Lincolnshire COUNTY COUNCIL *Working for a better future*

Open Report on behalf of Andy Gutherson - Executive Director for Place

Report to:	**Planning and Regulation Committee**
Date:	**2 October 2023**
Subject:	**Application by Cottam Solar for a Development Consent Order to install solar PV panels to generate 530MW, on site battery storage with 600MW/h capacity and associated infrastructure including battery energy storage system, access provision and an underground 400kV electrical connection to the National Grid Substation at Cottam Power Station.**

Summary:

An unrestricted duration Development Consent Order (DCO) for the construction, operation and maintenance of an energy solar park is sought covering 4 separate land parcels covering approximately 2800 acres (1,150 ha) that would produce 600MW of energy that would be transferred to Cottam Sub Station via underground cable, roughly situated in a linear form between the A631 and A1500 in West Lindsey. The Council is required to provide its comments on this application to the Examining Authority who will following a six month examination make a recommendation to the Secretary of State for Energy Security and Net Zero as to whether the Development Consent Order should be granted or not.

The Council is required to engage in the process by proving confirmation of its views on the proposal and this report sets out the matters the Council is required to comment on including consideration of the Councils Local impact Report.

Recommendation:

That the Committee resolves to :-

(A) Approve the Local Impact Report at Appendix A to be submitted to the Examining Authority.

(B) The County Council informs the Examining Authority in its written response that whilst the project would produce clean renewable energy that would support the nation's transition to a low carbon future and deliver significant biodiversity net gain benefits through the creation of mitigation and enhancements as well as other more limited positive impacts (as identified within our Local Impact Report), these positive impacts are not outweighed by the negative, some significant,

impacts that arise given the overall size and scale of the development both on its own and in combination with the three other solar projects proposed in this geographical area as follows.

- A permanent and negative impact upon the landscape character and the appearance of the area as a consequence of changes to the current arable agricultural land use. In view of the conclusions from the Council's assessment of the landscape and visual impact of the development negative impacts have been identified for the site some of which may be mitigated by the production of further evidence but the cumulative impact when combined with the other proposed solar farms in this location is negative which results in a conclusion that the scheme would be contrary to Local Plan Policies S5, S14 and S16.

- There is a tension in relation to BMV impacts given that a proportion of the energy park site by area comprises a modest amount of Grades 3a but significant amounts of 3b land. The National Policy Statements direct that previously developed land, brownfield land, contaminated land, industrial land and non-BMV land should be developed as a preference, and where policies S14 and S67 of the CLLP seek to protect the best and most versatile agricultural land so as to preserve opportunities for food production and the continuance of the agricultural economy. A permanent and negative impact as a consequence of the loss of agricultural land, a proportion of which of which is classed best and most versatile land. This loss is not only at a local level but significant when considered in-combination with the loss of land from other NSIP scale solar developments that are also being promoted and considered across Lincolnshire contrary to Policy S67.

- Negative impacts on the users of Public Rights of Way in and around the proposed development as a consequence of changes to the visual appearance of the area and views from these routes and uncertainty around the disruption that will be caused resulting from the diversion of footpaths and the re-instatement treatment proposed contrary to Policies S48 and S54.

- Due to the level of uncertainty as a result of the restricted amount of trial trenching that has been undertaken across the Order Limits there is a distinct possibility that archaeological remains of more than local/regional significance could be disturbed and damaged. Consequently it is not possible to adequately assess the impacts on such assets and therefore the requirements of Policy S57 have not been met.

- That if the Secretary of State grants the Development Consent Order a comprehensive and appropriate package of Community Benefits is secured and delivered to compensate for the identified negative impacts that the proposed development would cause to the communities affected by this project.

The Application

1. The Applicant is seeking development consent for the construction, operation and maintenance of an energy solar park close to the settlements of Blyton, Corringham and Sturton by Stow in West Lindsey and the Council is required to provide its comments on this application to the Examining Authority who will following a six month examination make a recommendation to the Secretary of State for Energy Security and Net Zero as to whether the Development Consent Order should be granted or not. Attached to this report is Lincolnshire County Council's Local Impact Report (LIR) assessing the proposed Cottam Solar Energy Park and provides the evidence to support the Council's formal position on the application.

2. A LIR is a report in writing giving the details of the likely impact of the proposed development on the authority's area. When an Examining Authority accepts an application, it asks the relevant local authorities to prepare a LIR and these should focus around whether the local authority considers the development would have a positive, negative or neutral effect on the area. The LIR does not need to contain a balancing exercise between positives and negatives as this will be for the Examining Authority to carry out when making its decision. In addition to the LIR the Council is also being invited to submit Written Representations which can cover any matters relevant to the proposal. The LIR and Written Representation is therefore an opportunity for the Council to set-out its overall position on the application.

3. The Council is not the determining Authority for the proposal; this is because Cottam Solar is proposed to have a generating capacity exceeding 50 MW (stated to be 600MW) and, as such, is classified as a Nationally Significant Infrastructure Project (NSIP). This means that, to gain permission to build the project, the developer is required to submit a Development Consent Order (DCO) application to the Planning Inspectorate (PINS) which will be considered by a panel of independent Inspectors (the Examining Authority – ExA).

4. A DCO application for the project was made on in January 2023, and PINS confirmed that they accepted the application for examination on 22 February 2023. Following the pre-examination period, PINs issued a 'Rule 6' letter on 11 July which sets out the examination timetable and includes various deadlines for submission of information. Of note, is Deadline 1 – 17 October 2023, which is the deadline for submission of Local Impact Reports (LIR) from any Local Authority and the date the Council must submit its written representations.

5. The Planning Inspectorate has six months to carry out the examination which started on 5 September 2023. During this stage Interested Parties who have registered by making a Relevant Representation are invited to provide more detail of their views in writing. Careful consideration is given by the Examining Authority to all the important and relevant matters including the representations of all

Interested Parties, any supporting evidence submitted and answers provided to the Examining Authority's questions set out in writing or posed at hearings.

6. Following examination, the ExA must prepare a report on the application to the relevant Secretary of State, including a recommendation, within three months of the close of the six month Examination stage. The relevant Secretary of State then has a further three months to make the decision on whether to grant or refuse development consent.

7. As a host authority, the Council are requested to submit a Local Impact Report (LIR) and Written Representation to the ExA. These are the written submissions that will form the Council's formal response to the Cottam DCO application. A series of hearings, as set-out in the examination timetable on specific issues, are scheduled to take place over the coming months, up to 5 March 2024 when the examination period is scheduled to close.

8. LIRs are defined as a report in writing giving details of the likely impacts of the proposed development on the authority's area. The report should consist of a statement of positive, neutral and negative local impacts, but it does not need to contain a balancing exercise between positives and negatives. Written Representations can cover any matters relevant to the proposal. The Planning Inspectorate advise that Interested Parties must identify those parts of the application with which they agree and those parts with which they do not agree, and explain the reasons why. This response is the opportunity for the Council to set-out its overall position on the application.

9. Officers of LCC have engaged with the applicants throughout the pre-application stage and worked with the other host local authority, West Lindsey District Council. Both local authorities will be submitting their own Local Impact Report (LIR) and Written Representation to ensure that the ExA is aware of the matters of concern to each authority.

Proposed Development

10. The proposed development will consist of the construction, operation, maintenance, and commissioning of a solar photovoltaic (PV) electricity generating facility, energy storage facility and export connection to the National Grid. The development would generate a substantial amount of low-cost renewable energy and aims to meet a national need for decarbonisation and security of supply.

11. The land within the Order limits is predominantly contained within Lincolnshire. The remaining land within the order limits is within Nottinghamshire.

12. The development's Order Limits consist of 4 different sites, the largest being Cottam 1 close to the village of Sturton by Stow which would also include much of the associated infrastructure such as the sub-station and battery energy storage system (BESS). Cottam 2 is located just to the north of the A631 close to

Corringham and Cottam 3a and 3b are situated close to Blyton. The Solar and Energy Storage Park, which is entirely contained within the County , makes up the bulk of the site as it includes all areas comprising solar panels, battery storage and the on-site substation. Secondly, the Grid Connection Corridor is the area of the site used for the grid connection between the Solar and Energy Storage Park and Cottam Substation, with the part located to the east of the River Trent being located within the County. The remaining Grid Connection Corridor to the west of the Trent falls within Nottinghamshire.

13. In addition to the operational site itself, access routes are proposed as part of the order limits, situated at points along the roads.

14. The Scheme will be connected to the National Grid at the Cottam Substation. The closure of the former coal fired Cottom Power Station in this area means that there is available capacity for a significant amount of electricity generation to enter the National Grid. Cottam aims to utilise this in order to not only export solar generated electricity to the National Grid, but to also potentially import electricity for storage at the site. The cable route between the Solar and Energy Storage Park and Cottam Substation are planned to be placed underground to minimise landscape and visual impacts.

15. The estimated amount of electricity that the development will be able to generate will depend on the final layout of the Scheme and technology choice. The proposed total installed capacity is approximately 600 MW so as to maximise the grid connection export capacity.

16. The application documents have been consulted internally and with Landscape Visual Impact and Agricultural Land Use Consultants appointed by the Council to review the application as set out below:

- Minerals and Waste Policy Team - as Minerals and Waste Planning Authority for Lincolnshire;
- Highways and Transportation – as Local Highways Authority for Lincolnshire;
- Public Rights of Way – as Local Highways Authority;
- Surface Water Flooding and Drainage – as Lead Local Flood Authority for Lincolnshire;
- Lincolnshire Fire and Rescue;
- Public Health;
- Cultural Heritage; and
- Socio economics and Land Use.

17. (a) Minerals and Waste Policy Team (Lincolnshire County Council) – The Council has considered Chapter 12 (Minerals) of the submitted ES and other relevant documents related to mineral safeguarding. The sites, are only a very small part of the safeguarded mineral resources, and these are predominantly isolated and constrained deposits. When considering the nature and characteristics of the project the Council is satisfied that there would be

negligible impact in terms of any sterilisation of mineral resources. In respect of energy minerals, whilst there are some existing oil sites in proximity to the proposals, all elements of the scheme are outside of their associated safeguarding areas and so again, no safeguarding implications arise.

Regarding the cable route corridors, these have been refined since the PEIR has been produced, and it is noted that, as set out in the ES, "the Cable Route Corridor has been designed so that wherever possible cable routes follow existing infrastructure corridors or alternatively follow the edge of significant landscape features rather than directly crossing open fields. Such an approach avoids creating a further obstruction to the future exploitation of the mineral resource." this approach aligns with the Councils previous discussions with the applicant. It is also noted that the proposed cable route in the vicinity of the River Trent overlaps with those of other proposed solar projects in the area, therefore minimising cumulative impact on the safeguarded mineral resources in this area.

The Council therefore have no mineral safeguarding objections to the proposals.

(b) Highways and Transportation (Lincolnshire County Council) – The County Council as Local highway Authority has been involved in a number of meetings with the applicant pre-submission. The submitted highway details record and update those pre-application discussions.

The Council considers that the assessment within the Transport and Access Chapter and draft Construction Environmental Traffic Management Plan is appropriate and provides a reasonable estimate of HGV and car traffic associated with the development during construction and shows that the impact will be within acceptable levels on the highway network. There is also a cumulative assessment (Table 14.26) which includes the other solar farms proposed in the area, due to their locations different minor roads are used for access, so only the A631 and A15 see any noticeable cumulative impact, but again within acceptable levels.

The Surface Water Flood Risk is also appropriately addressed at this outline stage, more detail would be needed on areas of the site which are proposed to be made impermeable and these could be conditioned. The energy storage facility (BESS) may create a large impermeable area and drainage details in accordance with SUDs principle would be needed for this – although it is referred to in the Construction Management Plan.

In terms of the draft DCO requirements the Council considers that, in connection with surface water flooding, subject for a requirement of details of the site areas which are proposed to be made impermeable to be submitted to and approved in writing by the Council, if these are acceptable. No further additions are required at this stage for those covering highway

matters but this will be kept under review during the examination as details of the other solar NSIPs in the area are made available.

(c) Public Rights of Way as Local Highway Authority (Lincolnshire County Council) – The visual impact on users of the public footpath are considered in the landscape and visual section set out below.

There will be need to be an appropriate timetable for the temporary closure orders and subsequently required extensions for the works proposed that will affect any of the footpaths affected during the construction phase to keep walkers and other users of the Public Rights of Way network away from construction traffic.

(d) Landscape and Visual Impact – Long range, open and panoramic views across the low lying Till Vale from elevated land to the east, including from within The Ridge Area of Great Landscape Value (AGLV) are a concern, which while of a longer range, would potentially include views down onto large areas of solar development, with larger elements, such as sub-stations, being particularly conspicuous in this low lying landscape.

The cumulative landscape and visual effects of the proposed development are also of concern, particularly when assessed alongside the proposed Gate Burton, West Burton and Tillbridge Solar proposals. 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 area may be completely altered, particularly when experienced sequentially.

(e) Lincolnshire Fire and Rescue - 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.

However, without further specific details, e.g. detailed plans etc., the response is based very much on the details within the document and the Fire Safety Officer reserves the right to add or amend these initial observations as more specific details of the proposed strategy to tackle a battery storage fire and detailed layout plans become available. This includes any requirement for Hazardous Substance Consent for the battery storage facility if this is considered necessary to be included in the Development Consent Order process and the need for the developer to enter into a Section 106 Agreement to provide resources for monitoring by Fire and Rescue Officers of this development and other projects involving Battery Energy Storage Systems that are emerging in significant numbers across the County.

(f) Cultural Heritage (Lincolnshire County Council) – Insufficient evaluation has been undertaken to allow for an adequate understanding of the

archaeological potential and developmental impacts, or to provide the basis for reasonable mitigation to deal with the impacts of this development. Significant concerns were raised regarding the applicant's proposed approach during the pre-application stage, particularly in regard to the evaluation trenching coverage.

The work undertaken by the applicant to date falls far below the necessary standards and the applicant's ES Chapter and proposed mitigation strategy is therefore ill informed and has no adequate evidential basis other than for the limited areas where evaluation has been undertaken.

A 2% coverage of the small number of areas within the redline boundary that have been evaluated was achieved, however large areas of the redline boundary and connection corridors have not been evaluated at all. Trench plans were agreed with the Council for individual fields, however an overall evaluation plan of the entire redline boundary was not forthcoming, despite repeated requests. The applicant's consultant consistently agreed to provide this information but has so far failed to provide all of the requested information. This piecemeal reactive approach has been a major concern regarding adequate trenching coverage across the site.

This means that the baseline evidence is inadequate and effective and appropriate mitigation cannot be determined outside of the trenched areas. All the areas within the redline boundary and the grid connection corridor which have not been subject to evaluation trenching therefore remain unknown in terms of archaeological potential.

The mitigation proposal for concrete shoes is considered unacceptable. Installation, compaction during the operational life of the site and subsequent decommissioning impacts would have a highly negative impact on surviving archaeology, especially in areas of shallow deposits which encompasses much of this agricultural landscape. Further, the use of concrete shoes in mitigation cannot be used in any area that has not been ground-truthed by evaluation trenching and found to be archaeologically negative. It is noted that previously unexpected human remains were found in the first few days of trenching in one area at a depth of 20cm below the ground surface.

To summarise, the archaeological work for this application has not been undertaken to the standard the Council would expect and therefore the Cultural Heritage section is limited, but is presented by the applicant as the complete and full understanding of the archaeological resource across the site. The mitigation proposed is therefore uninformed and cannot be fit for purpose and the Council consider that further archaeological evaluation within the red line boundary is necessary to understand the extent, nature and significance of surviving archaeology so that appropriate mitigation can be determined.

The Council is concerned with the approach and conclusions made with regard to the impacts of this proposal on cultural heritage assets within Lincolnshire. It is considered that this approach is inadequate and the application details at this time do not meet the evidential requirements as set out in the relevant policy and guidance.

Consequently, in light of the uncertainty through the inadequate amount of trail trenching that has been undertaken (just 17%) of the Order limits there is possibility that archaeological remains of more than local/regional significance could be disturbed. With this uncertainty it is assed that moderate harm arises as it is not yet possible to assign categorically the potential impact significance within the Order limits.

It is therefore recommended that an **objection** is raised based on the uncertain impacts through construction and decommissioning will have on the Order limits with the degree of harm still not quantified due to the insufficient evaluation undertaken to date.

(g) Growth Team (Lincolnshire County Council) - based on the Economic impacts section of the Socio Economic chapter, from a Growth perspective, what is assessed, and the mitigation measures proposed appear reasonable.

Although what is included in the ES looks reasonable, the Council would expect appropriate energy related benefits to the local communities and economy provided and the Council would welcome the opportunity to explore these through the examination.

Agricultural Land Use Classification – The Council has commissioned an Agricultural Land Classification specialist to review the applicants Agricultural Land Classification report. The full report is attached as an Appendix to the LIR.

The main conclusions of this report are the loss of otherwise productive farmland is not particularly covered in the application on the basis that the majority of land is not identified as BMV.

However, is does represent a significant area of land particularly when considering the wider cumulative impact on farmland across Lincolnshire and the West Burton, Tillbridge and Gate Burton schemes locally.

Therefore, whilst the application involves the loss of a modest amount of BMV (around 4% (48 ha)) it is considered that for the reasons set out above and the more detailed report attached at Appendix B to the LIR there is a **negative** impact on BMV which is consequently contrary to the requirements of Policy S67.

(h) Director of Public Health (Lincolnshire County Council) – is undertaking research into the potential health impacts of large scale solar farms and to identify possible links to the sites of these projects and areas of deprivation. However, this will not be available in time for the Council's written response to the application but will be brought to the attention of the Examining Authority if concluded during the examination.

Decommissioning

18. Although the Environmental statement is based on a 40 year duration the applicant is currently seeking an unlimited permission. There will inevitably be significant improvements in the efficiency of solar panels over the lifetime of this development and this could result in the possible reduction in the overall site area covered by panels. If the DCO is allowed it should ensure that these future technological advances are secured and built into the ongoing operation of the scheme and where panels are no longer required that the land is returned back to agricultural use or formally restored to provide wider biodiversity enhancements.

19. As outlined above in the minerals and waste section a matter that needs to be addressed is the arrangements to be put in place for disposing the vast number of panels from all these projects once no longer viable or replaced by new technology this will have implications on the County's future waste needs requirements. The Examining Authority will also need to consider the potential environmental impacts of any change to the panels used on the site throughout the life of the development as these could potentially have a greater impact than those currently been assessed as part of the DCO. Considerations needs to be given to how such impacts could be assessed without the need for future applications.

Community Benefits

20. Should the Secretary of State decide the national benefits out weight the negative impacts that have been identified, it will be essential that a full robust package of community benefits to compensate for this impacts that the local communities most affected will be expected to absorb for many years to come. To this end the Council expect a substantial offer from the developer to cover an annual programme of community benefits for the lifetime of the development, and its decommissioning, around the following themes:

- Renewable energy and energy efficiency;
- Biodiversity net gain;
- Reducing waste and increasing recycling;
- Rural business and agriculture/farming support;
- Community health and wellbeing support;
- Employment and skills development in renewables and supply chains;
- Active travel and public transport support;
- Education and young people.

