance

GLVIA3 Chapter 8, under the heading “Review of the landscape and visual effects content of an Environmental Statement”, says:

“8.35 Competent authorities receiving Environmental Statements will often subject the documents to formal review of both the adequacy of the content and of their quality. The review process will usually check that the assessment:

- *meets the requirements of the relevant Regulations;*
- *is in accordance with relevant guidance;*
- *is appropriate and in proportion to the scale and nature of the proposed development;*
- *meets the requirements agreed in discussions with the competent authority and consultation bodies during scoping and subsequent consultations.*

8.36 The summary good practice points in this guidance should assist in review of the landscape and visual effects content of an Environmental Statement. In addition, several existing sources may also help anyone involved in reviewing this topic to decide what to look for:

- *IEMA has developed a series of general criteria for reviewing Environmental Statements and registrants for the EIA Quality Mark¹ must meet the criteria...*
- *The former Countryside Commission published criteria for reviewing the landscape and countryside recreation content of Environmental Statements...*
- *Appendix 1 of Scottish Natural Heritage’s Handbook on EIA² contains useful tests to help judge the landscape and visual effects content of Environmental Statements...”*

In addition, European Commission guidance on ES review³, published in 2001 and, although directed at whole ES review rather than topic specific review, has also provided useful pointers.

This review framework has been developed in this context.

¹ IEMA EIA Quality Mark, IEMA website: [redacted] [accessed 200110]

² Scottish Natural Heritage, [A handbook on environmental impact assessment v5](#), 2018, SNH website: [redacted]

[redacted] [accessed 200110]

³ European Commission, [Guidance on EIA-EIS Review](#), Luxembourg: Office for Official Publications of the European Communities 2001 ISBN 92-894-1336-0, EC website:

[redacted] [accessed 200110]

3. Carrying out the review

There are three main components of a review of a LVIA or LVA leading to a report containing the overall conclusion in respect of the completeness, competency and reliability of the LVIA/LVA.

- 1. Checking the methodology used to undertake the assessment, the criteria selected (including balance between), and the process followed;**
- 2. Checking the baseline, content and findings of the assessment;**
- 3. Checking the presentation of the assessment findings.**

As a starting point when undertaking a review, the reviewer will need to define the structure and process to be followed by for example setting out a set of headings or questions against which the LVIA or LVA is examined. Setting out standard or systematic questions will allow consideration being given to each step and each element covered in the assessment. The “good practice” bullet points at the end of each chapter in GLVIA3, noted above, may provide a starting point for such an approach. It is also important to bear in mind the principle of proportionality (cf. EIA Directive). Both the LVIA (or LVA) and the Review should have a defined scope and level of detail which is proportionate and reasonable to allow an informed decision to be reached.

In order to improve consistency and quality of reviews of LVIAs and LVAs the Landscape Institute has produced this framework. Those who undertake reviews should follow this framework and modify or adapt the framework to the Review being carried out and set out the reasons for such modifications.

Step 1. Checking methodology, criteria and process

In this phase, the reviewer will check the methodology, scope and process used in the assessment and how these relate to GLVIA 3. This involves reviewing the following:

- a) Does the scope of the assessment meet the requirements set out in the Scoping Opinion and/or as defined in the LVIA or LVA and if substantively different, are the reasons clearly set out and explained?
- b) What consultations have been carried out and have responses been acted upon?
- c) Has the scope and methodology of the assessment been formally agreed with the determining authority? If not, why not?
- d) As part of the methodology, has the terminology been clearly defined, have the criteria to form judgements including thresholds been clearly defined and have any deviations from good practice guidance (such as GLVIA3) been clearly explained?
- e) Does the assessment demonstrate a clear understanding and provide a separate consideration of landscape and visual effects?
- f) Does the assessment demonstrate comprehensive identification of receptors and of all likely effects? and
- g) Does the assessment display clarity and transparency in its reasoning, the basis for its findings and conclusions?

Step 2. Check the baseline, content, and findings of the assessment

As part of this stage in the review process the reviewer will consider the description of the baseline, both in narrative as well as in illustrations by plans, photographs and drawings etc. This may also include publicly available aerial photography, books, online resources, local plans and management plans.