21. The Council would request the applicant fund the provision of a community liaison post throughout the life of the development in order to ensure that the scheme is constructed as approved and monitoring of the discharge and implementation of the schemes required by the requirements and any other legal agreements. Also to address any concerns from local communities especially during the construction phase of the development and the undertaking of the secured community benefits.

Discussion and Conclusion

22. The application before the Committee today is different to planning applications the Committee normally determines as the County Council is the decision maker on minerals and waste development applications as the Minerals and Waste Planning Authority. In this case the application is made under the procedures of the 2008 Planning Act and therefore the Council's comments on the application are required to be reported to the Planning Inspectorate for consideration during the examination stage of the application. Whilst the Council can make observations on any element of the proposal this report has focused on the Council's statutory areas of responsibility.

23. The attached LIR sets out the likely issues and impacts that LCC considers will arise from the construction and operation of the Cottam Energy Project. The LIR has identified positive, neutral and negative effects at this stage.

24. Cottam Energy Park development, by its nature offers positive impacts in terms of the production of clean renewable energy that can deliver power to over 180,000 households each year and the transition and movement towards Net Zero, as well as the potential to deliver significant biodiversity net gain through the creation of mitigation and enhancements proposed as part of the development. There are also some limited economic benefits arising from the potential creation of employment opportunities and increased spend on local services during the construction phase however these would be time-limited and therefore need to be balanced against any negative impacts identified.

25. A number of negative impacts, some significant, have been identified at this stage and these can be summarised as follows:

- A permanent and negative impact upon the landscape character and the appearance of the area as a consequence of changes to the current arable agricultural land use. In view of the conclusions from the Council's assessment of the landscape and visual impact of the development negative impacts have been identified for the site some of which may be mitigated by the production of further evidence but the cumulative impact when combined with the other proposed solar farms in this location is negative which results in a conclusion that the scheme would be contrary to Local Plan Policies S5, S14 and S16.

- There is a tension in relation to BMV impacts given that a modest proportion of the energy park site by area comprises land in Grades 3a. The NPSs direct that

previously developed land, brownfield land, contaminated land, industrial land and non-BMV land should be developed as a preference, and where policies S14 and S67 of the CLLP seek to protect the best and most versatile agricultural land so as to preserve opportunities for food production and the continuance of the agricultural economy. A permanent and negative impact as a consequence of the loss of agricultural land, a proportion of which of which is classed best and most versatile land. This loss is not only at a local level but significant when considered in-combination with the loss of land from other NSIP scale solar developments that are also being promoted and considered across Lincolnshire contrary to Policy S67.

- Negative impacts on the users of Public Rights of Way in and around the proposed development as a consequence of changes to the visual appearance of the area and views from these routes and uncertainty around the disruption that will be caused resulting from the diversion of footpaths and the re-instatement treatment proposed contrary to Policies S48 and S54.

- Due to the level of uncertainty as a result of the restricted amount of trial trenching that has been undertaken across the Order Limits there is a distinct possibility that archaeological remains of more than local/regional significance could be disturbed and damaged. Consequently it is not possible to adequately assess the impacts on such assets and therefore the requirements of Policy S57 have not been met.

26. Overall, it is considered that the proposed development due to its overall size and scale will have a significant negative impact on Lincolnshire.

RECOMMENDATIONS

(A) That the Committee approve the Local Impact Report at Appendix A to be submitted to the Examining Authority.

(B) The County Council informs the Examining Authority in its written response that whilst the project would produce clean renewable energy that would support the nations transition to a low carbon future and deliver significant biodiversity net gain benefits through the creation of mitigation and enhancements as well as other more limited positive impacts (as identified within our Local Impact Report), these positive impacts are not outweighed by the negative, some significant, impacts that arise given the overall size and scale of the development both on its own and in combination with the three other NSIP scale solar projects proposed in this geographical area as follows:

- A permanent and negative impact upon the landscape character and the appearance of the area as a consequence of changes to the current arable agricultural land use. In view of the conclusions from the Council's assessment of the landscape and visual impact of the development negative impacts have

been identified for the site some of which may be mitigated by the production of further evidence but the cumulative impact when combined with the other proposed solar farms in this location is negative which results in a conclusion that the scheme would be contrary to Local Plan Policies S5, S14 and S16.

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- Due to the level of uncertainty as a result of the restricted amount of trial trenching that has been undertaken across the Order Limits there is a distinct possibility that archaeological remains of more than local/regional significance could be disturbed and damaged. Consequently it is not possible to adequately assess the impacts on such assets and therefore the requirements of Policy S57 have not been met.

- That if the Secretary of State grants the Development Consent Order a comprehensive and appropriate package of Community Benefits is secured and delivered to compensate for the identified negative impacts that the proposed development would cause to the communities affected by this project.

Appendix

These are listed below and attached at the back of the report	
Appendix A	Local Impact Report – Cottam Solar Project
Appendix B	Landscape and Visual Review of the Development Consent Order (DCO) Application For The Cottam Solar Project For Lincolnshire County Council
Appendix C	Review of Soils and Agricultural Local Classification for Cottam

Background Papers

The following background papers as defined in the Local Government Act 1972 were relied upon in the writing of this report.

Document title	Where the document can be viewed
Development Consent Documents	Nationally Significant Infrastructure Projects website https://infrastructure.planninginspectorate.gov.uk/
National Planning Policy Framework	The Government's website www.gov.uk
Lincolnshire Minerals & Waste Local Plan (2016)	Lincolnshire County Council's website www.lincolnshire.gov.uk

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Nationally Significant Infrastructure Project
Cottam Solar Project

Local Impact Report - October 2023

Contents

1. Terms of Reference

Introduction

1.1 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), DCLG's 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'.

Scope

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

1.3 In summary, the proposed development will consist of the construction, operation, maintenance, and decommissioning of the following:

- Cottam 1, 2, 3a and 3b: four solar array sites including ground mounted solar photovoltaic (PV) generating stations and arrays, conversion units, inverters, and 132kV substations in Cottam 2 and 3 and a 400kV substation in Cottam 1.
- An energy storage system located within Cottam 1.
- Underground electricity cables connecting Cottam 1 to 3 solar array sites, substations, and the energy storage system to the National Grid substation at Cottam Power Station.
- Associated infrastructure, mitigation and enhancement measures, and other ancillary works, for example, fencing, security, local grid connections, temporary access roads, permanent means of access, highway works, temporary works compounds and work sites.

1.4 Three new access routes are included in the order limits: Stow Lane, between Blackthorn Hill and Furze Hill; Stone Pit Lane, at Cot Garth Lane; and Green Lane, 400m west of Pilham Lane

1.5 The LIR Covers topics where LCC has a statutory function or holds particular expertise. LCC defers to West Lindsey District council, Bassetlaw District council, and Nottingham County Council on all other matters.

1.6 The topics the subject of this LIR cover:

- Principle of the development
- 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

1.7 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.

1.8 The LIR will seek not to duplicate material covered in the Statement of Common Ground (SoCG).

2. Description of the area

2.1 The proposed development consists of four distinct sites referred to as Cottam 1, Cottam 2, Cottam 3a and Cottam 3b.

- Cottam 1 consists of a discontinuous ring of sub-sites (812.1ha), located around the hamlet of Coates. The sub-sites lie within the civil parishes of Cammeringham, Fillingham, Stow, Sturton-by-Stow, Thorpe in the Fallows, and Willingham.
- Cottam 2 consists of a single site (156ha), located approximately 1km northeast of the village of Corringham.
- Cottam 3a (169.49ha) is located 1km east of the village of Blyton and lies within the civil parishes of Blyton and Laughton.
- Cottam 3b totals 74.27ha in area and is located to the east of the village of Pilham and lies within the civil parishes of Blyton and Pilham.

Cottam 1

2.2 The Site at Cottam 1 consists almost entirely of agricultural fields used for arable crops (predominately cereals and oilseeds). A small amount of the Site consists of grassland, riverbank, and small areas of trees. The topography of Cottam 1 is relatively flat, falling within the wider plain of the River Till, which the Site traverses. The Site is interspersed with other landholdings that accommodate farmsteads. The Site includes existing farm access tracks and field accesses. The Site is crossed by a small number of Public Rights of Way and is bounded and traversed by a number of local roads. Overhead lines (up to 33kV only) operated by the local distribution network operator (DNO) cross parts of the Site.

2.3 The surrounding area is predominantly arable farmland, interspersed with a number of woodland blocks to the eastern portion of the landholding. The settlements at Coates and Thorpe le Fallows lie closest to the Site, whilst larger villages are found along north-south routes to the east and west of the Site, the largest of these being Sturton by Stow. The topography of the surrounding area is largely defined by the

flood plains of the River Trent and River Till, and is bounded to the east by a limestone escarpment known as “The Cliff”.

Cottam 2

2.4 The Site at Cottam 2 consists almost entirely of agricultural fields used for arable crops (predominately cereals and oilseeds) with a small area of grassland and ponds, and a small area for agricultural storage. The topography of Cottam 2 is relatively flat and is predominantly well screened from its immediate surroundings by tall hedges. Corringham Beck and Yawthorpe Beck bound the northwestern and eastern sections of the site respectively. The fields are generally large and typically have dividing hedgerows. There are only isolated trees outside of field margins. The Site benefits from existing field accesses. The Site is not crossed by any Public Rights of Way. Overhead lines (11kV to 33kV) operated by the local DNO, cross parts of the Site.

2.5 The surrounding area is predominantly arable farmland, interspersed with a small number of woodland blocks, adjoining and within proximity to the eastern portion of the landholding. The village of Corringham lies close to the southwest of the Site, whilst the hamlets of Aisby and Yawthorpe can be found to the northwest and east respectively. The topography of the surrounding area is largely defined by the hills above Gainsborough to the west, and to the east by a limestone escarpment known as “The Cliff”.

Cottam 3a

2.6 The Site predominantly comprises agricultural fields used for arable crops. However, parts are a former airfield and therefore feature areas of hardstanding used for material storage, and larger areas of grassland. The topography is relatively flat and is predominantly well screened from its immediate surroundings by hedges. The fields are generally large and typically have dividing ditches and hedgerows including some with tree rows. The Site benefits from existing field accesses and access via the entrance to Blyton Racetrack.

2.7 The surrounding area is predominantly arable farmland, interspersed with a small number of tree belts along major field boundaries. The village of Blyton and Pilham lie close to the west of the Site, whilst the villages of Northorpe and Laughton can be found to the northeast and northwest respectively. The topography of the surrounding area is largely defined by the hills above Gainsborough to the southwest, and to the east by a limestone escarpment known as “The Cliff”. There is a significant area of woodland known as Laughton Forest approximately 3km to the northwest.

2.8 The Site and its surroundings are home to a small number of ecological designations. The Site lies within the impact risk zones of several SSSIs, located around the villages of Laughton and Scotter to the northwest. Notably, the area of The Cliff to the east is designated as an Area of Great Landscape Value.

Cottam 3b

2.9 The surrounding area is predominantly arable farmland, interspersed with a small number of tree belts along major field boundaries. The hamlet of Aisby lies to the south of Cottam 3b. The Site is crossed by a single Public Right of Way and is bounded by several local roads including the B1205 Kirton Road. Overhead lines up to 132kV operated by the local DNO cross parts of the Site. The northern boundary is adjacent to the Brigg Branch of the Sheffield-Lincoln railway line.

Further area information

2.10 Almost all the land within the sites is arable agricultural land, with an Agricultural Land Classification of 3b, being used mostly for arable crops (predominately cereals and oilseeds). 4.1% of the total land area, spread out amongst each site in small pockets, is classified as Best and Most Versatile agricultural land.

2.11 Most of Cottom 1's subsites lie within Flood Zone 3, with some area to the west being with Flood Zone 2. Cottam 2's northern and eastern boundaries are encroached upon by Flood Zone 3, with the remainder being with Flood Zone 1. Cottam 3a and 3b are situated wholly within Flood Zone 1.

2.12 The Sites would be connected to each other and to the grid connection point by some 27.5km of high voltage underground cable circuits. The routing of these cables is linear from Cottam 3a to Cottam 3b to Cottam 2 and then Cottam 1, where the 400kV substation will be located. From there a 400kV cable runs to the connection point at Cottam Power Station. The cable routes cross predominantly agricultural land, with a need to also cross the Main Line and Brigg Branch of the Sheffield-Lincoln railway, the River Till, and the River Trent.

3. Planning History

3.1 There is no relevant planning history for minerals, waste or County Council developments in the Order Limits area.

4. Development Plan Documents and Local Guidance

National Planning Policy

4.1 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.

4.2 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:

EN-1 – Overarching National Planning Policy Statement for Energy.
EN-3 – National Planning Policy Statement for Renewable Energy Infrastructure.
EN-5 – National Planning Policy Statement for Electricity Networks Infrastructure.

4.3 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.

4.4 EN-3 (National Planning Policy Statement for Renewable Energy Infrastructure) was published in 2011 and covers those technologies which were technically viable at generation capacities of over 50MW onshore and 100MW offshore. Solar PV is not included in the EN-3 because at the time it was published utility scale solar development was not considered to be commercially or technically viable. Nonetheless, it is a material planning consideration in the determination of the DCO application which the SoS will no doubt consider.

4.5 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.

Draft Revised National Planning Policy Statements

4.6 The Government is reviewing and updating the NPSs in order to ensure that the policy framework enables the delivery of infrastructure required to support the transition to Net Zero. Revised draft versions of EN-1 and EN-3 were first published and consulted upon in 2021. A further consultation took place this year and updated NPS are expected to be confirmed by the end of this this year. The revised drafts recognised and included reference to NSIP scale solar projects and contained specific policies and factors that should be taken into consideration when assessing

such proposals. The draft NPS's have been updated and revised since 2021 with the latest changes being focused principally on seeking views on the importance of both onshore and offshore wind and cutting down the time to process applications relating to such projects as well as proposals to update the civil and military aviation and defence interests to reflect the status of energy developments and how impacts to civil and military aviation, meteorological radars and other types of defence interests should be managed. Much of the content relating to solar development as proposed within the first revised draft versions of EN-1 and EN-3 remains unchanged.

4.7 The revised draft EN-3 states that solar is a key part of the government's strategy for low-cost decarbonisation of the energy sector and that 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.

4.8 Section 3.10.9 to 3.10.39 of the draft 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 (section 3.10.9 to 3.10.39 refer). The technical considerations are set out in sections 3.10.40 to 3.10.63) 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 in Sections 3.10.64 to 3.10.117 and biodiversity and nature conservation, landscape, visual and residential amenity, glint and glare, cultural heritage, construction including traffic and transport noise and vibration.

4.9 Both draft EN-1 and EN-3 are not yet designated and therefore do not 'have effect' for the purposes of Section 104 of the PA2008. However, the transitional arrangements set out in these documents confirms that any emerging draft energy NPSs (or those designated but not having effect) are potentially capable of being important and relevant considerations in the decision-making process. The extent to which they are relevant is a matter for the SoS to consider within the framework of the Planning Act and about the specific circumstances of each DCO application. Therefore, both the current and draft NPSs identified above, are likely to be matters the SoS will consider relevant and important and considered in the determination of the application.

4.10 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. 7.2 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).

4.11 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)).

4.12 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.

4.13 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.

4.14 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'.

4.15 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.

Development Plan

4.16 The documents that comprise the development plan are listed below. Other policy documents that that should be considered as a material consideration are also identified.

Central Lincolnshire Local Plan

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

The Relevant Policies are:

- **Policy S5: Development in the Countryside** – Specifically Part E: Non-Residential development in the country. The reason for this is because of the condition 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: "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: majority of the sites are in high flood risk zones.

- **Policy S47:Acessibility and Transport** –

- **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: the policy aim to ensure access to adequate access to nature.

- **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" (Might not be relevant but it's close enough to possible be considered to impact the character of the countryside near Gainsborough).

- **Policy S59: Green and Blue Infrastructure Network** – Reason: Relevant because of the nature the development itself or the development impacts PROWs.

- **Policy S60: Protecting Biodiversity and Geodiversity** – Reason: Some of the woodlands near or bordering the order limit might “irreplaceable habitats”.

- **Policy S61: Biodiversity Opportunity and Delivering Measurable Net Gains** – Reason: 10% biodiversity net gain is required as a minimum for all new developments.

- **Policy S62: Area of Outstanding Natural Beauty and Areas of Great Landscape Value** – Reason: Might be relevant because of the development’s proximity to The Cliff to the east.

- **Policy S66: Trees, Woodland and Hedgerows** – Reason: due to the hedgerows around the site boundaries and the potential for a proportion of these to be removed to enable the development to progress.

- **Policy S67: Best and Most Versatile Agricultural Land** – Reason: there is BMV land present on all four sites.

4.18 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: Development 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 completement 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.

Lincolnshire Minerals and Waste Local Plan Core Strategy and Development Management Policies

4.19 The planning policy framework for minerals and waste within Lincolnshire is set out in the adopted Lincolnshire Mineral and Waste Local Plan (2016)

Relevant Policies are:

- **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 M2: Providing for an adequate supply of sand and gravel**.

- **Policy M11: Safeguarding of Mineral resources.**

- **Policy W8 Safeguarding Waste Management Sites**

Other relevant Local Policies

4.20 In addition to the development Plan documents listed above, there are several additional policy documents which provide local policy on key topics of relevance to this development.

West Lindsey District Council Strategic Flood Risk Assessment (SFRA) Final Report – July 2019

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

West Lindsey Sustainability, Climate Change and Environment Strategy

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

5. Assessment of Impacts and Adequacy of Response

5.1 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 – Archaeology
- Socio Economics,
- Land use – loss of agricultural land
- Health and Fire Safety

6. The principle of the development – Climate Change

6.1 Local Policy

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

6.2 Section 4.8 of the 2011 EN-1 addresses climate change adaptation in energy infrastructure development. It notes that the IPC (now ExA) should take the effects of climate change into account when developing and consenting infrastructure, referring also to the potential long-term impact of climate change

6.3 New energy infrastructure will typically be a long-term investment and will need to remain operational over many decades, in the face of a changing climate. Consequently, applicants must consider the impacts of climate change when planning the location, design, build, operation and, where appropriate, decommissioning of new energy infrastructure (paragraph 4.8.5).

6.4 The IPC (now ExA) should be satisfied that applicants for new energy infrastructure have considered the potential impacts of climate change using the latest UK Climate Projections available at the time the ES was prepared to ensure they have identified appropriate mitigation or adaptation measures. This should cover the estimated lifetime of the new infrastructure (paragraph 4.8.6).

6.5 EN-1 notes the energy NPSs should speed up the transition to a low carbon economy and thus help to realise UK climate change commitments sooner than continuation under the current planning system.

6.6 Paragraph 2.2.5 notes the UK economy is reliant on fossil fuels, and they are likely to play a significant role for some time to come. Most of our power stations are fuelled by coal and gas. The majority of homes have gas central heating, and on our roads, in the air and on the sea, our transport is almost wholly dependent on oil.

6.7 Paragraph 2.2.6 identifies that the UK needs to wean itself off such a high carbon energy mix: to reduce greenhouse gas emissions, and to improve the security, availability, and affordability of energy through diversification. EN-1 also notes that

storage has a key role to play in achieving net zero and providing flexibility to the energy system.

6.8 Section 4.9 of the 2023 draft EN-1 focuses on climate change adaptation and reiterates the need to minimise the most dangerous impacts of climate change.