The reviewer may also consider that a site visit may be necessary either to complement or to verify baseline information. The site visit and potential visits to viewpoints are also useful to check actual findings of the assessment.

This stage of the review typically includes further tests:

- a) What is the reviewer's opinion of the scope, content and appropriateness (detail, geographic extent) of both the landscape and the visual baseline studies which form the basis for the assessment of effects (supported by appropriate graphic such as ZTVs etc as appropriate)?
- b) Has the value of landscape and visual resources been appropriately addressed (including but not necessarily limited to) considerations of: local, regional and national designations; rarity, tranquillity, wild-land and valued landscape?
- c) Have the criteria to inform levels of sensitivity (both landscape and visual) and magnitude of change have been clearly and objectively defined, avoiding scales which may distort reported results?
- d) How well is the cross-over with other topics, such as heritage or ecology, addressed?
- e) Is there evidence of an iterative assessment-design process?
- f) Is it clear how the methodology was applied in the assessment, e.g.: consistent process, use of terms, clarity in reaching judgements and transparency of decision-making?
- g) How appropriate are the viewpoints that have been used?
- h) How appropriate is the proposed mitigation, both measures incorporated into the scheme design and those identified to mitigate further the effects of the scheme, and mechanisms for delivering the mitigation?
- i) What is the reviewer's opinion of the consistency and objectivity in application of the criteria and thresholds set out in the methodology for assessing the sensitivity of receptors, the magnitude of changes arising from the project, the degree/nature of effects, and the approach to judging the significance of the effects identified, in the case of EIA projects?
- j) What is the opinion on the volume, relevance and completeness of the information provided about the development or project including, where relevant, detail about various development stages such as construction, operation, decommissioning, restoration, etc.?
- k) Does the document clearly identify landscape and visual effects which need to be considered in the assessment? and
- l) Have levels of effect have been clearly defined and, in the case of LVIA, have thresholds for significance been clearly defined and have cumulative landscape and visual effects been addressed?

Step 3. Critique of the presentation of the findings of the assessment

This phase is perhaps the most straightforward. It involves examining the ‘presentation’ of the assessment including report text, figures/ illustrations, visualisations, and other graphic material forming the LVIA or LVA, and answering the following:

- a) Does the LVIA/ LVA display transparency, objectivity and clarity of thinking, appropriate and proportionate communication of all aspects of the assessment of landscape and visual effects, including cumulative effects.
- b) Have the findings of the assessment been clearly set out and are they readily understood?
- c) Has there been clear and comprehensive communication of the assessment, in text, tables and illustrations?
- d) Are the graphics and/or visualisations effective in communicating the characteristics of the receiving landscape and visual effects of the proposals at agreed representative viewpoints?
- e) Are the graphics and/or visualisations fit for purpose and compliant with other relevant guidance and standards? and
- f) Is there a clear and concise summation of the effects of the proposals?

Overall Conclusion: Report the review

The final step of the review process is to use the reviewer’s findings to draft a short report which would include (but need not be limited to):

1. Confirmation of the brief issued to the reviewer setting out the scope of the review;
2. A summary of how the review was undertaken);
3. A summary of findings of the review of the assessment methodology;
4. A summary of findings of the review of the scope of the assessment;
5. A summary of findings of the review of the actual assessment of effects;
6. A summary of findings of the presentation of the assessment;
7. A summary statement by the reviewer in respect of appropriateness, quality, comprehensiveness, compliance and conformity with relevant guidance and regulations;
8. Recommendations for further information to be sought (if necessary); and
9. Overall conclusions on the adequacy of the assessment and whether it is sufficient to support making an informed planning decision.

The report can also include further information not covered here but relevant to reporting on the compliance (or otherwise) of the LVIA or LVA with GLVIA3 or matters of competence or expertise. This guidance provides a summary framework for reviewing and reporting only; the Landscape Institute continues to regard GLVIA3 as the primary source of guidance for undertaking LVIA's and LVAs.