6.9 The 2023 draft EN-3 (paragraphs 3.10.56 and 3.10.140), requires the applicant to consider the design life of solar panel efficiency over time when determining the period for which consent is required. An upper limit of 40 years is typical, although applicants may seek consent without a time-period or for differing time-periods of operation.

6.10 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.

6.11 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.

6.12 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.

6.13 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.

6.14 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:

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

6.15 The Cottam Solar Project would make a significant contribution towards renewable energy generation, providing the electricity to power an equivalent of approximately 180,000 homes. This contribution aligns to key commitments at the national level and within the adopted and emerging National Policy Statements recognising the importance of the Government's commitments to cut greenhouse gases by 80% of 2050.

6.16 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 Cottam Energy 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

6.17 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 any negative impacts identified within this LIR and those raised by other host authorities and Interested Parties.

7. Landscape

Local Policy

- Policy S5: Development in the Countryside
- Policy S14 Renewable Energy
- Policy S53: Design and Amenity

- 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, and Stow) Policy 5: Delivering Good Design

7.1 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.

7.2 Paragraph 5.10.34 of draft EN-1 (2023) 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 5.10.35 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'.

7.3 Paragraph 5.10.5 of the 2023 draft EN-1 sates 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'.

7.4 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'.

7.5 The specific guidance relating to Solar Photovoltaic Generation in section 3.10 of the 2023 draft EN-3 notes at paragraph 3.10.85 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 3.10.86 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'.

7.6 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.

7.7 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.

7.8 The Council commissioned AAH Landscape Consultants to assist in the consideration and review of the landscape and visual elements of the Cottam 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 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.

7.9 Firstly it is noted that the Draft Development Consent Order (DCO) (specifically: *PART 6 MISCELLANEOUS AND GENERAL: 38 Felling or lopping of trees and removal of hedgerows; 39: Trees subject to tree preservation orders;* and *SCHEDULE 13: HEDGEROWS TO BE REMOVED: PART 1, PART 2, PART 3*.) with regards to vegetation removal and retention contradicts the assumptions made in the Landscape and Visual impact Assessment(LVIA) report. This needs to be clarified as it has the potential to undermine the findings of the LVIA. The LVIA clearly states the intention is to retain and enhance trees and hedgerows, and this approach is reflected in the judgments of effects at all phases with existing vegetation forming key elements of the landscape baseline and also providing screening and softening of built elements of the scheme. However, the Draft DCO is seeking permission to have the ability to remove all hedgerows within the redline, and also remove any trees that are deemed necessary to facilitate development. While it is not anticipated all this vegetation would ultimately be removed, under the Draft DCO, as currently written, it could be and this is a clear contradiction, and creates uncertainty as to the parameters the LVIA baseline has been assessed against. It is considered that the extent of tree and hedgerow removal should be more proportionally set out in the DCO rather than including the full length of every hedgerow, Not only is this extent of vegetation removal completely unacceptable and unnecessary, it is also not captured on any vegetation removal plans or within the LVIA. Finally, as it is stated that the LVIA is utilising the Rochdale Envelope approach, so the '*worst case'*, based on the Draft DCO and permission to remove extensive hedgerows and trees, would likely be an assessment with little or no retained existing vegetation within the site redline.

7.10 The LVIA and the associated figures, appendices and documents together are a large set of work that provides a very detailed analysis of the development and its impact upon the baseline landscape and visual conditions of the site and surrounding area. However, the volume of information and a lack of clear, overarching narrative and summary result in making the detailed information inaccessible and often difficult to follow.

7.11 By reason of its mass and scale, the assessment is that 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 the character on a large scale. This landscape change also has the potential to affect wider landscape character, at a regional scale, by replacing large areas of agricultural or rural land with solar development, affecting the current open agricultural character that is identified as key defining characteristics of the area.

7.12 Regarding judgements on Landscape effects in the LVIA, there are some inconsistencies identified in paragraph 4.9 of the Appendix B. These need to be clarified as they relate to the identification of significant effects. However, some of the findings of the landscape assessment are not agreed and do not see any appropriate justification for assessing significant beneficial landscape effects on both landscape character areas, or individual contributors to landscape character by the construction and operation of a large solar development. There are also several minor beneficial effects (not significant) identified, predominantly at the Operation (Year 1) phase of the development, that also lack justification.

7.13 Regarding judgements on Visual effects in the LVIA, there are some inconsistencies identified in paragraph 5.9 of the Appendix B. These need to be clarified as they relate to the identification of significant effects. It is not agreed with the findings of the LVIA that any of the views would be improved over the baseline by the implementation of a large scale solar development across an open agricultural landscape. As well as the 15 views assessed as having residual significant beneficial effects, several others have been assessed as having minor beneficial.

7.14 The justification for the benefits is predominantly reliant upon landscape benefits, not visual – the scheme does not improve or enhance the view, and generally does not screen or integrate existing visual detractors.

7.15 It is also concluded that the cumulative landscape and visual effects of the Development will also bring about significant landscape and visual effects, particularly when assessed alongside the proposed Gate Burton, West Burton and Tillbridge Solar 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 changed completely, particularly when experienced sequentially while travelling through the landscape.

7.16 Notwithstanding comments regarding the contradiction with the Draft DCO, any tree and vegetation removal associated with the development, including wider highways improvements and access for construction, must be clarified, and subsequently any works (such as lopping or pruning), or removal to 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. This should be to BS:5837 Trees in Relation to Construction and any subsequent

arboricultural method statements, again which should be approved by the appropriate relevant planning authority. In particular this should ensure existing trees, and associated root protection areas, are suitable protected throughout the entire construction period. This would likely include areas within the order limits but away from construction activity as storage of materials or tracking over of plant will likely damage tree root protection areas.

7.17 While the submission includes landscape proposals (Figures 8.16.1 to 8.16.10), these are of a high level and would expect if the project proceeds that much more detailed plans to be submitted and subsequently agreed with the appropriate authority (in this case the relevant 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 relevant figures has been utilised to assess the landscape and visual effects of the scheme, therefore we would expect any detailed landscape proposals consist of the area and extent shown on these plans as a minimum.

7.18 The LVIA needs to clearly express the authors judgement about changes to the landscape and views from the implementation of the development, which is currently missing as it is contained within multiple sources relying on the reader cross referencing multiple appendices and other ES chapters and parts of the DCO application. The main LVIA chapter would benefit from being reduced in size and furnished with a clear and concise written summary of the findings. In particular, it would be useful to have the identification and clear explanation of which aspects of landscape and visual change are more important, which are not, and why they are. This should be clearly laid out using *plain, easy to understand language*. The examination process now provides the opportunity to develop a clearer and more succinct identification and summary of the key landscape and visual issues and effects.

7.19 It is therefore concluded that the development will cause **negative** impacts on the landscape character both individually and also **negative** impacts due to the cumulative impacts with the other solar projects in the area namely Gate Burton, West Burton and Tillbridge.

8. Highways and Transportation

Local Policy

- CLLP Policy S47: (Accessibility and Transport)

8.1 Paragraph 5.13.6 of the 2011 EN-1 sets out the 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 to for funding infrastructure and otherwise mitigating adverse impacts.

8.2 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 5.13.11).

8.3 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 through the use of 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.

8.4 The County Council as Local highway Authority has been involved in a number of meetings with the applicant pre-submission. The submitted highway details record and update those pre-application discussions.

8.5 The Council considers that the assessment within the Transport and Access Chapter 14 and draft Construction Environmental Traffic Management Plan is appropriate and provides a reasonable estimate of HGV and car traffic associated with the development during construction and shows that the impact will be within acceptable levels on the highway network. There is also a cumulative assessment (Table 14.26) which includes the other solar farms proposed in the area, due to their locations different minor roads are used for access, so only the A631 and A15 see any noticeable cumulative impact, but again within acceptable levels.

8.6 There is still a need to ensure that the DCO provides a mechanism for the Highway Authority to review and provide the necessary specification for works in the Highway that would normally be captured via a Section 278 Agreement and the mechanism as how this will be achieved is still under discussion in the drafting of the DCO. At this stage however, the Council concludes that traffic and transport impacts during the construction, operation, and decommissioning (subject to agreement of a CTMP) would be **neutral**.

9. Public Rights of Way (PRoWs)

- Policy S48: Walking and Cycling Infrastructure
- Policy S54: Health and Wellbeing

- Policy S59: Green and Blue Infrastructure Network

9.1 Section 3.10 of the 2023 draft EN-3 makes a number of recommendations in relation to accessibility and public rights of way, noting at 3.10.30 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.

9.2 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.

9.3 As a general observation on the wording of the draft DCO there needs to be greater clarity regarding the necessary temporary stopping up of paths and advance notice procedures. There needs to be a clear procedure for temporary closing or diverting rights of way with clear details about reinstatements of any paths and surface of any diverted routes.

9.4 Records shows that there are a number of routes within or close to the Order limits which are claimed paths and if these claims are successful this will have the potential to impact on the development if not addressed in the DCO.

9.5 In respect of PROW Fillingham 86 which is proposed to be temporarily stopped up but more details in respect of this stopping up are required. There are a number of other footpaths that are also affected where either more details are required or opportunities exist for enhancement which should be given appropriate consideration to determine what is possible through agreements or other appropriate mechanisms.

9.6 Whilst there are opportunities for positive impacts associated with the enhancements to existing footpath network there are currently some unresolved issues regarding the necessary works and reinstatement to the existing public footpath network and until these matters are resolved it is considered that the impact on Public Rights of Way is currently **negative**.

10. Flood Risk, Drainage and Surface Water

10.1 Key Policies

- CLLP Policy S12 - Water Efficiency and Sustainable Water Management

- CLLP Policy S14 - Renewable Energy
- CLLP Policy S20 – Resilience and Adaptable Design
- CLLP Policy S21 - Flood Risk and Water Resources
- CLLP Policy S59 - Green and Blue Infrastructure

10.2 Section 5.15 of the 2011 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'.

10.3 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 5.15.7).

10.4 Paragraph 5.8.7 of the 2023 draft 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.

10.5 The guidance confirms that the Exception Test should only be engaged where "the Sequential Test has identified reasonably available, lower risk sites appropriate for the proposed development where, accounting for wider sustainable development objectives, application of relevant policies would provide a clear reason for refusing development in any alternative locations identified". The examples of such 'relevant policies' which would provide a clear reason for refusing potential alternative sites are those relating to landscape, heritage and nature conservation designations, for example Areas of Outstanding Natural Beauty (AONBs), SSSIs and World Heritage Sites.

10.6 Paragraph 3.10.51 of draft EN-3 also set out that applicants for solar generating stations will need to consider several factors when considering the design and layout of sites, including "proximity to available grid capacity to accommodate the scale of generation, orientation, topography, previous land – use and ability to mitigate environmental impacts and flood risk".

10.7 Paragraph 3.10.75 then notes that where a Flood Risk Assessment has been carried out this must be submitted alongside the applicant's ES and will need to consider the impact of drainage. It notes that as solar PV panels will drain to the existing ground, "the impact will not, in general, be significant".

10.8 Paragraph 3.10.145 also notes that where previous management of the site has involved intensive agricultural practice, “solar sites can deliver significant ecosystem services value in the form of drainage, flood attenuation, natural wetland habitat, and water quality management”.

10.9 CLLP policy S12 ‘Water Efficiency and Sustainable Water Management’ sets out that in addition to the wider flood and water related policy requirements contained in policy S21, all residential development or other development comprising new buildings with outside hard surfacing, must ensure such surfacing is permeable unless technical considerations dictate otherwise.

10.10 Policy S14 ‘Renewable Energy’ supports proposals for renewable energy schemes, including ancillary development, where the direct, indirect, individual and cumulative impacts are or can be made acceptable, which with reference to point (i) includes flood risk, albeit there are no further references to flood risk under the ‘Additional matters for solar based energy proposals’ subheading.

10.11 Policy S20 ‘Resilient and Adaptable Design’ requires design proposals to be adaptable to future social, economic, technological and environmental requirements in order to make buildings both fit for purpose in the long term and to minimise future resource consumption, including that they are resilient to flood risk, from all forms of flooding.

10.12 Policy S21 ‘Flood Risk and Water Resources’ requires all proposals that are likely to impact on surface or ground water to consider the requirements of the Water Framework Directive and that with specific relevance to flood risk that they will be considered against the NPPF, including application of the sequential and, if necessary, the exception test.

10.13 Amongst other things proposals are required to demonstrate that they are informed by and take account of the best available information from all sources of flood risk and by site specific flood risk assessments where appropriate; that the development will be ‘safe’ during its lifetime taking into account the impacts of climate change, that flood defence integrity is not impacted, that wider scope for flood risk reduction has been considered and that where appropriate they have incorporated Sustainable Drainage Systems (SuDS).

10.14 Finally Policy S59 ‘Green and Blue Infrastructure Network’ states that proposals that cause loss or harm to the green and blue infrastructure network will not be supported unless the need for and benefits of the development demonstrably outweigh any adverse impacts

10.15 A Flood Risk Assessment (FRA) has been prepared and submitted as part of the DCO application documentation and the FRA concludes that the majority of the development is proposed outside areas with a risk of flooding and where development is proposed in areas susceptible to flooding there may be a requirement for mitigation measures to ensure no detrimental effect to flooding

potential within or from the affected watercourses in the catchment once the scheme is operational.

10.16 The Council, as Lead Local Flood Authority for Lincolnshire concludes that the surface water Flood Risk is appropriately addressed at this outline stage in the ES; and suitable mitigation measures proposed in the CEMP. More detail would be needed on areas of the site which are proposed to be made impermeable and this could be captured by an appropriate requirement. The Draft DCO includes an appropriate requirement to ensure such details are provided.

10.17 The Surface Water Flood Risk is also appropriately addressed at this outline stage, more detail would be needed on areas of the site which are proposed to be made impermeable and these could be conditioned. The energy storage facility (BESS) may create a large impermeable area and drainage details in accordance with SUDs principle would be needed for this – this is not mentioned in Appendix 10.1, although it is referred to in the Construction Management Plan.

10.18 In terms of the draft DCO requirements the Council considers that, in connection with surface water flooding, subject for a requirement of details of the site areas which are proposed to be made impermeable to be submitted to and approved in writing by the Council, if these are acceptable. No further additions are required at this stage for those covering highway matters but this will be kept under review during the examination as details of the other solar NSIPs in the area are made available.

10.19 In summary, subject to the development being carried out as proposed within the DCO application documents and further details being agreed as part of subsequent DCO Requirements, the Council as Lead Local Flood Authority for Lincolnshire, is of the view that impacts of this proposal would be **neutral**.

11. Minerals and Waste

- Policy M2 - Providing for an adequate supply of sand and gravel
- Policy M11 - Safeguarding of Mineral resources
- Policy M11 of the LMWLP seeks to protect mineral resources from permanent sterilization by other development
- Policy W1 - Future Requirements for New Waste Facilities

11.1 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.

11.2 The Council has considered Chapter 12 (Minerals) of the submitted ES and other relevant documents related to mineral safeguarding. The sites, are only a very small part of the safeguarded mineral resources, and these are predominantly isolated and constrained deposits. When considering the nature and characteristics of the

project the Council is satisfied that there would be negligible impact in terms of any sterilisation of mineral resources. In respect of energy minerals, whilst there are some existing oil sites in proximity to the proposals, all elements of the scheme are outside of their associated safeguarding areas and so again, no safeguarding implications arise.

11.3 Regarding the cable route corridors, these have been refined since the PEIR has been produced, and it is noted that, as set out in the ES, "the Cable Route Corridor has been designed so that wherever possible cable routes follow existing infrastructure corridors or alternatively follow the edge of significant landscape features rather than directly crossing open fields. Such an approach avoids creating a further obstruction to the future exploitation of the mineral resource." This approach aligns with the Councils previous discussions with the applicant. It is also noted that the proposed cable route in the vicinity of the River Trent overlaps with those of other proposed solar projects in the area, therefore minimising cumulative impact on the safeguarded mineral resources in this area.

11.4 The Council therefore have no mineral safeguarding objections to the proposals and therefore the impacts on the minerals resource is assessed as **neutral**

11.5 In respect of Policy W1 this requires the Council to make provision for sites to meet predicted future capacity gaps for wate 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 County that may be granted DCOs in the next 12 months this will present an issue that will need additional facilities to ensure these products are sustainably disposed of. Therefore, it will be necessary for a requirement to be imposed 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 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 life time of the development. Therefore in this regard it is assessed as having a **negative** impact

12. Cultural Heritage – Archaeology

- Policy S57: The Historic Environment – Reason: potential archaeological interest on the sites
- Policy DM4: Historic Environment

12.1 Section 5.8.22 of the 2011 EN1 National Policy Statement states that where there is high probability that a development site may include as 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 draft National policy Statement EN3.

12.2 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 take into account 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.

12.3 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.

12.4 Development affecting archaeological remains, whether known or potential, designated or undesignated, should take every practical and reasonable step to protect and, where possible, enhance their significance. Planning applications for such development should be accompanied by an appropriate and proportionate assessment to understand the potential for and significance of remains, and the impact of development upon them. If initial assessment does not provide sufficient information, developers will be required to undertake field evaluation in advance of determination of the application. This may include a range of techniques for both intrusive and non-intrusive evaluation, as appropriate to the site. Wherever possible and appropriate, mitigation strategies should ensure the preservation of archaeological remains in-situ. Where this is either not possible or not desirable, provision must be made for preservation by record according to an agreed written scheme of investigation submitted by the developer and approved by the planning authority.

12.5 The Council is concerned about the approach taken on evaluation and conclusions made with regard to the impacts of this proposal on cultural heritage assets within Lincolnshire. The Council has consistently advised the Applicant that there must be enough pre-determination evaluation undertaken to determine the impact of the development upon potential archaeology and enough assessment undertaken to understand the impact on settings of heritage assets and the historic landscape.

12.6 Throughout the pre-application stage (i.e. including the Scoping and PEIR stages) the Council has advised on detailed specific requirements for this proposed development and the need to provide a sufficient evidence base to allow for sufficient understanding of the site specific archaeological potential and in order to enable a mitigation strategy to be produced which is reasonable, appropriate and fit for purpose.

12.7 The Council is concerned by the lack of evaluation trial trenching in 'blank' areas where previous archaeological evaluation techniques have not identified archaeological potential. An appropriate fit for purpose mitigation strategy cannot be achieved in areas that have not been subject to evaluation trial trenching.

12.8 The issue of insufficient trenching evaluation has also been highlighted in discussions with the developer where Historic England stated that the areas not subjected to evaluation trial trenching appeared to be quite large and so the project contained a high level of risk.

12.9 Sufficient pre-determination evaluation is required and has been a principle of the archaeological process since Planning Policy Guidance 16: Archaeology and Planning was published, and in accordance with current policy guidance the Council can only agree proposed mitigation in areas where sufficient evaluation trial trenching has been undertaken. During the evaluation phase trench plans were agreed with the Council for individual fields, however an overall evaluation plan of the entire redline boundary was not forthcoming, despite repeated requests including post submission of the application.

12.10 The applicant has consistently agreed to provide this information, but failed to do so in a timely manner. This piecemeal reactive approach has been a major concern regarding adequate trenching cover across the site. It has become clear that 2% trenching has taken place only in certain parts of the redline boundary totalling 17.5% of the site. Despite this the submitted documents present the Cultural Heritage Chapter as completely assessed and evaluated with a full and complete understanding of the archaeological resource across the site. This is not the case. Only 440 trenches across the 1267ha of the order limits have been undertaken. This means that only 17.5% of the redline boundary area has been sufficiently evaluated. Informed appropriate mitigation measures therefore cannot exist for over 80% of the site. The submitted documents are therefore not fit for purpose nor are they in accordance with professional standards.