4. Further information

For further information or to provide feedback on the guidance in use, please refer to the Landscape Institute's website, using the search terms GLVIA. At the time of publication, material is likely to be found in the following section: [REDACTED]

Authored by Mary O'Connor FLI on behalf of the GLVIA Panel and approved by LI Technical Committee
Nov 2019

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Review of ALC and Soil Resource Documents for Tillbridge Solar Project

On behalf of Lincolnshire
County Council



Contents

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- 2. Geology and Soils**
- 3. Cumulative Impacts**
- 4. Spatial Approach**
- 5. Assessment of Farming Circumstances**
- 6. Cable Route; Soil and ALC Assessment**
- 7. Further Comments**
- 8. Conclusions on Use of Best and Most Versatile Land**

1. The Site and Proposal

The Proposed Development comprises the installation of solar photovoltaic (PV) generating modules, cabling, and grid connection infrastructure with significant.

The Site is located within the administrative boundary of West Lindsey District, in the county of Lincolnshire. The Site measures approximately 1210 hectares (ha) and extends east of Gainsborough and south of A631. The Site boundary is represented in **Appendix 1**, which also shows the findings of the final ALC report.

2. Geology and Soils

Geology

The geology of the area is shown on a British Geological Map and is primarily shown as Till over Mudstone Formation, and various smaller areas of drift, glaciofluvial deposits and alluvium.

Soils

The soils locally are described as:-

Salop Association soils on the west of the site: Slowly permeable seasonally waterlogged reddish fine loamy over clayey, fine loamy and clayey soils associated with fine loamy over clayey soils with slowly permeable subsoils and slight seasonal waterlogging.

Beccles 1 Association soils on the north-west and east of the site: Slowly permeable seasonally waterlogged fine loamy over clayey soils, associated with similar clayey soils Ragdale Association soils on a small area on the northern boundary: Slowly permeable seasonally waterlogged clayey and fine loamy over clayey soils. Some slowly permeable calcareous clayey soils especially on slopes.

Wigton Moor Association soils in the far east: Permeable fine and coarse loamy soils variably affected by groundwater, the drier soils being on slightly raised sites. Generally flat land.

3. Cumulative Impacts

There are a number of largescale Solar PV schemes in Lincolnshire, with others planned or proposed. There are six known solar project NSIP schemes; specifically in relation to impacts on agricultural land. The situation is a moving picture as new proposals come forward from time to time. Most of these sites are proposed on farmland.

Lincolnshire is an agricultural area with substantial areas of land within the Best and Most Versatile category. Much of the non BMV land will be Grades 3b and some 4 but with very little Grade 5.

A county-level assessment should consider scope for connection into the National Grid at the locations proposed by the registered NSIP solar projects above, and with specific consideration of agricultural land impacts.

For a project of this scale there is an impact the project will tie up the land for up to 40 years, there will be an impact. The area is large locally and if the quantities of BMV are as stated then the impact will be reasonably small in BMV terms. Environmental Impact Assessments give guidance on the size and quality of Land Grade that is or can be affected by development proposals.

The loss of such a large area of land would normally be considered as significant at District level, even though the use is 'temporary'. Any permanent loss of land due either to construction or through biodiversity designation may affect this assessment.

The importance of agriculture and soils in Lincolnshire

Lincolnshire is home to 10 percent of English agricultural production. Its combination of climate, soil type and topography make the county ideal for a variety of crops. There are significant proportions of wheat, oilseed rape, sugar beet and potatoes, with the county producing 12 percent of England's arable crops.

Lincolnshire is also home to around 25% of the UK's vegetable production, and 21% of ornamental crop production. This high level of production is vital to the county's economy, generating a Gross Value Added of £446m in 2012. To preserve fresh produce and minimise supply chain distance, highly productive food hubs have built up in the south of the county. The importance of this sector for the local economy is reflected in the number of jobs it generates: if this food supply chain is included alongside food retail and catering in the county, the number of employees exceeds 100,000.

Even though the majority of the site is not BMV, there will be an impact on agriculture locally and across the county.

4. Spatial Approach

The augering of the site has been undertaken in line with TIN 049 and the MAFF 1988 Guidelines, one auger point per hectare and with occasional soil pits particularly where soil types vary.

Soil types have been laboratory analysed for textural assessment to provide accurate information that can be relied upon in calculating the ALC grade.

5. Assessment of Farming Circumstances

The documents acknowledge the following:-

15.4.14 There is no current guidance on the assessment of Farming Circumstances. The approach taken for this EIA broadly follows the guidance from the now superseded Planning Policy Guidance Note 7 (PPG7) Annex B.

They go on to state:-

Farming Circumstances

15.3.8 A farming circumstances baseline has been completed as far as possible, but not all of the twelve agricultural occupants have been interviewed. The assessment is based upon Farming Circumstances for five farm businesses operating within the Principal Site. Two of the farms that have not yet been interviewed are understood to be small units (15 and 5 hectares) with the land used for horses and the owner's own amenity, not commercially viable farm businesses.

15.3.9 The five farms considered range between large and dynamic arable operations that farm additional land for other landowners under contract management arrangements, and smaller units that the owners regard as no longer financially viable. Some of the farm businesses where baseline data could not be obtained are understood to have arable land managed by contractors rather than

undertaking their own land work in hand. These farm businesses will therefore have little to no farm labour and machinery currently employed to manage the land.

15.3.10 As there is currently no planning policy guidance or environmental impact assessment guidance on the assessment of farming circumstances, the omission of some farms from the baseline data does not compromise the ability to assess environmental effects for Soils and Agriculture.

Food Security

At a time when there are both food shortages across the globe and issues of food security, related to climate change and the weaponizing of food during the Ukraine conflict, the loss of productive farmland should be avoided, wherever possible. The NFU confirm that the UK is only 58% self-sufficient in food and the loss of this area of strong agricultural production is therefore significant. The NFU believes that productivity should increase on UK farms.

Much of the land is arable and the loss to the local farming economy will be significant. Cereals and wider combinable crops are grown locally on similar soils.

Food Security and Food Imports

Nearly half of what we eat in the UK comes from abroad, and two-thirds of that has in recent years come from the EU. The NFU confirm that UK self-sufficiency is only at 58%. With the recent war in Ukraine and the uncertainty of supply of core commodities such as wheat, there have been both supply issues and huge price fluctuations. This has refocused attention on food security in the UK and the need to protect productive farmland from development and long-term decline.

"There are three cornerstones on which a prosperous farming sector must be built and which any government should use to underpin its farming policy. They are boosting productivity, protecting the environment, and managing volatility (source Minette Batters, NFU president). The country must "never take our food security for granted," she said.

The United Kingdom Food Security Report states:-

Food security is a complex and multi-faceted issue. It is structured around five principal 'themes', each addressing an important component of modern-day food security in the UK. They are as follows:

- *Global food availability, which describes supply and demand issues, trends and risk on a global scale, and how they may affect UK food supply;*
- *UK food supply, which looks at the UK's main sources of food at home and overseas;*
- *Supply chain resilience, which outlines the physical, economic, and human infrastructure that underlies the food supply chain, and that chain's vulnerabilities;*
- *Household-level food security, which deals with issues of affordability and access to food; and*
- *Food safety and consumer confidence, which details food crime and safety issues.*

The report notes that the biggest medium to long term risk to the UK's domestic production comes from climate change and other environmental pressures like soil degradation, water quality and biodiversity. Wheat yields dropped by 40% in 2020 due to heavy rainfall and droughts at bad times in the growing season. This is an indicator of the effect that increasingly unreliable weather patterns may have on future production. When UK production is reduced, we are more dependent on imported commodities. The war in Ukraine has highlighted the vulnerabilities of such a strategy.

6. Cable Route; Soil and ALC Assessment

In my review of the PEIR documents I indicated that:-

Cable Route; Soil and ALC Assessment

An ALC survey of the Cable Route Corridor is not currently proposed. Instead, ALC along the Cable Route Corridor will be mapped based on secondary data sets, which is considered adequate given impacts will comprise permanent below ground works, with land returned to its original agriculture use following installation.

The documents confirm that a soil survey has not yet been undertaken, but it will be a requirement.

Cable Route Corridor

15.3.1 The Cable Route Corridor has not been subject to a soil survey to inform soil handling work for the cable construction. This survey will be conducted via a requirement of the DCO once the precise location of the cable trench path within the Cable Route Corridor is finalised. This approach to Cable Route Corridor surveying is precedented across the neighbouring solar farm projects and others including Sunnica Energy Farm. The soil survey can also record Agricultural Land Classification (ALC) grades for the cable trench path.