12.11 As well as completely inadequate evaluation, the proposed mitigation shows little attempt at reasonable measures which adequately deal with development impact. Their *'Preservation in situ'* section 7.1.8 to 7.1.11 of Appendix 13.7: Written Scheme of Investigation for Archaeological Mitigation states they will use concrete ground anchors. This proposed mitigation is entirely inappropriate and unacceptable for unevaluated areas as it would cause any surviving archaeology, especially in areas of shallow deposits which encompasses much of this agricultural landscape, to be damaged or destroyed without investigation and without recording. For example on

this scheme previously unexpected human remains were found in the first few days of trenching at a depth of 20cm below the ground surface.

12.12 There would be compaction when the ground anchors are installed, settling and readjustment during the decades of operational life and ground disturbance when the ground anchors are ripped out in decommissioning as the land will need to be restored *'to its preconstruction condition at the end of the operation.'* (C7.2 Outline Decommissioning Statement section 2.1.1) There is no mention of archaeology in the Outline Decommissioning Statement including Table 3.1 Decommissioning Mitigation and Management Measures.

12.13 Looking through the submission documents there are also extensive further ground impacts from other proposed mitigations such as wildlife ponds, woodland and shelterbelt planting, and bird habitat scrapes up to 0.5m deep. All these proposed mitigations have significant below ground impacts yet the potential impact on surviving archaeological remains is not known, and again no archaeological mitigation is proposed.

12.14 The applicant has failed to provide a reasonable baseline assessment of the archaeological resource and the development's impact upon it. This is contrary to relevant guidance and policy and to professional standards and it means that at this stage any proposed mitigation is uninformed and therefore cannot be fit for purpose. Further archaeological evaluation within the red line boundary and the full cable route is necessary to understand the extent, nature and significance of surviving archaeology so that appropriate mitigation can be determined.

12.15 In summary it is the Councils view that the approach taken has been woefully inadequate and the submission does not meet the evidential requirements as set out in the relevant policy and guidance including Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (Regulation 5 (2d)), the National Planning Policy Framework and the National Planning Statement Policy EN1 (Section 5.8) which states ***"****The applicant should ensure that the extent of the impact of the proposed development on the significance of any heritage assets affected can be adequately understood from the application and supporting documents (5.8.10)."*

12.16 From the above it is clear that there is considered uncertainty of the extent of buried heritage assets due to the inadequate amount of trial trenching undertaken there is a real possibility that remains of more than local/regional/ significance could be disturbed. With this uncertainty it is assessed that moderate harm arises as it is not yet possible to assign categorically impact significance within the Order limits. There is therefore a **negative** construction impact upon the archaeological remains in relation to the Order limits with the degree of harm as yet unquantifiable due to the insufficient evaluation undertaken so far.

13. Socio-economics, Land use and Agriculture

- Policy S14: Renewable Energy

- Policy S67: Best and Most Versatile Agricultural Land

13.1 Paragraph 5.10.8 of the 2011 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'.

13.2 Paragraph 5.10.15 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'.

13.3 The 2023 draft 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 latter 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'.

13.4 Under the heading of 'Solar Photovoltaic Generation', paragraph 3.10.14 of the 2023 draft 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)'.

13.5 Paragraph 3.10.15 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, the impacts of such are expected to be considered and are discussed under paragraphs 2.10.66 – 2.10.83 and 2.10.98 – 2.10.110'.

13.6 Paragraph 3.10.16 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'.

13.7 Paragraph 3.10.17 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.

13.8 Paragraph 3.10.136 of draft National Policy Statement for Renewable Energy Infrastructure (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'.

13.9 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.

13.10 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.

13.11 The Council commissioned Landscope to produce a report 'Review of Soils and Agricultural Land Classification for Cottam attached at Appendix C which provides a detailed review of the impact of the proposal on the agricultural land affected by the proposal

13.12 The report notes that the 1:250,000 series Agricultural Land Classification maps show the land to be all Grade 3. The Predictive map for best and most versatile land shows the area to be low to moderate chance of BMV, i.e. 20-60%.

13.13 The survey work has been undertaken using recognised competent operators and surveyed in line with the 1988 Guidelines and TAN 049. The work has been undertaken at 1 borehole per hectare and occasional soil pits dug, with laboratory reports of soil samples to verify soil texture.

13.14 The report has checked calculations and background date used and as far as can be established the information is correct.

13.15 According to the ALC survey 95% of the land is **not** Best and Most Versatile. The main determinant for this is due to the Wetness Class of the soil and issues such as workability of the land.

13.16 In respect of geology and soils In all three parts of the site the bedrock geology is shown to be Scunthorpe Mudstone Formation. Each part has some variations, but primarily the land is of heavy clay character, such as Fladbury 2, Beccles and Salop Associations. The only exception is a small area of Cottam 3 that is of the Cranymoor Association, a well-drained sandy soil, which is droughty in character, but does not constitute a large area of the site.

13.17 For **Cottam 1** this site amounts to 923.9 hectares and is divided into 3 areas, 1a, 1b and 1c. The majority of the site has been found to be ALC grade 3b. There are relatively small quantities of Grade 2 and 3a, but the clear majority of the land is shown as of 3b. The soils are described as Stoneless clayey soils variably affected by groundwater, or slowly permeable seasonally waterlogged reddish fine loamy over clayey, fine loamy and clayey soils.

13.18 For **Cottam 2** 131.2 hectares of arable land Mainly Grade 3b with around 8% Grade 3a. Soils are described as slowly permeable, seasonally waterlogged fine loamy over clayey soils.

13.19 For **Cottam 3a and 3b** 180.5 hectares of arable land to the east of Blyton. The site is mainly Grade 3b with very small quantities of Grade 2 and 3a. The soils are described as heavy clay over slowly permeable clay subsoils resulting in seasonal wetness and limiting the cultivation of the soils in late autumn and spring.

13.20 Four farm businesses are identified to manage the land within the site. All are owners of the land occupied and all own and occupy additional land outside of the site area. Each unit is described in summary with the stated impact, but that income from the solar farm would more than compensate for the loss of mainly arable farm land.

13.21 The loss of otherwise productive farmland is not particularly covered in the application documents on the basis that the majority is not BMV. However it does represent a significant area of agricultural land particularly when considering the wider cumulative impact on farmland across Lincolnshire and the West Burton, Tillbridge and Gate Burton schemes locally.

13.22 Therefore, whilst the application involves the loss of a modest amount of BMV (around 4% 48 ha) the Council consider that for the reasons set out above and the more detailed report attached at Appendix C there is a **negative** impact on BMV which is consequently contrary to the requirements of Policy S67.

14. Health and Fire Safety

- Policy 10 Supporting a Circular Economy

- Policy S21: Flood Risk and Water Resources
- Policy 53 :Design and Amenity
- Policy S54: Health and Wellbeing

14.1 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. The 2011 EN-1 states at section 4.13 that whilst access to energy is clearly beneficial to society as a whole, the production, distribution, and use of energy may have negative impacts on some people's health.

14.2 Paragraph 5.15.4 of the draft EN-3 states that all large infrastructure projects are likely to generate some hazardous and non-hazardous waste and that the Environment Agency's permitting regime incorporates operational waste management requirements for certain activities.

14.3 Paragraph 5.15.9 of the draft EN-3 requires an applicant to provide a report setting out the development will incorporate sustainable management of waste and use of resources including how re-use and recycling will be maximised.

14.4 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.

14.5 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'.

14.6 Policy 54 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.

14.7 The Council's Director of Public Health is undertaking research into the potential health impacts of large scale solar farms and to identify possible links to the sites of these projects and areas of deprivation. However, this will not be available in time for the submission of the LIR but will be brought to the attention of the Examining Authority if concluded during the examination.

14.8 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.

- 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. From the discussion with the Lincolnshire Fire Service who have developed standing advice for BESS based on national guidance 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. During the first year of operation this will involve 21 days of work for the Fire Service and then 2 days in each subsequent year for the lifetime of the development.

- 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.

- 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 Section 106 Agreement to the Fire Service so that it has sufficient resources in places to undertake monitoring of the BESS connected to this project and potential 9 other 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.

- In respect of the necessary tests for a Section 106 Agreement to be secured in terms of necessity as set out above this monitoring would ensure the obligations of draft requirement 6(2) are met helping to minimise the risk of a fire event and potential pollution caused by contaminated water used to put out a fire within the BESS.

14.9 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 Energy Storage Safety Management Plan has been submitted.

14.10 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.

14.11 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 Brigade 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.

14.12 This also includes any requirement for Hazardous Substance Consent for the battery storage facility if this is considered necessary to be included in the Development Consent Order.

14.13 Therefore on balance the Council considers the impacts associated with matters relating to accidents and disasters, and health to be **neutral.** This position will be reviewed as further information for fire safety measures and arrangements for subsequent monitoring of the BESS is negotiated

15. Other Topics

15.1 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.

16. Summary

16.1 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 Cottam Energy Project. The LIR has identified positive, neutral and negative effects at this stage.

16.2 The Cottom Energy Project by its nature offers positive impacts in terms of the production of clean renewable energy and transition and movement towards Net Zero as well as the potential to deliver significant biodiversity net gain through the creation of mitigation and enhancements proposed as part of the development. There are some limited economic benefits arising from the potential creation of employment opportunities and increased spend on local services during the construction phase however these would be time-limited and therefore need to be balanced against the negative impacts identified.

16.3 It is noted that the delivery of renewable energy of this nature is in accordance with the strategic policies of the Central Lincolnshire Local Plan (2023); most notably CLLP policies S14 ‘renewable energy’ and S16 ‘wider energy infrastructure’.

Underpinning the Plan is the overarching vision and strategy, and a series of policies, to address the challenges relating to climate change to ensure that the District and Central Lincolnshire is fit for a zero-carbon future, contributes to the transition to a net-zero carbon society, and is responsive to a changing climate.

16.4 The negative impacts, some significant, have been identified at this stage and these can be summarised as follows:

- A permanent and negative impact upon the landscape character and the appearance of the area as a consequence of changes to the current arable agricultural land use. In view of the conclusions from the Council's assessment of the landscape and visual impact of the development, negative impacts have been identified for the site some of which may be mitigated by the production of further evidence but the cumulative impact when combined with the other proposed solar farms in this location is negative which results in a conclusion that the scheme would be contrary to Local Plan Policies S5, S14 and S16.

- There is a tension in relation to BMV impacts given that a proportion of the energy park site by area comprises land in Grades 3a. The NPSs direct that previously developed land, brownfield land, contaminated land, industrial land and non-BMV land should be developed as a preference, and where policies S14 and S67 of the CLLP seek to protect the best and most versatile agricultural land so as to preserve opportunities for food production and the continuance of the agricultural economy. A permanent and negative impact as a consequence of the loss of agricultural land, a proportion of which of which is classed best and most versatile land. This loss is not only at a local level but significant when considered in-combination with the loss of agricultural land from other NSIP scale solar developments that are also being promoted and considered across Lincolnshire contrary to Policy S67.

- Negative impacts on the users of Public Rights of Way in and around the proposed development as a consequence of changes to the visual appearance of the area and views from these routes and uncertainty around the disruption that will be caused resulting from the diversion of footpaths and the re-instatement treatment proposed contrary to Policies S48 and S54.

- Due to the level of uncertainty as a result of the restricted amount of trial trenching that has been undertaken across the Order Limits there is a distinct possibility that archaeological remains of more than local/regional significance could be disturbed and damaged. Consequently it is not possible to adequately assess the impacts on such assets and therefore the requirements of Policy S57 have not been met.

Appendix B – Landscape and Visual Review of the Development Consent Order (DCO) Application For The Cottam Solar Project For Lincolnshire County Council

Appendix C – Review of Soils and Agricultural Land Classification for Cottam

AAH consultants

LANDSCAPE AND VISUAL REVIEW

OF THE DEVELOPMENT CONSENT ORDER (DCO) APPLICATION

FOR THE COTTAM SOLAR PROJECT

FOR

LINCOLNSHIRE COUNTY COUNCIL

September 2023

Landscape and Visual Review

Quality Assurance – Approval Status

Version	Date	Prepared by	Checked by	Approved by	Version Details
1	15/09/2023	Oliver Brown	Tom Ferraby	Oliver Brown	Initial Draft for Comment

Landscape and Visual Review

Contents

Appendices:

Appendix A: Previous AAH Consultation documents:

- AAH TM01 Landscape Meeting on 07-03-22
- AAH TM02 Viewpoint Comments 29-03-22
- AAH TM03 PIER Comments 25-07-22

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 Cottam Solar Project (the '**Development'**), submitted to the Planning Inspectorate in January 2023, 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**). The review 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 for a DCO for the Development, which is 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 (LI) and the Royal Town Planning Institute (RTPI).

1.5 This review has been prepared by a Chartered Landscape Architect within AAH with over 20 years' experience in landscape design and assessment.

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://infrastructure.planninginspectorate.gov.uk/projects/east-midlands/cottam-solar-project/?ipcsection=docs

- Environmental Statement Chapter 8: Landscape and Visual Impact Assessment January 2023;
- Chapter 8 Appendices:
  - Appendix 8.1 LVIA Methodology
  - Appendix 8.2 Assessment of Potential Landscape Effects
  - Appendix 8.3 Assessment of Potential Visual Effect
  - Appendix 8.4 Consultation
  - Appendix 8.5 Policy Commentary
- Chapter 8 Figures:
  - Figure 8.1 Cottam 1, 2, 3a and 3b Site Location and Study Area
  - Figure 8.3 Cottam 1, 2, 3a and 3b Landform
  - Figure 8.4 Cottam 1, 2, 3a and 3b Landscape Character – National
  - Figure 8.5 Cottam 1, 2, 3a and 3b Landscape Character – Regional
  - Figure 8.6 Cottam 1, 2, 3a and 3b Landscape Receptors
  - Figure 8.7 Cottam 1, 2, 3a and 3b Visual Receptors
  - Figure 8.8 Cottam 1 Bare Earth ZTV
  - Figure 8.9 Cottam 2 Bare Earth ZTV
  - Figure 8.10 Cottam 3a and 3b Bare Earth ZTV
  - Figure 8.11 Cottam 1 Augmented ZTV (including viewpoint locations)
  - Figure 8.12 Cottam 2 Augmented ZTV (including viewpoint locations)
  - Figure 8.13 Cottam 3a and 3b Augmented ZTV (including viewpoint locations)
  - Figure 8.14 Cottam Viewpoint Verified Photography and Photomontages (90 Viewpoints)
  - Figure 8.15 Cottam Cumulative Developments
  - Figure 8.16 Central Lincolnshire Biodiversity Opportunity Mapping
  - Figure 8.16.1 to 8.16.10 Landscape and Ecology Mitigation and Enhancement Plans
  - Figure 8.16.11 Indicative Landscape Sections
- Outline Construction Environmental Management Plan
- Outline Decommissioning Statement
- Landscape and Ecological Management Plan Outline Plan
- Planning Statement Cottam Solar Farm
- Design and Access Statement Part 1, 2 3 and 4 of 4
- Concept Design Parameters and Principles
- Outline Operational Environmental Management Plan
- Outline Ecological Protection and Mitigation Strategy
- Layout plans and ES figures:
  - Figure 1.1 Location Plan
  - Figure 2.1 Cumulative Assessments Site Plan
  - Figure 3.1 Field Numbering Plans Cottam 1
  - Figure 3.2 Field Numbering Plans Cottam 2
  - Figure 3.3 Field Numbering Plans Cottam 3a and 3b
  - Figure 4.1 Illustrative Site Layout Plan Cottam 1 North
  - Figure 4.2 Illustrative Site Layout Plan Cottam1 South

- Figure 4.3 Illustrative Site Layout Plan Cottam 1 West A
- Figure 4.4 Illustrative Site Layout Plan Cottam 1 West B
- Figure 4.5 Illustrative Site Layout Plan Cottam 2
- Figure 4.6 Illustrative Site Layout Plan Cottam 3A
- Figure 4.7 Illustrative Site Layout Plan Cottam 3B
- Figure 4.8 Energy Storage Illustrative Layout Plan

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;
- Visualisations/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 For landscape and visual matters AAH have issued three Technical Memos 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.** *Appendix 8.4* of the LVIA usefully summarises consultation carried out and identifies how the matters raised have been addressed, which is a clear and useful record and evidence of the consultation process and how this has fed into and shaped the proposals and LVIA.

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 We wish to note the volume of information provided within the LVIA and associated appendices, which while very detailed and extensive, makes the identification and clear understanding of key landscape and visual findings, as well as providing succinct review comments, difficult. The main LVIA chapter alone is some 295 pages with limited summary or narrative of effects to communicate the main findings, relying in places multiple statements cross referencing numerous large appendices or supporting documents. This makes the document inaccessible to most readers and difficult to follow. As explained in the Landscape Institutes *Guidelines for Landscape and Visual Impact Assessment, 3rd Edition* (**GLVIA3**), which is the acknowledged primary guidance document on landscape end visual assessment, the LVIA needs to clearly express to decision makers the authors judgement about changes to the landscape and views from the implementation of the development. In particular, the identification and explanation of which aspects of landscape and visual change are more important (and which are not), and why they are, which needs to be clearly laid out using *plain, easy to understand language*. The LVIA chapter would benefit from being reduced in size and furnished with a clear and concise written summary of the findings that doesn't rely on multiple cross references to large appendices. The Examination stage of

the DCO application now provides the opportunity to develop a clearer and more succinct identification and summary of the key landscape and visual issues and effects.

2.2 The *Environmental Statement Volume 4: Non-Technical Summary (C6.5)* (**NTS**) would particularly benefit from this for non-technical readers who are unlikely able to understand what is being presented in its current format. The landscape and visual section of the NTS contains a list of potentially affected receptors with limited summarising narrative provided to provide context or identify what the key issues are making it difficult for non-technical readers to understand what is being presented and subsequently difficult to comment upon the findings.

2.3 It is however understood and acknowledged that the volume of information is in part due to the fragmented nature of the development and cable routes, which are spread over a wide area, creating additional elements to consider beyond a simple, singular redline boundary in one focussed geographic location.

2.4 A lot of the supporting information is provided within associated appendices which provide very detailed, thorough information relating to the assessment.

2.5 The LVIA has been carried out by a team of Chartered Landscape Architects. The assessment is detailed and while overall it is thorough, the volume of information within the main chapter and number and scale of appendices makes it difficult to follow the thread of the report and immediately understand which part of the site or development is being presented or what is actually being communicated and why, relying on accessing multiple appendices and other supporting documentation that isn't always laid out in an obvious way.