15.3.4 The cable trenching work will be similar to the laying of agricultural field drains, with excavated soil being placed to the side then backfilled directly without the need to remove soil to a storage bund. All work will benefit from the embedded mitigation of a Soil Management Plan ensuring the soil is not in a plastic consistence when worked. This will effectively eliminate the principal risk of soil degradation from the cable trenching works. As the works are brief with no loss or degradation of soils or agricultural land, there is no significant limitation to the soils and agriculture appraisal from the absence of pre-application detailed assessment in the Cable Route Corridor.

From viewing the maps included in the report it seems likely that some of the cable route will be BMV. However, irrespective of the land quality there will be issues of concern to farmers and landowners including:-

- Land drainage
- Weed burden
- Biosecurity for plant diseases
- Timeliness of soil stripping and storage

These matters will need to be addressed if the scheme is to proceed.

7. Further Comments

Soil Damage During Construction

Soil structure can be significantly damaged during the construction phase of the process, particularly on heavy clay soils. There is inevitably a lot of trafficking of vehicles on the land to erect the panels and if this work is undertaken when soils are wet, there can be significant damage. Much of this damage can be remedied post construction, but not all and it is possible that long term drainage issues occur on the site due to the construction.

During the construction phase many of the areas will affect soil and water issues. A basic Soil Management Plan should be established as part of the Construction Phase, to minimise the impact on soil resources.

A separate soil management plan should be considered for the cable route to minimise the impact on soil structure, land drainage and ultimately soil quality. Guidance is available in published documents.

8. Conclusions on Use of Best and Most Versatile Land

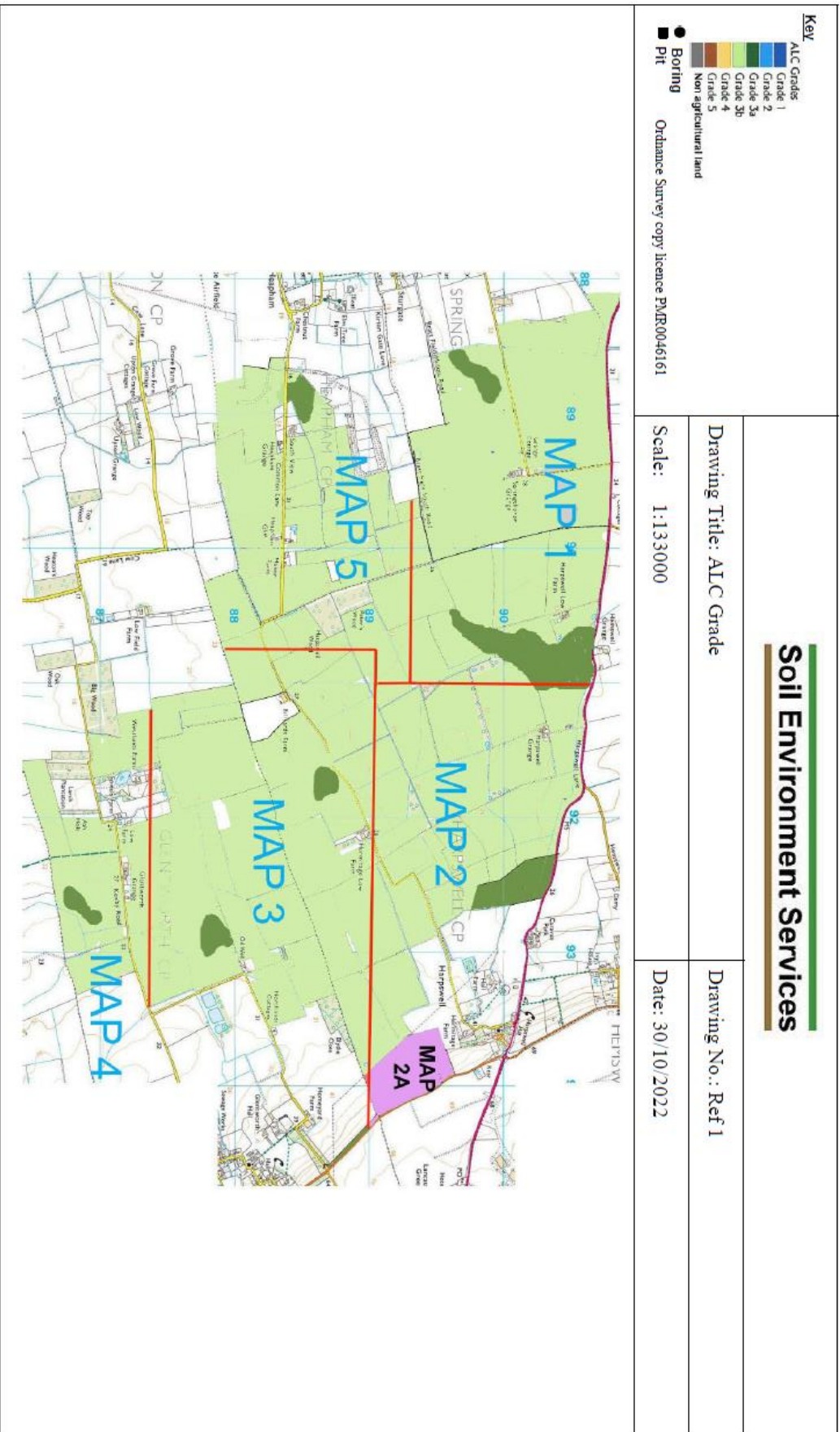
In my review of the PEIR documents I indicated that:-

It is my view that only where the preliminary work has identified significant differences from published data, particularly the provisional ALC maps and the predicted Best and Most Versatile status, should those areas be assessed further.

A detailed ALC report has been commissioned and whilst some BMV land has been identified, over 90% of the site is found to be Grade 3b. Some areas of BMV have been excluded from development as part of the revised proposals.

I attach a chart in **Appendix 2** which appraises the key steps in the process. At this stage I consider the ALC meets the criteria set out by British Society of Soil Science, though I cannot corroborate the soil samples themselves, only the calculations based on the data.

Appendix 1



Appendix 2

BSSS ALC Checklist					
Background	P/C/F	Comment		PASS	PASS
Is the company / author a specialist in ALC?		PASS		FAIL	FAIL
Have published soil maps been mentioned?		PASS		CONCERN	CONCERN
Climate data					
Is interpolated climate data included for the site (esp. Field Capacity Days (FCD), Moisture Deficits (MD) and Maximum grade on climate)?		PASS			
Is the data consistent with that expected for the area?		PASS			
Site and standalone limitations					
Have gradients, micro-relief and flooding been considered / acknowledged?		PASS			
Soils and interactive limitations					
Have topsoils and subsoils been field surveyed? References to soil pits, auger samples & lab samples should be included.		PASS			
Are the soil types clearly described, including reference to gleying, slowly permeable layers (SPL), soil wetness class (SWC) and drought?		PASS			
Have the reasons for ALC grading been clearly described?		PASS			
Have soil structure and porosity been described?		PASS			
Have soils been described using Soil Survey Field Handbook (Hodgson 2021)?		PASS			
Have soils been described using Munsell soil colour notations?		PASS			
Conclusions and references					
Is there a table clearly showing areas of ALC grades?		PASS			
Is there a list of references (normally including Soil Survey of England and Wales mapping, the MAFF 1988 ALC guidelines, Munsell soil colour charts and the Soil Survey Field Handbook – Hodgson 1997)?		PASS			
Have the limitations been justified when concluding the ALC grade(s) on the site?		PASS			
Schedule of auger borings and soil pits					
Has a map of auger boring & soil pit locations been included?		PASS			
Have laboratory analyses been included to confirm topsoil particle size distribution?		PASS			
Has a schedule of auger boring information been provided?		PASS			
Do the auger borings show horizon depths, colours & textures?		PASS			
Do the auger boring records clearly show soil wetness class?		PASS			
Do the auger boring records clearly show topsoil stone content?		PASS			
Do the auger boring records clearly show depth to gleying and depth to slowly permeable layer (SPL)?		PASS			
Do the auger boring records clearly show moisture balance (MB) values for drought (Wheat & Potatoes)?		PASS			
Has detailed soil pit information been provided in the report and do the pit descriptions show horizon depths, colours and textures?		PASS			
Do the soil pits / pit clearly show soil wetness class (WC)?		PASS			
Do the soil pits / pit clearly show moisture balance (MB) values for drought?		PASS			
Do the soil pit / pits clearly show soil structure and porosity in the subsoil?		PASS			