2.6 The LVIA clearly draws a distinction between **landscape effects** and **visual effects**, with the main chapter focussing on likely **'significant'** effects (paragraph 8.4.27 clarifies "*Landscape and visual effects identified as being moderate, moderate-major and major are considered to be significant effects*), with *significance* being defined within the *Table 8.1.15* of *Appendix 8.1.1: LVIA Methodology* as: *"A measure of the importance or gravity of the environmental effect, defined by significance criteria specific to the environmental topic..".*

2.7 Fundamentally, the LVIA is not clear or explicit in regards to what constitutes the development that it based on, requiring the reader to utilise information that is under the heading of *mitigation* to ascertain this. A clear section on "Development Proposals" with a clear reference to the parameters being assessed would be useful in the earlier chapters of

the report. Within *Section 8.6: Embedded and Additional Mitigation* there are references to other documents where the development parameters are defined, which makes it challenging when reading through the large document, specifically:

- Paragraph 8.6.1, under the title *"Mitigation Approach",* references the *DCO*, *Works Plans[EN010133/APP/C2.4]* and the *Concept Design Parameters and Principles [*EN010133*/APP/C7.15]*.

- *Table 8.21 Primary and Secondary Mitigation: Landscape Design Parameters* in Paragraph 8.6.3, provides several Landscape Design Parameters, which are referenced in paragraph 8.6.21 stating *"design parameters that are relevant to the landscape and visual mitigation matters are set out in Table 8.21".* However, it is unclear how these are to be secured as part of the application, and how they relate to other information, particularly the Draft *DCO* and the *Concept Design Parameters and Principles.* One example which is of concern and discussed in more detail below, is that within Table 8.21, under existing vegetation under both Primary and Secondary Mitigation , the LVIA clearly states the intention is to retain and enhance trees and hedgerows, which we would encourage. However, the *Draft DCO* is seeking permission to have the ability to remove all hedgerows within the redline, and also remove any trees that are deemed necessary to facilitate development. While we would not anticipate all this vegetation would ultimately be removed, this is a clear contradiction, and creates uncertainty as to the parameters the LVIA baseline has been assessed against.

- Paragraph 8.6.16 of the LVIA (under the sub section title of: *Functionality and Need*) clarifies that the Rochdale Envelope approach has been used to allow flexibility and subsequently the LVIA presents an assessment of a 'worst case' scenario of the Development, stating that the *"parameters assessed in the EIA are set out in the Concept Design Parameters [EN010133/APP/C7.15] document included at Appendix 4.2 of the ES*".

2.8 However, despite this information, we still have concerns in regards to what constitutes the development that the LVIA has assessed against which may be fundamental to its integrity. The following needs clarifying:

- The extent of proposed tree and hedgerow removal, both within the redline and also associated with any highways works, and if this has been properly captured within the LVIA, as it appears at this stage that it has not. Currently the Draft DCO contains extensive

areas of hedgerow removal and freedom to potentially remove any trees, including those with Tree Preservation Orders (**TPO**s), which are specifically referenced within: *PART 6 MISCELLANEOUS AND GENERAL: 38 Felling or lopping of trees and removal of hedgerows; 39: Trees subject to tree preservation orders;* and *SCHEDULE 13: HEDGEROWS TO BE REMOVED: PART 1, PART 2, PART 3*.

Not only is this vegetation removal completely unacceptable and unnecessary, it is also not captured on any vegetation removal plans or within the LVIA. However, the LVIA findings rely heavily on retained vegetation, which it states would be either managed or supplemented with planting to reduce landscape and visual effects at all phases. If the LVIA is actually utilising the Rochdale Envelope approach, then the worst case, based on the Draft DCO and permission to remove extensive hedgerows and trees, would likely be an assessment with little or no retained existing vegetation within the site redline.

Another concern relating to the vegetation removal is that all visualisations contained within the LVIA are illustrating the majority of vegetation as retained on site at all phases. Again, if the DCO is seeking permission to remove hedgerows and trees, this must be reflected within the visualisations and assessment. Currently it is not and could subsequently be misleading.

- How are the parameters of the scheme layout fixed, particularly the location of larger elements such as the sub stations, BESS etc. as well as the extent of solar arrays and mitigation areas? The LVIA appears to be based upon indicative layouts (Figures *8.16.1* to *8.16.10: Landscape and Ecology Mitigation & Enhancement Plan*s) and information provided within *the Concept Design Parameters.* However, it is not clear how these elements will be geographically fixed, and what plans will achieve this. If proposed mitigation areas and extents or locations of built elements are changed in later, detailed design stages, the findings of the LVIA are likely to also change.

- Landscape mitigation and tree and hedgerow retention and protection needs to be clarified and clearly secured as the assessment relies heavily upon landscape mitigation and retention of existing vegetation to mitigate effects. This includes areas associated with wider highways works and improvements, and any works to facilitate access for large or abnormal loads during construction.

2.9 The LVIA at assesses landscape and visual effects at four main phases: **construction; year 1, year 15** and **decommissioning** as clarified at paragraph 8.4.14. These phases are detailed

within paragraphs 8.4.15 to 8.4.19 of the LVIA. The LVIA considers the Development in isolation, but also **cumulatively** with similar type and scale schemes in the local area (notably, Cottam Solar, West Burton Solar and Tillbridge Solar).

LVIA Appendices

2.10 The Appendices produced as part of the LVIA provide very detailed supporting information relating to the assessment. The appendices are listed within section 8.1.3 of the LVIA, and are referenced throughout the report to support the findings and provide additional detailed information.

LVIA Figures

2.11 The Figures produced as part of the LVIA are appropriate in the level of detail provided and clarity of information presented. However, some figures are still difficult to accurately read due to the scale of the Site and subsequent scale of the base mapping and information presented. The figures are clearly listed within section 8.1.3 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 8.4 of the LVIA and *Appendix 8.1 LVIA Methodology [EN010133/APP/C6.3.8.1]*. It begins by reiterating the compliance with GVLIA3 guidance in assessing both **landscape effects** and **visual effects** as interrelated but separate components. Reference is made in paragraph 1.1.1 to GVLIA3 and LI technical guidance notes 06/19 and 02/21, which are correct, however we would expect other LI guidance notes and clarification notes be used and referenced.

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 the significance of effects for the phases of the scheme (construction, year 1, year 15 and decommissioning).

3.3 The study area selection and extents are explained in detail within paragraphs 8.4.8 to 8.4.13 the LVIA. The radius of the study areas 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 chartered and experienced landscape architects.

3.5 The methodology is clear, and paragraphs 1.1.36 to 1.1.48 and 1.1.68 to 1.1.79 of *Appendix 8.1* 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 8.1.7 and 8.1.12 of *Appendix 8.1* provide clear indicative criteria of the assessment of magnitude of landscape and visual change. Table 8.1.13 of *Appendix 8.1* provides a matrix to guide the determination of significance 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 8.1.13. Significant effects are identified as Major, Moderate – Major, and Moderate, which is consistent with accepted practice. The methodology confirms that effects can be *beneficial, adverse* or *neutral,* as well as *direct* and *indirect* and therefore by default effects assessed as *minor, negligible and neutral* are 'not significant'.

3.7 While the assessment methodology has generally been carried through into the main assessment and used consistently, we question how the judgement of beneficial effects, particularly beneficial visual effects, has been applied, which is dealt with in Section 4 and 5 of this review.

ZTV Methodology

3.8 The process of modelling Zones of Theoretical Visibility (ZTVs) is presented within section *Appendix 8.14 ZTV Methodology [Reference: C6.3.8.1.4]*. However, while this is not explicit in the methodology to what parameters the proposals have been modelled to, paragraph 8.4.40 of the LVIA chapter identifies that the ZTVs have been *"set to the tops of tallest proposed structures",* which while would be useful to clarify, is assumed based on the maximum design parameters provided within the *Concept Design Parameters and Principles* section, however this needs to be clarified. The location of these built elements also needs to be confirmed and clarifying if these locations are indicative or are fixed by way of parameter or works plans.

3.9 Paragraph 8.4.39 identifies that existing woodland and significant areas of vegetation have been incorporated into the Digital Terrain Model (**DTM**). Based on the Draft DCO and identification of extensive potential vegetation loss, it needs to be confirmed if this removal has been considered within the ZTV information.

Visualisation Methodology

3.10 The process of delivering visualisations is presented within *Appendix 8.1.5*, which states that they were prepared in accordance with the Landscape Institute *TGN 06/19 Visual Representation of Development Proposals*. Page 3 of *Appendix 8.1.*5 confirms that the proposals modelled: *"correspond with the site layout and elevations supplied in the engineering layouts. Landscaping has been added at twos stages: Year 1 & 15. Heights have been specified by Landscape Architects at Lanpro.".*

3.11 *Appendix 1.2 Layout Information used for 3D Model Construction* includes plans of the development that was modelled. However, it is not clear if the maximum parameters provided within the *Concept Design Parameters and Principles* section were used, or how the location of elements shown in the visualisations would be fixed in place. The location of these built elements also needs to be confirmed and clarifying if these locations are indicative or are fixed by way of parameter or works plans, as if located in alternative positions or not shown at their maximum height would likely alter the judgements of effects.

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 8.5 of the LVIA, and Figure 1.1 confirms the Scheme Location and Order limits. Paragraphs 8.5.3 to 8.5.7 confirm that the site comprises four main development parcels of Cottam 1, 2, 3a and 3b for *"solar arrays, substations, energy storage, inverters/transformers, security features such as CCTV and fencing"* and cable route corridors:

- *Cottam 1 covers an area of 812.1 ha.*
- *Cottam 2 covers an area of 132.66 ha.*
- *Cottam 3a covers an area of 169.49 ha.*
- *Cottam 3b covers an area of 74.27ha*
- *Cable Route Corridors:*
    - *approximately 13.34 km long from the Cottam 1 substation to the Cottam substation at Cottam Power Station.*
    - *approximately 9.27 km long from Cottam 1 to Cottam 2*
    - *approximately 4.9 km long from Cottam 3a to Cottam 3b and then on to Cottam 2*

4.2 The baseline follows the LVIA methodology and begins with identifying and describing published character assessments, which is considered in detail from paragraph 8.5.11 to 8.5.52, which covers a variety of scales from National Character Areas to Local Level assessment, and includes Historic Characterisation information. However, as these are at a large scale, more detailed, or fine grain, assessments have been carried out as part of the LVIA, with an overview provided within paragraphs 8.5.78 to 8.5.86 of the LVIA. This that identifies individual contributors to landscape character, which subsequently defines Detailed Landscape Receptors under the following headings:

- *Land Use*
- *Topography and Watercourses*
- *Communications and Infrastructure*
- *Settlements, Industry, Commerce and Leisure*
- *Public Rights of Way and Access*
- *Nationally and Locally Designated Landscape*
- *Scheduled Monuments, Listed Buildings, Conservation Areas and Registered*
- *Parks and Gardens; and*
- *Ancient Woodland and Natural Designations*

4.3 This process resulted in twenty two Landscape Receptors at varying scales being identified to assess the effects of the Development. These are defined within the LVIA as:

- Five Regional Character Areas (from the *East Midlands Regional Landscape Character Assessment*);
- Four Local Character Areas (from the *West Lindsey Landscape Character Assessment*);
- Three Trent Vale Landscape Character Areas (from the *Trent Vale Landscape Character Assessment*);
- One Historic Landscape Character Zone (from the *Historic Landscape Characterisation Project: The Historic Character of The County of Lincolnshire*); and

- Nine Detailed Landscape Receptors or individual contributors to landscape character (from desktop and fieldwork as part of the LVIA).

4.4 Each of these Landscape Receptors were subsequently judged on value, susceptibility to change individually (if geographically applicable to each receptor) for all four development parcels and the three cable route corridors. This provides a very detailed and thorough baseline. However due to the volume of information required to carry this out, much of which has also been included within the main LVIA chapter, it is not easy to glean the overall character of this landscape or how it varies across the site and study area as this section covers 44 pages (from paragraph 8.5.10 to 8.5.186). We would suggest a simple summary table of receptors would help with this and brief, succinct overview text on the landscape character, and how it varies across the study area and site would greatly assist the reader.

4.5 Further detail of the landscape baseline is provided within *Appendix: 8.2 Potential Landscape Effects [Reference: C6.3.8.2].* Again, this 278 page appendix is a very thorough set of information that provides a detailed baseline of every landscape receptor against every applicable land parcel or cable route, as well as a detailed analysis of the value, susceptibility and subsequently sensitivity of each of these. This is a lot of information to navigate with several tables covering multiple pages creating a slight barrier to accessing the information.

Landscape Assessment

4.6 The Landscape Assessment is detailed within *Appendix: 8.2 Potential Landscape Effects [Reference: C6.3.8.2],* which as identifies previously includes a clear assessment of Value and Susceptibility, and subsequently the Sensitivity of landscape receptors, which is aligned with the criteria provided within the methodology. The landscape assessment is summarised within section 8.7 of the LVIA, with paragraphs 8.7.13 to 8.7.292 providing detail on each identified receptor applicable to each individual parcel and cable route section. Again, this is a very long section of the LVIA chapter totalling 47 pages, and would have benefitted from being more succinct and providing an overview or summary to identify the key landscape and visual issues and effects, which are difficult to ascertain from the volume of information.

4.7 As agreed at the pre-application stage, the national character areas have not been assessed and used for context only. In line with the methodology, the assessment of the landscape

character areas, or landscape receptors, progresses from regional to local and finer grain individual contributors to landscape character.

4.8 The baseline identified a variety of sensitivities of landscape receptors, with no character areas or individual contributors to landscape character identified as being of high sensitivity, however Regional Scale Landscape Character – 4b: Wooded Vales has been assessed as being of a medium-high sensitivity.

4.9 The LVIA identifies significant landscape and visual effects at the four phases of **construction, operation (year 1), operation (year 15),** and **decommissioning**. However, there are some inconsistencies between the appendices and the summary tables within the chapter that need addressing, which are outlined in further sections of this review. The following significant residual effects are identified in the LVIA:

- At **Construction** the following landscape receptors were assessed as having significant effects (broken down into development and cable parcels):
    - **Cottam parcels 1, 2, 3a, 3b:**
        - Communications and Infrastructure: **Moderate Adverse** Significant
    - **Cottam 1, 2, 3a, 3b Substation Sites:**
        - Land Use: **Major Adverse** Significant
        - Topography and Watercourses: **Major Adverse** Significant
- At **Operation (Year 1)** the following landscape receptors were assessed as having significant effects:
    - **Cottam parcels 3a, 3b:**
        - Communications and Infrastructure: **Moderate Adverse** Significant
    - **Cottam 1, 2, 3a, 3b Substation Sites:**
        - Land Use: **Moderate-Major Adverse** Significant (Note: 3a Substation Site shown in Table 8.46 in LVIA as Major Beneficial – assume incorrect as not aligned with findings in Appendix 8.2?)

        - Topography and Watercourses: **Moderate-Major Adverse** Significant (Note: 3a and 3b Substation Sites shown in Tables 8.47 and 8.55 in LVIA as Major Beneficial – assume incorrect as not aligned with findings in Appendix 8.2?)

- At **Operation (Year 15)** the following receptors were assessed as having significant effects:

    - **Cottam parcels 1, 2, 3a, 3b:**

        - Regional Character Area: Unwooded Vales: **Moderate Beneficial** Significant (Note: Appendix 8.2.2.2.1 could not be located within the overall Appendix 8.2 to verify)

        - Land Use: **Moderate Beneficial** Significant

        - Topography and Watercourses: **Moderate Beneficial** Significant

        - Nationally and Locally Designated Landscape: **Moderate Beneficial** Significant.

        - Ancient Woodlands and Natural Designations: **Moderate Beneficial** Significant.

    - **Cottam 1, 2, 3a, 3b Substation Sites:**

        - Land Use: **Moderate Adverse** Significant. (Note: 3a Substation Site shown in Table 8.46 in LVIA as Moderate Beneficial – assume incorrect as not aligned with findings in Appendix 8.2?)

        - Topography and Watercourses: **Moderate Adverse** Significant. (Note: 3a and 3b Substation Sites shown in Tables 8.47 and 8.55 in LVIA as Moderate Beneficial – assume incorrect as not aligned with findings in Appendix 8.2?)

4.10 These identified 'significant' effects represent effects on character areas and individual contributors to landscape character that fall both within the Site and also within the study area. However, we are not in agreement with the findings of the landscape assessment, and do not see any appropriate justification for assessing significant beneficial landscape effects on both landscape character areas, or individual contributors to landscape character by the construction and operation of a large solar development. There are also several minor

beneficial effects (not significant) identified, predominantly at the Operation (Year 1) phase of the development, that also lack justification.

4.11 While we acknowledge to establishment of new areas of planting will bring introduce positive elements of the landscape, the development will bring about an extensive change on land use (which is defined in table 8.31.15 of Appendix 8.1 as "*What land is used for, based on broad categories of functional land cover such as urban and industrial use and the different types of agriculture and forestry")* and subsequently the openness and perception of solar development: creating what may be perceived as an 'energy landscape' as opposed to rural or agricultural one at present, which is a complete change of character. New planting will offset some of the adverse elements of the scheme, however will not bring about the wholesale beneficial landscape changes that have been identified.

4.12 The justifications provided within Appendix 8.2 and within the LVIA chapter for beneficial landscape effects are predominantly focussed on mitigation planting and often highlight visual matters, which while are interrelated with landscape, particularly character through perception, provide an unbalanced judgement as to the benefits of the scheme.

4.13 At the Operation (Year 1) phase, several landscape receptors have been assessed as having beneficial effects based on the mitigation planting. At this stage, the planting will have minimal effect on reducing the adverse landscape impacts of extensive areas of solar arrays, and we disagree that any beneficial landscape effects will be achievable at the stage.

4.14 The residual effects at Operation (Year 15), while we would typically expect these to reduce through the established mitigation planting, still have an over reliance on mitigation and exaggerate the likely beneficial effects. For example, regarding Land Use, mitigation planting is identified as providing beneficial aspects to the development of the site, however planting in this instance would have limited influence to benefit land use (what the land is used for) – it is currently an agricultural land use, and it is proposed to be solar. The examination provides the opportunity to further interrogate the findings of the landscape assessment.

4.15 By reason of its mass and scale, we judge that the scheme would lead to significant adverse effects on landscape character at all phases. The Development has the potential to transform the local landscape by altering the character on a large scale. This landscape change also has the potential to affect wider landscape character, at a regional scale, by replacing large areas of agricultural or rural land with solar development, affecting the current openness and agricultural character that are identified as key defining

characteristics of the area. As well as the panels and associated equipment, he presence of extensive fencing and CCTV will be out of character with the wider rural area.

4.16 No significant adverse effects were identified in the LVIA on character areas, representing larger scale receptors which underplays effects. At a local and regional scale, the development will change the land use over a large area and also has the potential to alter unique characteristics of a character area, albeit these changes would be direct at a local scale, however these would likely be of more than local significance (potentially at a regional scale due to scale and extent).

4.17 In regards to landscape effects, the scale or size of a character area (County 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 impacts.

4.18 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. The LVIA should assess what the change would be in that part of the character area and what key elements identified within the baseline are affected, and how development change would affect those

4.19 There is an over reliance within the LVIA upon planting to mitigate the landscape effect of the development; the character of the area is relatively open, and too much planting without due care for location, simply to screen could have detrimental impacts, changing the landscape character detrimentally. The PROW and local roads in the study area enjoy an open aspect across some areas of the study area, therefore, care needs to be taken to prevent the loss of this character through an overbearing set of mitigation proposals. It is noted the offsets proposed in the *Concept Design Parameters and Principles,* and with careful design, this will go some way to address the matter raised.

4.20 However, the extent of vegetation removal currently proposed within the Draft DCO has the potential to completely remove extensive areas of hedgerows and trees, which is both completely unacceptable and unnecessary, and is also not identified or assessed within the LVIA. Any vegetation removal should be minimal and as necessary to facilitate the development. Any retained vegetation should subsequently be retained throughout the period of construction and proposals ensure appropriate offsets.

4.21 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, despite the potential adverse effects on the rural landscape these may have, including potential vegetation loss, urbanisation or visual amenity through any required improvements. Because of this, the construction landscape effects may be underestimated within the LVIA through the impact of, or loss of, vegetation. We strongly 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, as well as increase the visibility of the 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; and*
- *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 Landscape Baseline is considered in Section 8.5 of the LVIA. The baseline follows the LVIA methodology and begins with clarifying in section 8.5.187 that the *"objective is to set out the assessment parameters that have underpinned the final detailed assessment of any likely significant visual effects".* This is detailed in paragraphs 8.5.188 to 8.5.316, which covers 61 pages of the LVIA chapter. While very detailed, this section lacks an overall narrative to illustrate the overall visual amenity of the site and study area. We would recommend this section would benefit from being edited down in size and suggest a succinct overview text on the visual amenity of the site and study area is provided, and how it varies across the study area and site would greatly assist the reader and set the scene for the more detailed analysis.

5.2 Viewpoint receptors are identified and 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. Paragraph 8.5.199 clarifies the process in identifying the viewpoints, however no reference is made to the ZTV

plans (Figures 8.8 to 8.13) and how these have been utilised to clarify receptors and viewpoints, and also what they illustrate in regards to overall visibility of the site.

5.3 The LVIA clearly lays out the identified receptor groups (e.g. residents) and *Appendix 8.3 Potential Visual Effects [Reference: 6.3.8.3]* subsequently identifies the associated representative viewpoints as *"Nearest Viewpoint/s"*. Due to the fragmented nature of the Site and geographical extent, 91 viewpoints have been agreed at the pre-application stage to be taken forward into the assessment, as listed in Table 8.11 of the LVIA Chapter.

5.4 Paragraphs 8.5.281 to 8.5.316, which reflect the information provided within Appendix 8.3, goes on to describe the value of each view and identify associated groups of receptors. The majority of views have been judged to be of medium value. The LVIA main chapter does not identify the susceptibility to change, however this judgement is provided within *Appendix 8.3.* The resultant sensitivity of each receptor and subsequently each representative viewpoint is also detailed within Appendix 8.3 and summarised within Tables 8.56 to 8.67. . The majority of visual receptors have been judged to be of either medium or medium-high sensitivity.

5.5 The baseline generally follows the LVIA methodology and considers the consultation undertaken at the pre-application stage.

Visualisations/Photomontages

5.6 Viewpoints representative of the identified visual receptors were identified. These were discussed and agreed upon through consultation (refer **Appendix A**). The baseline process resulted in identifying 91 viewpoints to represent the views of the visual receptors. *Figure 8.14 Cottam Viewpoint Verified Photography and Photomontages* illustrate these views.

5.7 A methodology of photography and visualisation preparation and presentation is included in Appendix 8.1.5. The methodology clarifies that photographs/visualisations have been prepared and presented with an *"accuracy of camera locations and 3D modelling conforms with the Landscape Institute's Type 4 (the highest level of accuracy). The 3D modelling has been produced to AVR 3 (photorealistic) and for some views AVR1 (simple dashed line identifying extents)."*

Visual Assessment

5.8 The Visual Assessment is detailed within *Appendix 8.3 Potential Visual Effects [Reference: 6.3.8.3)*, 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 findings are presented in section 8.5 of the LVIA, with residual visual effects (following the implementation of mitigation) presented within paragraphs 8.11.70 to 8.11.88 of the LVIA.

5.9 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 residual visual effects at Operation (year 15) are identified in the LVIA (summarised in tables 8.103 to 8.144, within the LVIA). There are several anomalies in these summary tables, which have been highlighted below in brackets and need clarifying as they are fundamental in beginning to understand the significant effects that have been assessed:

- **Cottam 1 Viewpoints:**
    - VP04: Thorpe Lane, Local Bridge: **Moderate Adverse** Significant (Note: Table 8.56 identifies **Moderate to Major Adverse** at Operation 15 years)
    - VP05: TLFe/31/2: **Moderate-Major Beneficial** Significant (Note: Table 8.56 identifies **Minor to Moderate Beneficial** at Operation 15 years)
    - VP06: Thorpe Lane: **Moderate-Major Beneficial** Significant (Note: Table 8.56 identifies **Minor to Moderate Beneficial** at Operation 15 years)
    - VP07: Thorpe Bridge TFLe/32/1: **Moderate Adverse** Significant (Note: Table 8.56 identifies **Moderate to Major Adverse** at Operation 15 years)
    - VP10: Stur/73/1: **Moderate Beneficial** Significant
    - VP11: TLFe/31/2: **Moderate Adverse** Significant (Note: Table 8.56 identifies **Moderate to Major Adverse** at Operation 15 years)
    - VP12: Camm/31/1: **Moderate Beneficial** Significant
    - VP13: Fleets Lane, Stow Pasture: **Moderate Adverse** Significant
    - VP15: Squire's Bridge: **Moderate Adverse** Significant
    - VP19: Bridge over River Till: **Moderate-Major Adverse** Significant

- VP20: Normanby Road: **Moderate Neutral** Significant (Note: Assume typo and is adverse. Table 8.56 identifies **Neutral Minor** at Operation 15 years, which does not align with the methodology criteria)
- VP21: Stow/83/1: **Moderate-Major Beneficial** Significant (Note: Table 8.56 identifies **Minor Beneficial** at Operation 15 years)
- VP32: Fill/86/1: **Moderate-Moderate Beneficial** Significant (Note: Assume typo and is Moderate. Table 8.56 identifies **Moderate Beneficial** at Operation 15 year)
- VP36: Fill/767/1: **Moderate Beneficial** Significant (Note: Table 8.56 identifies **Minor Beneficial** at Operation 15 years)
- VP37: Junction of Gypsy Lane and Willingham Road: **Moderate Beneficial** Significant (Note: Table 8.56 identifies **Minor Beneficial** at Operation 15 years)
- VP39: Junction of Cot Garth Lane and Stone Pit Lane: **Moderate Adverse** Significant (Note: Table 8.56 identifies **Moderate to Major Adverse** at Operation 15 years)
- LCC-C-D: Blackthorn Lane: **Moderate Beneficial** Significant
- LCC-C-G: PRoW Fill/85/2: **Moderate Adverse** Significant (Note: Table 8.56 identifies **Moderate to Major Adverse** at Operation 15 years)
- LCC-C-H: PRoW Fill/767/1: **Moderate Adverse** Significant
- LCC-C-I: Willingham Road: **Moderate Adverse** Significant (Note: Table 8.56 identifies **Minor Adverse** at Operation 15 years)
- LCC-C-J: Fillingham Lane: **Moderate Adverse** Significant
- LCC-C_T: Kirton Road: **Moderate Beneficial** Significant (Note: Table 8.56 identifies **Moderate Adverse** at Operation 15 years)

- **Cottam 2 Viewpoints:**
  - VP49: East Lane: **Moderate Beneficial** Significant
- **Cottam 3a Viewpoints:**
  - VP60: B1025 (Kirton Road): **Moderate Adverse** Significant

- VP61: B1025 (Kirton Road): **Moderate Beneficial** Significant (Note: Table 8.63 identifies **Minor Beneficial** at Operation 15 years)
- VP62: B1025 (Kirton Road): **Minor Adverse** Not Significant (Note: unsure why included as residual significant effect as judged not significant)
- VP63: A159 (Laughton Road): **Moderate Beneficial** Significant
- LCC-C-T: Kirton Road: **Moderate Adverse** Not Significant (Note: Assume typo and is actually significant - Table 8.63 identifies as significant effect)

- Cottam 3b Viewpoints:
  - VP56: Pilh/20/1: **Moderate Beneficial** Significant (Note: Table 8.65 identifies as being judged not significant which is assumed to be a typo)
  - VP58: Junction of Pilh/20/1 and Bonsdale Lane: **Moderate Beneficial** Significant (Note: Table 8.65 identifies **Moderate Major (unsure if assessed as adverse or beneficial as not stated)** at Operation 15 years)
  - VP59: Blyton Level Crossing: **Moderate Adverse** Significant

5.10 The views and visual receptors with significant effects represent close range views of the development. However, while fifteen views were deemed to have significant adverse visual effects, the remaining 15 were deemed to have residual significant beneficial effects. We disagree with the findings of the LVIA that any of the views would be improved over the baseline by the implementation of a large scale solar development across an open agricultural landscape. As well as the 15 views assessed as having residual significant beneficial effects, several others have been assessed as having minor beneficial effects. The justification for the benefits is predominantly reliant upon landscape benefits, not visual – the scheme does not improve or enhance the view, and generally does not screen or integrate existing visual detractors. Where extensive areas of mitigation planting are visible, the assessment often judges this as an improvement, whereas the view is often foreshortened from the baseline, blocking out current views of open agricultural land, for example Viewpoint 4.

5.11 The viewpoints with significant effects (presented on *Figure 8.14*) are recommended to be reviewed as it is unclear as to why some of the views are assessed as adverse, and others that are similar are judged to be beneficial. We would not expect to find beneficial visual

effects from the development of a large scale solar farm within an open agricultural landscape. We also find the justification of judging a view beneficial over the baseline is more aligned with landscape benefits, such as the creation of new areas of vegetation, as opposed to actually enhancing the view, or removing negative elements/visual detractors.

5.12 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, despite the potential adverse effects on views of the rural landscape these may have, including potential vegetation loss, urbanisation or visual amenity through any required improvements. Because of this, the construction visual effects may be underestimated within the LVIA through the impact of, or 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.

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; and*
- *Are any residential properties (receptors) likely to experience significant effects to their visual amenity.*

Cumulative Methodology

6.1 Cumulative landscape and visual effects methodology is provided within *Appendix 8.1.3 – Cumulative Methodology [Reference: 6.3.8.1.3]*, which provides a logical approach to consider the Development alongside other schemes that have been identified.

6.2 Other schemes that are considered for the cumulative assessment are identified within paragraph 1.2.12 of the Cumulative Methodology. This identifies that Cumulative sites are to be assessed (Cottam 1, Cottam 2, Cottam 3a, and Cottam 3b), and also Cumulative Developments (Bumble Bee Farm, Field Farm, Gate Burton, High Marnham, Tillbridge, West Burton). This approach is appropriate to understand how the local area may potentially change through the development of large scale solar over an extensive area.

Cumulative Landscape and Visual Effects

6.3 Cumulative landscape and visual effects are presented within Section 8.10 of the LVIA chapter. Regarding Cumulative effects (Cumulative landscape and visual effects are those that are: "*incremental changes caused by other past, present or reasonable foreseeable changes resulting from other local developments, together with the Scheme")*, the LVIA identifies that there will be significant cumulative effects with those schemes identified to be included within the assessment.

6.4 Regarding Cumulative Landscape Effects:

- No Significant effects were identified for the national, regional or local landscape character types identified in the East Midlands Regional Landscape Character Assessment;
- The four Local Landscape Character Areas, three Trent Vale Landscape Character Areas, and one Historic Landscape Character Zone identified within the baseline have not been included within the cumulative landscape assessment;
- No significant effects were identified for the nine Detailed Landscape Receptors or individual contributors to landscape character (from desktop and fieldwork as part of the LVIA). However, three minor (not significant) beneficial effects were judged for the following Detailed Landscape Receptors or individual contributors to landscape character, with the rest being of a Neutral Effect:

- Topography and Watercourses (Year 15 Operation: **Minor Beneficial**)

- Nationally and Locally Designated Landscape (Year 15 Operation: **Minor Beneficial**)

- Ancient Woodland and Natural Designations (Year 15 Operation: **Minor Beneficial**)

6.5 We have judged that the cumulative change to the landscape will be considerable and significant, and the combination of two or more sites has the potential to change the local landscape character at a scale that would be of more than local significance. The cumulative impact of the four adjacent NSIP scale 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.

6.6 Regarding Cumulative Visual Effects:

- No summary or narrative has been provided in paragraph 8.10.26, which would assist in the reader understanding the overall cumulative visual effects, and subsequently relies on referencing the detailed assessments and the reader going through a document of appendices that is over 700 pages in length. Therefore it is unclear as to what the LVIA has judged in regards to cumulative visual effects;
- A summary and conclusion should be provided to draw out these key issues as the cumulative visual effects are essentially spread out throughout Appendix 8.3 and very difficult to identify this very detailed information.

6.7 The overall findings of the cumulative visual effects should be pulled together and a judgement made on the overall findings, not just on isolated viewpoints included within the appendices. There will likely be significant visual effects from the development of multiple NSIP scale solar farms in this agricultural area. This is likely exacerbated when travelling through the area either along PROW or local roads, and the sequential effects of multiple large scale solar sites, which are spread over extensive, often fragmented redline boundaries, creates the perception of being surrounded by solar development. Views do not have to be extensive and open to create the perception, and regular sequential glimpsed views would create a change to the experience of visual receptors as well as change the perception of character of an entire area.

6.8 GLVIA3 defines types of cumulative visual effect as either: Combined (in same view) or Sequential. It is the sequential views that are of concern and must be considered. Table 7.1 of GLVIA regarding Cumulative visual effects states:

*"**Sequential:** Occurs when the observer has to move to another viewpoint to see the same or different developments. Sequential effects may be assessed for travel along regularly used routes such as major roads or popular paths:*

***Frequently Sequential:** Where features appear regularly and with short time lapses between instances depending on speed of travel and distance between viewpoints*

***Occasionally sequential**: Where longer time lapses between appearances would occur because the observer is moving very slowly and/or there are larger distances between viewpoints."*

Residential Visual Amenity

6.9 An overview of the Visual Assessment of Residential Properties is provided in paragraphs 8.4.28 to 8.4.32.

6.10 An overview of the Visual Assessment of Residential Properties is provided in paragraphs 8.4.28 to 8.4.32. Paragraph 8.4.31 states that: *"This LVIA chapter and appendices has therefore been undertaken to take account of steps 1-3 for the Scheme and if following assessment of affects upon residential properties at year 15 there remain significant effects at the highest magnitude of significance (major) then a full RVAA is undertaken where appropriate for those properties affected."*

6.11 Residential receptors subsequently form part of the baseline and assessment of the LVIA. Any RVAA is subsequently not specifically mentioned again in the LVIA, and therefore it is assumed that no properties met the threshold for a full RVAA to be carried out. However, the findings of the initial three stages of residential assessment have been utilised to inform the layout mitigation in any adjacent areas.

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; and*
- *Is the long-term management of existing and proposed vegetation properly addressed in any long term management plans to promote establishment.*

Evidence of Iterative Process

7.1 Mitigation proposals, described in the LVIA reference a series of documents within the DCO package. The masterplan has been presented as evolving through an iterative process, with the landscape and visual findings feeding back into the design process. However, there appears in places an over reliance upon planting just to screen proposals, without full attention to the potential impact of screening on this landscape. The LVIA and appendices do not go into detail about the level of care to ensure the design of mitigation enhances the physical landscape, or views from receptors, other than just screening the development.

7.2 The design has evolved and appears to have responded to the consultation process, there is clear evolution from the different stages of the masterplan.

7.3 Section 8.6 of the LVIA describes the embedded and additional mitigation measures of the scheme to, where practicable, avoid adverse effects on the landscape and views, and this process is described in more detail within the Design and Access statement and *Chapter 5: Alternatives and Design Evolution [Reference 6.2.5].*

Mitigation Measures

7.4 The *Outline Ecological Protection and Mitigation Strategy [Reference: 7.16]* provides information regarding the establishment and maintenance of the planting associated with

the Development (as shown on Figures 8.16.1 to 8.16.10 Landscape and Ecology Mitigation and Enhancement Plans.

7.5 The success of the landscape mitigation to meet the objectives laid out in the management plan associated figures 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, as well as protection of exiting trees and hedgerows. 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 5 year period, particularly if landscape and visual effects are being assessed at 15 years: the reduction in landscape and visual effects presented in the LVIA are based on the success of landscape mitigation and retention of existing planting. Similarly, any proposals for early planting should be secured and implemented at the earliest opportunity as effects are also reduced in the LVIA based upon the assumption these are in place and 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 robustness to deal with the challenging climatic conditions when it comes to establishing new plantings. 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 period will also ensure that the management plan can adapt to varying conditions.

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 without due care for location, simply to screen could have detrimental impacts. The PROW and local roads in the study area enjoy an open aspect across some areas of the study area, 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. 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)* and whether it is sufficient to support making an informed decision.

Finally, recommendations for further information to be sought are provided to assist in the Examination of the DCO Application.

Summary and Conclusions on the LVIA

8.1 The LVIA is in contradiction with the Draft DCO (specifically: *PART 6 MISCELLANEOUS AND GENERAL: 38 Felling or lopping of trees and removal of hedgerows; 39: Trees subject to tree preservation orders;* and *SCHEDULE 13: HEDGEROWS TO BE REMOVED: PART 1, PART 2, PART 3*.) in regards to vegetation removal and retention. This must be clarified as it has the potential to undermine the findings of the LVIA. The LVIA clearly states the intention is to retain and enhance trees and hedgerows, and this approach is reflected in the judgments of effects at all phases with existing vegetation forming key elements of the landscape baseline and also providing screening and softening of built elements of the scheme. However, the Draft DCO is seeking permission to have the ability to remove all hedgerows within the redline, and also remove any trees that are deemed necessary to facilitate development. While we would not anticipate all this vegetation would ultimately be removed, under the Draft DCO, as currently written, it could be and this is a clear contradiction, and creates uncertainty as to the parameters the LVIA baseline has been assessed against. Not only is this extent of vegetation removal completely unacceptable and unnecessary, it is also not captured on any vegetation removal plans or within the LVIA. Finally, as it is stated that the LVIA is utilising the Rochdale Envelope approach, so the '*worst case'*, based on the Draft DCO and permission to remove extensive hedgerows and trees, would likely be an assessment with little or no retained existing vegetation within the site redline.

8.2 The LVIA and the associated figures, appendices and documents together are a large set of work that provides a very detailed analysis of the development and its impact upon the baseline landscape and visual conditions of the site and surrounding area. However, the volume of information and a lack of clear, overarching narrative and summary result in making the detailed information inaccessible and often difficult to follow.

8.3 The LVIA needs to clearly express the authors judgement about changes to the landscape and views from the implementation of the development, which is currently missing as it is contained within multiple sources relying on the reader cross referencing multiple appendices and other ES chapters and parts of the DCO application. The main LVIA chapter would benefit from being reduced in size and furnished with a clear and concise written summary of the findings. In particular, it would be useful to have the identification and clear explanation of which aspects of landscape and visual change are more important, which are not, and why they are. This should be clearly laid out using *plain, easy to understand language*. The Examination process now provides the opportunity to develop a clearer and more succinct identification and summary of the key landscape and visual issues and effects.

8.4 By reason of its mass and scale, our opinion is that 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 the character on a large scale. This landscape change also has the potential to affect wider landscape character, at a regional scale, by replacing large areas of agricultural or rural land with solar development, affecting the current open agricultural character that is identified as key defining characteristics of the area.

8.5 Regarding judgements on Landscape effects in the LVIA, there are some inconsistencies identified in **paragraph 4.9** of this review. These need to be clarified as they relate to the identification of significant effects. However, we are not in agreement with some of the findings of the landscape assessment, and do not see any appropriate justification for assessing significant beneficial landscape effects on both landscape character areas, or individual contributors to landscape character by the construction and operation of a large solar development. There are also several minor beneficial effects (not significant) identified, predominantly at the Operation (Year 1) phase of the development, that also lack justification.

8.6 Regarding judgements on Visual effects in the LVIA, there are some inconsistencies identified in **paragraph 5.9** of this review. These need to be clarified as they relate to the identification of significant effects. We disagree with the findings of the LVIA that any of the views would be improved over the baseline by the implementation of a large scale solar development across an open agricultural landscape. As well as the 15 views assessed as having residual significant beneficial effects, several others have been assessed as having minor beneficial

effects. The justification for the benefits is predominantly reliant upon landscape benefits, not visual – the scheme does not improve or enhance the view, and generally does not screen or integrate existing visual detractors.

8.7 It is also our opinion that the cumulative landscape and visual effects of the Development will also bring about significant landscape and visual effects, particularly when assessed alongside the proposed Gate Burton, West Burton and Tillbridge Solar 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, particularly when experienced sequentially while travelling through the landscape.

8.8 Notwithstanding comments regarding the contradiction with the Draft DCO, any tree and vegetation removal associated with the development, including wider highways improvements and access for construction, must be clarified, and subsequently any works (such as lopping or pruning), or removal to 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. This should be to BS:5837 Trees in Relation to Construction and any subsequent arboricultural method statements, again which should be approved by the appropriate authority. In particular this should ensure existing trees, and associated root protection areas, are suitable protected throughout the entire construction period. This would likely include areas within the order limits but away from construction activity as storage of materials or tracking over of plant will likely damage tree root protection areas.

8.9 While the submission includes landscape proposals (Figures 8.16.1 to 8.16.10), these are of a high level and would expect if the project proceeds that much more detailed plans 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 relevant figures has been utilised to assess the landscape and visual effects of the scheme, therefore we would expect any detailed landscape proposals consist of the area and extent shown on these plans as a minimum.

APPENDIX A

Previous AAH Consultation documents:

- AAH TM01 Landscape Meeting on 07-03-22
- AAH TM02 Viewpoint Comments 29-03-22
- AAH TM03 PIER Comments 25-07-22

Technical Memorandum 1

Lincolnshire County Council, Cottam and West Burton Solar Projects

Landscape Meeting (Virtual): Viewpoint Discussion: Held 07 March 2022

A meeting was held on Monday 7th March 2022 over Microsoft Teams for the Cottam and West Burton NSIP Solar sites to discuss overall visual amenity of the two sites and associated Study Areas, and Viewpoint selection. The meeting was attended by representatives from the development team (including consultants from Landpro), Lincolnshire County Council, and AAH Consultants (providing landscape and visual advice and support to Lincolnshire County Council).

The meeting was held and led by representatives from Landpro, with the project landscape architects, Laura Huby and Chris Jackson, presenting a general overview of the main landscape and visual aspects of the Cottam and West Burton Solar Project sites and study areas. The Augmented ZTV figures from the LVIA Scoping documents for both projects were primarily utilised in the meeting, which also show the proposed viewpoint locations.

The purpose of the meeting was to introduce the relevant parties, provide some project background and progress to date, identify a general overview of the key landscape and visual issues and discuss the selected viewpoints with a view to getting agreement that the selected viewpoints are adequate for the projects.

Following the presentation, there was the opportunity for discussion on what was presented, with a focus on the viewpoint selections. It was agreed that AAH visit site prior to providing any detailed feedback or further discussion.

Actions and Comments

AAH are carrying out initial visits to Cottam and West Burton Solar sites week commencing 14th March. Following this, AAH will review the viewpoints and organise a follow up meeting with the developer's team. Overall, the viewpoint selections for both sites generally appear thorough, and due to the nature of the red line boundaries have resulted in a relatively high number of viewpoints. At this stage, it would be useful to have a simple table that identifies each viewpoint location and view in more detail and its reasoning for inclusion (along the lines of "*view north from xxxx road and xxxx PROW of Cottam 1 and 2*", or identifying a cumulative view of different sites and what would likely be in the view).

AAH will provide more detailed, and separate feedback on viewpoints for each site once initial field and desktop work has been carried out. While we appreciate the timings of obtaining winter views for photography, it is important to ensure appropriate time is allowed to review the information. When the detailed feedback is issued, we would reccomend a follow up discussion and/or meeting on site to further refine.

Also, as suggested at the meeting, we would welcome a workshop covering all the three solar sites in West Lindsey, which would allow for a discussion around cumulative views and impacts, as well as discussion of the main landscape and visual issues. The date and invitation for this will follow, and have assumed this would be organised by LandPro and/or AECOM.

We are also coordinating with *Via East Midlands* (who providing landscape services and advice for Nottinghamshire County Council), and would suggest they are also involved in any upcoming workshops.

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15 March 2022

AAH consultants

Technical Memorandum 2 (AAH TM02)

Lincolnshire County Council, Cottam Solar Project

Visual Amenity: Viewpoint Comments

Following the meeting held on Monday 7th March 2022 (refer AAH TM01) over Microsoft Teams to discuss LVIA Viewpoints, we have reviewed the information presented and provided by Lanpro from the Cottam Scoping Report, and subsequently attended site over the week commencing 14th March. We walked the Cottam Solar site and visited all the viewpoints proposed by Lanpro. The proposed viewpoints were identified on the Augmented ZTV figures (Figures 7.11 to 7.13) from the LVIA Scoping documents.

Following this, we have the following general comments and requests:

1. With the site being split over three main land parcels, it would be useful to have a table that identifies each viewpoint location and view in more detail, the receptors it is representing, and its reasoning for inclusion, identifying which parcel, or parcels, the view is including or if a cumulative view of different sites and what would likely be in the view. It may be useful for this exercise to reference sub parcels, particularly for Cottam 1, to aid clarity;

2. Please could details on the final solar panel option be provided when available. Para. 4.2.2 of the scoping report details: Option A: Tracking Panels 4.5m high; and para. 4.2.3 report details: Option B: Fixed Panels 3.5m high. The final solution will obviously have differing visibility. It has been assumed the Augmented ZTV figures (Figs. 7.11 to 7.13) have been developed using panels at a 4.5m height;

3. Paragraph 4.2.5 of the scoping report identifies a 400kv sub-station at Cottam 1 of some 3.5Ha and with up to 13 metre high elements. Could the location, size/massing and height, including what features would be 13 metres in height, of this off substation be provided. Again this would likely have visual impacts that would require additional viewpoints beyond those initially identified;

4. Please could further details be provided about the on-site 132kv substations (paragraph 4.2.5 of the scoping report) identified within Cottam 2 and Cottam 3, including location, size/massing and height, including what features would be 6.4 metres in height. As at this stage we do not have this information, the location of this would likely have visual impacts that would require additional viewpoints beyond those initially identified;

5. We do not feel we can provide more detailed feedback at this stage on the Cable Route Corridors 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;

6. While the scoping report in para. 7.5.1 states that visual study beyond 5km has been scoped out, it was observed on site that there are potential long distance views to Lincoln Cathedral and Lincoln Castle. While Lincoln lies approximately 9.0km to the south east of Cottam 1 and, it would be useful to have a statement as to whether views from these nationally important Grade I listed buildings to the site and/or development are possible, admittedly would be from a long distance, however due to the scale of the development (particularly cumulatively), and that visitors may be in elevated positions, is such that it should be considered;

7. Having visited site over the period of several days, we have observed that while many of the lanes and tracks within the study area are rural and remote in character and primarily used for motor vehicles and farm access, they are also well used by dog walkers, horse riders and leisure cyclists, and subsequently the assessment should consider this within the methodology. The presence of several well-tended benches and grass verges with swathes of spring bulb planting reinforce the local value of these networks beyond being road networks, which also provide suitable PROW connections for walkers improving the connectivity of the wider recreational footpath network.

8. While heritage features have been considered within these comments, they do not include full consultation with LCCs heritage officer. These additional comments will be incorporated when available.

The following comments are in regards to visibility of the site from specific receptors and viewpoints, and the marked up plans attached to this memo should be referred to for these target notes. We suggest these detailed comments are initially discussed further at a workshop to refine and subsequently agree:

<u>As shown on mark up Figure 7.11 Cottam 1 Augmented ZTV</u>

A. **Additional viewpoint should be included from along Ingham Road at the eastern settlement edge of Stow looking east.** Cottam 1 is visible to the north and south of the road and photography should provide the most advantageous view of the site and proposed development;

B. **Additional viewpoints should be included from along PROW Stur/72/3 and PROW Stow/72/1 looking east/north east.** These are views from PROW along the eastern settlement edges of Sturton by Stow and Stow across open fields to Cottam 1. Photography should provide the most advantageous view of the site and proposed development;

C. **Additional viewpoint should be included from along PROW Stur/73/1 looking east.** Cottam 1 is visible for users of this PROW travelling east, and a localised high point along this footpath provides a vantage point across Cottam 1. Photography should provide the most advantageous view of the site and proposed development;

D. **Additional viewpoints should be included from along Blackthorn Lane looking west.** These are views from the lane that passes through the site offering clear views to Cottam 1. Photography should provide the most advantageous view of the site and proposed development;

E. **Additional viewpoint should be included from PROW Ingh/27/2 at intersection of Stow Lane looking west.** While in close proximity to VP25, this view is more open and provides clearer views to the site. Photography should provide the most advantageous view of the site and proposed development;

F. **Additional viewpoints should be included from PROW Ingh/24/1 south east of the site boundary looking north west.** This view will represent receptors travelling north west along this PROW. Photography should provide the most advantageous view of the site and proposed development;

G. **Additional viewpoint should be included from PROW Fill/85/2 at intersection with Willingham Road looking south west.** This view provides close range views representing road and PROW users. Photography should provide the most advantageous view of the site and proposed development;

H. **Additional viewpoint should be included from PROW Fill/767/1 intersection with Willingham Road looking south west.** This view provides close range views representing road and PROW users. Photography should provide the most advantageous view of the site and proposed development;

I. **Additional viewpoint should be included from Willingham Road adjacent to Turpin Farm and Turpin Bungalows looking north and south.** This view provides close range views representing road users however being located within the redline, would benefit from views in opposite directions (North and South). Photography should provide the most advantageous view of the site and proposed development;

J. **Additional viewpoint should be included from Fillingham Lane at gap in field boundary east of Ivy Cottage and Moor Bridge looking south.** This view provides close range views representing views from road users. Photography should provide the most advantageous view of the site and proposed development;

K. **Additional viewpoint should be included from Fillingham Lane east of Carisbrooke looking south.** Low hedgerows along this section of road allow for views across open fields to the site. Photography should provide the most advantageous view of the site and proposed development;

L. **Additional viewpoint should be included from the B1398 at Cliff Farm Cottages of looking south west.** Panoramic views to Cottam 1 and potential to include cumulative views to elements within the proposed Gate Burton and West Burton solar sites. Photography should provide the most advantageous view of the site and proposed development;

M. **Additional viewpoint should be included from Kexby Road east of Northlands Road looking south west.** This is a localised high point and low hedgerows along this section of road allow for views across open fields to the site. Photography should provide the most advantageous view of the site and proposed development;

N. **Additional viewpoint should be included from Glentworth Road south of Heatons Wood looking south east.** Low hedgerows along this section of road allow for views across open fields to the site. Photography should provide the most advantageous view of the site and proposed development;

O. Could a statement be provided as to potential views from the eastern settlement edge of Kexby and them being reviewed and subsequently scoped out. The ZTV shows potential views from this location, however from initial visits on site it is unclear at this stage if the proposals would be visible as they may be screened by intermittent vegetation – if there are potential views of the site and/or proposed development, a viewpoint should be obtained from this location;

As shown on mark up Figure 7.12 Cottam 2 Augmented ZTV

P. **Additional viewpoints should be included from along Corringham Beck looking east**. Gaps in the low hedgerow allow clear close range views east to Cottam 2. Photography should provide the most advantageous views of the site and proposed development;

Q. **Additional viewpoint should be included from junction of Templefield road and Yawthorpe Road looking north west.** Relatively open view from receptors on Templefield Road across arable fields to Cottam 2. The bridge over Yawthorpe Beck provides a similar view and may also be included as a viewpoint. Photography should provide the most advantageous views of the site and proposed development;

As shown on mark up Figure 7.13 Cottam 3 Augmented ZTV

R. Could a statement be provided as to potential views from the A159 as it rises up to the railway bridge looking east and north east. The ZTV shows potential views from this location, however from initial visits on site it is unclear at this stage if the proposals would be visible as they may be screened by intermittent vegetation – if there are potential views of the site and/or proposed development, a viewpoint should be obtained from this location;

S. Could a statement be provided as to potential views from PROWs Blyt/24/1, Blyt/24/2 and Blyt/26/1 south of Blyton looking east and north east. The ZTV shows potential views from these locations, however from initial visits on site it is unclear at this stage if the proposals would be visible as they may be screened by intermittent vegetation – if there are potential views of the site and/or proposed development, a viewpoint should be obtained from this location;

T. **VP62:** this view would be clearer if it was located slightly to the east further along Kirton Road in a more elevated position closer to the site boundary of Cottam 3;

U. **Additional viewpoints should be included from along PROW Blyt/32/1 looking east**. While views are likely to be predominantly screened by intermittent vegetation, there is a potential for glimpsed views to the site and proposed development. Photography should provide the most advantageous views of the site and proposed development;

V. Could a statement be provided as to potential views from Dring Lane and publicly accessible areas around the Green Burial Park and the Blyton Park Race Track. The ZTV shows potential views from these locations, however from initial visits on site it is unclear at this stage if the proposals would be visible as they may be screened by intermittent vegetation – if there are potential views of the site and/or proposed development, a viewpoint should be obtained from this location;

W. **Additional viewpoint should be included from along Northorpe Road looking south west**. While a long distance view, this section of Northorpe Road offers views towards Cottam 3 from a localised high point over low hedgerows. Photography should provide the most advantageous views of the site and proposed development; and

X. **VP65:** Not clear as to why this viewpoint has been included as woodland, intermittent vegetation and topography appear to screen views to the site. Is this the best location for a viewpoint?

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

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29 March 2022

Island GREEN POWER

Lanpro

Key

- Site Boundary
- 2 km Landscape Study Area
- Augmented Zone of Theoretical Visibility to 2km
- Views of the Development may be visible
- Proposed Viewpoints

Note: A combination of Terrain data and screening features including buildings, trees and hedgerows, was used to produce this Zone of Theoretical Visibility (ZTV) which demonstrates where the development may be visible from, when considering existing screening elements. This ZTV was produced with an assumption that panels would fill the Site boundary in its entirety at a maximum height of 4.5m.

N

1:40,000 @ A3

AAH Mark up

Target Notes: Refer AAH TM02

March 2022

Drawn by: LH	Ref: 2892-REP-LAN-CO-7.11
Checked by: MT	Date: 23/11/2021

Figure 7.11
Cottam 1
Augmented ZTV

COTTAM SOLAR PROJECT
Landscape and Visual Impact Assessment
Scoping

Island GREEN POWER

Lanpro

Key

- Site Boundary
- 2 km Landscape Study Area
- Augmented Zone of Theoretical Visibility to 2km
- Views of the Development may be visible
- Proposed Viewpoints

Note: A combination of Terrain data and screening features including buildings, trees and hedgerows, was used to produce this Zone of Theoretical Visibility (ZTV) which demonstrates where the development may be visible from, when considering existing screening elements. This ZTV was produced with an assumption that panels would fill the Site boundary in its entirety at a maximum height of 4.5m.

N

1:30,000 @ A3

AAH Mark up

Target Notes: Refer AAH TM02

March 2022

Drawn by: LH	Ref: 2892-REP-LAN-CO-7.12
Checked by: MT	Date: 23/11/2021

Figure 7.12
Cottam 2
Augmented ZTV

COTTAM SOLAR PROJECT
Landscape and Visual Impact Assessment
Scoping

Island GREEN POWER

Lanpro

Key

- Site Boundary
- 2 km Landscape Study Area
- Augmented Zone of Theoretical Visibility to 2km
- Views of the Development may be visible
- Proposed Viewpoints

Note: A combination of Terrain data and screening features including buildings, trees and hedgerows, was used to produce this Zone of Theoretical Visibility (ZTV) which demonstrates where the development may be visible from, when considering existing screening elements. This ZTV was produced with an assumption that panels would fill the Site boundary in its entirety at a maximum height of 4.5m.

N

1:30,000 @ A3

AAH Mark up

Target Notes: Refer AAH TM02

March 2022

Drawn by: LH	Ref: 2892-REP-LAN-CO-7.13
Checked by: MT	Date: 23/11/2021

Figure 7.13
Cottam 3
Augmented ZTV

COTTAM SOLAR PROJECT
Landscape and Visual Impact Assessment
Scoping

Technical Memorandum 3 (AAH TM03)

Lincolnshire County Council, Cottam Solar Project: PEIR Landscape and Visual Comments

Introduction

AAH Consultants have reviewed the Cottam Solar Project: *Preliminary Environmental Information Report* (PEIR), on behalf of Lincolnshire County Council (LCC), in relation to Landscape and Visual matters. Information downloaded from: https://www.cottamsolar.co.uk/, and the documents that have been referenced, is as follows:

- **PEIR Volume 1: Report:**
  - Chapters 3 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 8: Landscape and Visual Impact (main focus of AAH review);
  - Chapter 9: Ecology (not formally reviewed, but to provide ecology context to the layout and landscape and visual matters).

- **PEIR Volume 2: Appendices:**
  - Chapters 3 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 8: Landscape and Visual Impact (main focus of AAH review):
    - LVIA Methodology;
    - Landscape Character Tables;
    - Viewpoint Analysis Tables;
    - Consultation and Responses;
    - Landscape Figures.
  - Chapter 9: Ecology (not formally reviewed, but to provide ecology context to the layout and landscape and visual matters).

- **Site Layouts** (Comments made in regards to landscape and visual matters):
  - Cottam 1 (3 plans);
  - Cottam 2 (1 plan);
  - Cottam 3 (2 plans).

The review takes into account previous AAH comments (Refer to Cottam AAH TM01 and AAH TM02), meetings/workshops held with Lanpro and detailed comments on methodology, study area, and landscape receptors issued to Lanpro 05th May 2022 via email. Subsequently, Lanpro have issued a "way forward" for several key documents via email on 11th July 2022. This includes several attachments which have comments and amendments (to those contained within the PEIR) which have also been considered in this review.

The comments provided are intended to assist in guiding the next (final) stage of the process development, 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: *Cottam Solar Project, Environmental Impact Assessment Scoping Report, Prepared by Lanpro, January 2022,* which contained a section on LVIA. Subsequently, a Scoping Report Review was carried out by AAH on Landscape and Visual matters (February 2022) which was appended to the *Scoping Opinion* issued by PINS dated: 09th March 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 (AAH TM01 and AAH TM02), meetings/workshops held with Lanpro and AAH detailed comments on methodology, study area, and landscape receptors issued to Lanpro 05th May 2022 via email. The information provided to date by Lanpro, including at meetings and workshops, has been thorough and well presented.

2. As outlined within Chapter 4 of the PEIR, the development proposals are still being developed and finalised. This includes the type of panel and location of taller/larger elements such as substations and battery storage. We would expect these elements to be fixed for the final ES and extents/parameters of the development be clearly set out, such as heights and locations that have been used in the assessment, which if there are still some outstanding design and layout elements to be finalised would be based on a "worst case" scenario to ensure any effects are not underplayed.

3. It is requested that further landscape and visual consultation is carried out between AAH and District Authority landscape specialists and the developer team (Lanpro) 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 (particularly river crossing) 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 AVRs.

B. Detailed Comments on PEIR Volume 1: Report:

1. In regards to the landscape and visual matters of the design proposals (**Chapter 4 of the PEIR**):
   - Comments on the ***Maximum Design Scenario*** (Section 4.2) are as follows:
     - As stated in previous correspondence (refer to paras. 2, 3 and 4 of AAH TM02), at this stage, we do not have details on the final location and appearance/extent of taller/larger elements that form part of the development. Table 4.1 within Chapter 4 of the PEIR usefully provides details of the design parameters used for the PEIR, and chapter 4.2.2 of Chapter 4 states: *"The ES will employ a maximum design scenario approach reflecting the principle of the 'Rochdale Envelope'. This approach allows for a project to be assessed on the basis of maximum project design parameters, i.e. the worst-case scenario…"*.
     - While this will likely be a reasonable approach for the solar arrays, we have concerns in regards to the larger and taller elements, such as substations (up to 13m in height), and more conspicuous elements such as energy storage and conversion units/inverters. The final location and layout of these elements will have likely greater visual effects in this flat, rural landscape than PV panels.

  - We would expect the location and 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. It is clearly stated that as part of the cable connection, cables will be underground (paras. 4.3.14 and 4.3.19), however it is not clear if within the site any additional short runs of overhead lines will be installed between components or if these would also be connected by underground cables. Additional lines and poles would likely be visible in this landscape above boundary vegetation.
- Regarding vegetation loss:
  - The extent of any vegetation loss to facilitate construction access or the permanent site access points is not identified. Also, any vegetation loss to facilitate any potential wider highways works is not identified. While it is understood existing agricultural access points are intended to be utilised (para. 4.4.2), it is likely these may need widening or cut back for sight lines. 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 known (to aid assessment) and subsequently is appropriately mitigated against.

2. In regards to the landscape and visual matters of the alternatives and design evolution (**Chapter 5 of the PEIR**):
   - Comments on the ***Alternative Cable Routes*** (Section 5.5) are as follows:
     - A refinement of the cable route corridor has been carried out from the scoping stage, and the PEIR at para. 5.5.2 identifies *"the crossing of the River Trent, with a preferred location chosen to the southwest of Marton",* which seeks to combine this crossing with Gate Burton and West Burton. This crossing is indicative at this stage and subject to micro siting, and due to the context has likely landscape and visual effects, as well as potential ecological effects. It is requested AAH and 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 AVRs of the crossing may need to be included within the LVIA to assess and illustrate any potential visual effects.

3. The PEIR identifies the extent of the Study Area of the Development at paragraph 8.5.5, which defines the spatial scope of the area to be addressed. Comments issued to AAH/LCC by Lanpro on 11th July 2022 confirm that the LVIA Chapter will include a clear statement on the justification for the extent of the Study Areas.

4. While the scoping report in para. 7.5.1 states that visual study beyond 5km has been scoped out, it was observed on site that there are potential long-distance views to Lincoln Cathedral and Lincoln Castle. Comments issued to AAH/LCC by Lanpro on 11th July 2022, confirm that: *"LVIA Chapter (where inter visibility captures listed buildings and monuments), this would be considered as part of the visual baseline where appropriate. Additional views have been*

suggested by LCC and NCC that take account of locations where heritage assets may be affected".

Identification of receptors:

5. The PEIR identifies a range of landscape and visual receptors within the Study Area. The visual receptors and viewpoints were previously discussed and agreed with AAH, as were the locations of Photomontages. However as stated and noted in previous correspondence, at this stage, we do not have details on the location and appearance/extent of taller/larger elements that form part of the development, which would likely have visual impacts that may require additional viewpoints beyond those initially identified.

6. Fourteen potential landscape receptors at varying scales are identified for consideration in the LVIA within section 8.7 (paras. 8.7.90 to 8.7.102). The correct National, Regional and Local 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. Typically National Character Areas, and often LCA at a regional level, are at a large scale, large geographic area of land and typically provide context only, as opposed to being a receptor to be assessed. A finer-grained site-level character assessment and identification of individual elements or features of the landscape have not been identified at this stage, which we would expect to be included within the LVIA. However comments issued to AAH/LCC by Lanpro on 11th July 2022, confirm that the LVIA Chapter will include *"a finer grained assessment that includes the Site and immediate area, including individual landscape elements such as trees hedgerows, woodlands, ponds/water features, or historic landscape features."*

7. As requested by AAH/LCC, comments issued by Lanpro on 11th July 2022, confirm that the LVIA Chapter will include reference to:
   - The Historic landscape characterisation project: *The Historic Character of The County of Lincolnshire (September 2011)*; and
   - HLF funded Landscape Partnership:
     - *Trent Vale Landscape Conservation Management Plan (June 2013).*
     - *Trent Vales Landscape Character Assessment:*

C. Detailed Comments on PEIR Volume 2: Appendices: Chapter 8 Landscape and Visual Impact:

Appendix 8.1: LVIA Methodology:

Review of the LVIA Methodology (Appendix 8.1.1)

Note: comments are made on tracked change PDF issued to AAH/LCC by Lanpro on 11th July 2022, which is different to the PEIR version issued online:

1. The methodology notes in para 1.1.1 that the assessment methodology follows GLVIA3 and also follows guidance from:
   - *An Approach to Landscape Character Assessment (October 2014);*
   - *Landscape Institute (17th September 2019) Technical Guidance Note 06/19 Visual Representation of Development Proposals.*

   The Landscape Institute guidance: *'Technical Guidance Note (TGN) 2/21 Assessing landscape value outside national designations', May 2021* is also of relevance and Technical Information Note *01/21 'GLVIA Webinar Q&As'* also provides relevant information and should be referred to.

2. To aid clarity, para. 1.2.1 may benefit from some minor restructuring – effects are determined through consideration of the *sensitivity of the receptor* and the *magnitude of change*. Sensitivity is judged through consideration of the *value* of the landscape or view, and the *susceptibility* of the receptor to change.

3. Para. 1.3.8 now contains additional potential receptors as requested. Users of roads are listed to include walkers and horse riders, and we would expect country lanes to include these as receptors, as well as cyclists (leisure and commuting).

4. Should the title *"Evaluating Visual Susceptibility to Change"* added after para. 1.5.3 be *"Evaluating Landscape Sensitivity"*?

5. "Under Landscape Value (paras. 1.5.6 to 1.5.8), it is potentially implied that only designated landscapes may have a medium or high value. This is not the case, and GLVIA 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.".*

   Para. 1.5.8 and Table 8.1.2 also need updating to consider new guidance and suggested factors used within: *'Technical Guidance Note (TGN) 2/21 Assessing landscape value outside national designations'*, *May 2021.* Table 8.1.1: Landscape Receptor Value should be updated as required following incorporating this more recent guidance.

6. In regards to Landscape Sensitivity, criteria are provided in Table 8.1.4, however how value and susceptibility are combined (which would have already been defined within Tables 8.1.1 and 8.1.3), potentially as a matrix, to assess Sensitivity may be more useful and would remove reference to Landscape Capacity, which is likely not relevant in this context. While not a requirement, including a matrix, which would guide professional judgement, would assist in transparency and provide a consistent approach as to how the Sensitivity of a receptor has been arrived at rather than relying on the pre-determined criteria within Table 8.1.4.

7. For consistency, we would query why Table *8.1.6 Magnitude of Landscape Change* does not have separate description columns for Size, Scale and Nature; Geographical Extent; and Duration and Reversibility as Table 8.1.10 does.

8. In regards to Visual Effects, paragraph 1.6.11 is titled: "*Evaluating Visual Susceptibility to Change",* however goes on to explain/introduce the general process of developing the visual baseline: it appears the title should be more aligned with an overview of assessing sensitivity, as para.1.6.14 is more focussed on susceptibility.

9. In regards to Visual Sensitivity, criteria are provided in Table 8.1.9, however how value and susceptibility are combined (which have already been defined within Tables 8.1.7 and 8.1.8), potentially as a matrix, to assess Sensitivity would be more useful. The characteristics shown mix the value of the view, and the susceptibility of the receptor: Table 8.1.9 attributes value to the receptor and susceptibility to the view, so removing this would aid in clarity. While not a requirement, including a matrix, which would guide professional judgement, would

assist in transparency and provide a consistent approach as to how the Sensitivity of a receptor has been arrived at rather than relying on the pre-determined characteristics within Table 8.1.9.

10. Section 1.9 covers Cumulative Effects. However, Appendix 8.1.3 also provides a Cumulative Effects methodology which is different to that included within section 1.9. Suggest just one Cumulative Effects methodology is included.

Review of Visual Assessment of Residential Properties Methodology (Appendix 8.1.2):
Note: comments are made on tracked change PDF issued to AAH/LCC by Lanpro on 11th July 2022, which is different to the PEIR version issued online:

1. The methodology references that it has been prepared in accordance with Landscape Institute Technical Guidance Note *TGN 2/19: Residential Visual Amenity Assessment.*

2. Para. 1.1.9 references a RVAA study area as being "*limited to those properties within 1 km of the proposed convertor station, which appear on the Ordnance Survey 1:25,000 scale map".* We have assumed this is a typo, and the study area should be clarified in the ES. Any properties outside the 1km study area also identified with direct, extensive and/or open views towards the development, particularly larger and taller elements or large open expanses of PV arrays, should also be identified and included if appropriate.

Review of Cumulative Methodology (Appendix 8.1.3):

1. Para. 1.1.6, 1.1.7 and 1.1.9 reference consultation with SDC – should this be West Lindsey, Bassetlaw, Nottinghamshire County and Lincolnshire County?

2. Para. 1.1.7 suggests a study area has been agreed. It is assumed this is a typo, and would subsequently be agreed with relevant stakeholders.

3. Para 1.2.10 references pg. 132 of GLVIA3, the quoted text is on page 131 of GLVIA3.

Review of Zone of Theoretical Visibility Methodology (Appendix 8.1.4):

1. The methodology describes the ZTV has been prepared to inform the visual assessment. The parameters any ZTV are generated upon are needed to be clearly stated within the LVIA, and whether taller elements have, or have not been included, as the omission of these elements will likely underplay the extent of visibility of the development. Comments issued to AAH/LCC by Lanpro on 11th July 2022, confirm that the LVIA Chapter will include *"Additional ZTVs will be run to take account of all works elements including battery storage and/or substations.".*

Review of Zone of Appendix 8.2: Landscape Character Tables;

1. Tables of the identified published Landscape Character Areas have been included, which break down each landscape character area's key characteristics. However at this point, it is unclear as to what the full aim of the tables is, and some clear introductory narrative and more detail on column/row labelling would assist in clarity. It is assumed that this is to illustrate what the key characteristics are, which plot contains the key characteristics and the identification of likely significant effects.
2. It is unclear what "SAO" within the tables indicates.

Review of Zone of Appendix 8.3: Viewpoint Analysis Tables;

1. Tables of the identified key viewpoints have been included, which break down each viewpoint and provide more detailed information and usefully provide an indication of which plot or plots are potentially visible and a brief narrative. The viewpoints listed now include those identified at earlier consultation stages. These have been indicated with an "LCC" prefix.
2. Comments on Viewpoint photography/images are made below under: **Appendix 8.5: Landscape Figures**.

Review of Zone of Appendix 8.4: Consultation and Responses:

1. The PEIR identifies those consultations that have been carried out, and AAH have held meetings and workshops with Lanpro and other relevant stakeholders. Appendix 8.4 of the PEIR includes copies of email correspondence and submitted information on the methodology, study area and viewpoints.
2. It is requested that further landscape and visual consultation is carried out between AAH and District Authority landscape specialists and the developer team (Lanpro) 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 (particularly river crossing) and location of any larger structures or buildings such as the substations. Comments issued to AAH/LCC by Lanpro on 11th July 2022, confirm that: *"Mitigation will be covered during further consultation with LCC and NCC. The PEIR provides a section on Policy Compliance to understand where the proposed mitigation meets with policy expectations and other guidance within landscape character assessments and published best practice data."*

Review of Zone of Appendix 8.5: Landscape Figures:

1. Generally: Figures are well presented and read well.

2. Figure 8.6: Cottam 1, 2 and 3: Landscape Receptor and Figure 8.7: Cottam 1, 2 and 3: Visual Receptor: These figures present a lot of useful, pertinent information and as such, providing additional plans at a scale closer to 1:40,000, split over 2 sheets, would be useful to see the detail at a site scale.

3. Figure 8.14: Technical Photography Methodology and Viewpoint Photography: A full methodology of photography has been provided. Comments issued to AAH/LCC by Lanpro on 11th July 2022, confirm that the LVIA Chapter will ensure that *"visualisations are supported by a full technical methodology, which aligns with LI TGN 06/19."*. This should include full details/parameters of the elements that have been modelled (Solar Arrays, substation etc.).

4. Comments in regards to the viewpoint photography:
    - Overall, the images presented for the viewpoints are of a resolution that does not allow for clarity of medium or long-distance views, with elements in the mid-distance appearing hazy and elements in the long distance often not being distinguishable, so as to not appear in the view at all. We have assumed these are interim low resolution images for the PEIR and would expect full resolution images for the final LVIA to allow.
    - VP01: While a long-distance view, this viewpoint provides a panoramic view of Cottam 1 from a recognised viewing area (Tillbridge Lane Viewpoint) and the view likely includes

West Burton and Gate Burton, so important for cumulative effects. The image included within the PEIR does not provide clarity of this long-distance view and beyond approximately 1 to 2km appears very hazy and pixelated. This is likely due to the resolution; however we would expect this viewpoint image to pick up views of these sites, and Cottam Power Station beyond, which on the current image would likely be indistinguishable;

- VP04: Please check correct image used – could not replicate the view on site;
- VP09: View may provide more context if rotated to the right (looking more to the north-east/east) to include the edge of the tree belt and some of the hedgerow so the view is not dominated by foreground trees.
- VP10: Image used looking looking southwest, should be Northeast.
- VP16: Would this view be more illustrative if orientated west/southwest to pick up views of closer parcels? If it is anticipated that views would be possible of the parcels to the north, VP16 should cover a wider view (split over several sheets) to illustrate this.
- VP23: Would this viewpoint also benefit from a view north west to capture the southern tip of the northern parcel.
- VP27: This view should be rotated slightly to the left to capture long-distance views of the southern areas of Cottam 1, and potentially cumulative views of West Burton and Gate Burton.
- VP31: Image of view is looking north and should be rotated to the left to capture views west/southwest.
- VP33: Check orientation of image – appears to be looking south east.
- VP37: Image looking south – needs reorientating to cover views northeast.
- VP46: View should be rotated to the right (east) to fully capture Cottam 2 and extents of development amended as appears to show Cottam 3 rather than Cottam 2;
- VP47: View would benefit from being rotated to the left (north) to have Cottam 2 more central to the view.
- VP48: Incorrect image – repeat of VP47.
- VP49: Extent of Development in this view would likely extend across the Corringham Grange Farm driveway to the left of the view (to the east).
- VP50: View should be rotated to the right (north) to capture more of Cottam 2; and
- Additional LCC viewpoints have been located on Figure 8.13 as agreed, however these photographs have not been included within the PEIR, but are available online as 360 degree panoramas and AAH will review providing comments directly to Lanpro.

5. Figure 8.15: Cumulative Sites: The plan identifies the main NSIP developments in the local area. A list of potential sites to be considered as part of the cumulative assessment has been forwarded to West Lindsey District Council, who are better placed to provide more detailed information.

6. Figure 8.16: Strategic Landscape Mitigation Measures: This plan illustrates the site proposals and mitigation areas in the context of existing landscape character and ecological objectives for the Study Area. Indicative cross sections of boundary treatments and offsets/buffers from residential properties, PROW and ecological features are provided. The mitigation buffer zones illustrated on Figure 8.16 are set out in Paragraph 8.8.24 of chapter 8 of the PEIR.

   The final submission should clearly state if the final Strategic Mitigation plan and mitigation buffer zones illustrated on the sections and identified within chapter 8.8.24 of the PEIR are

indicative to allow for flexibility, or if fixed. If indicative, the LVIA needs to clearly state what layout and mitigation it has been based upon, as different mitigation strategies will likely alter potential effects, and also a strategy to secure the mitigation should be provided. Comments issued to AAH/LCC by Lanpro on 11th July 2022, confirm that: *"The LVIA Chapter will also include a dedicated section with supporting detailed plans to reflect appropriate local and regional aims where applicable. These mitigation measures will aim to deliver design that accords with green infrastructure objectives at the regional and local level "* and goes on to state: *"The mitigation measures within the LVIA will be supported by a LEMP.".*

D. <u>Detailed Comments on Site Layouts (Comments made in regards to landscape and visual matters):</u>

1. Due to the evolving nature of the layouts, there are currently no Landscape and Visual Comments. However, it is requested that additional meetings and workshops be held with AAH/LCC to discuss these landscape and visual comments prior to the final ES and scheme submission, and also that a continued dialogue is maintained in regards to the development proposals, including the cable route corridor and location of any larger structures or buildings such as the substations. The Sub Station and Battery Storage is currently illustrated on drawings *Cottam 1 West A Solar Project Preliminary Layout v3* and *Cottam 1 West B Solar Project Preliminary Layout v3.* This location is near several sensitive receptors, including residents of Willingham by Stow. If this location is likely to be taken forward for these elements, it would be advisable to run an updated ZTV and re-assess potential views of the taller more conspicuous elements.

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25th July 2022

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).

Landscape Institute Technical Guidance Note

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 criterial for reviewing Environmental Statements and registrants for the EIA Quality Mark*[1] *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 EIA* [2]*contains useful tests to help judge the landscape and visual effects content of Environmental Statements…"*

In addition, European Commission guidance on ES review[3], 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: https://www.iema.net/eia-quality-mark [accessed 200110]

[2] Scottish Natural Heritage, A handbook on environmental impact assessment v5, 2018, SNH website: https://www.nature.scot/sites/default/files/2018-05/Publication%202018%20-%20Environmental%20Impact%20Assessment%20Handbook%20V5.pdf [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: http://ec.europa.eu/environment/archives/eia/eia-guidelines/g-review-full-text.pdf [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 LVIAs 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: https://www.landscapeinstitute.org/technical/glvia3-panel/

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

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Lincolnshire COUNTY COUNCIL Working for a better future

Open Report on behalf of Andy Gutherson - Executive Director for Place

Report to:	**Planning and Regulation Committee**
Date:	**2 October 2023**
Subject:	**Application by Ecotricity (Heck Fen Solar) Limited for a Development Consent Order for Ground Mounted Solar Panels, Energy Storage Facility, Below Ground Grid Connection to, and extension at, Bicker Fen Substation and all associated infrastructure works at Heckington Fen**

Summary:

The Heckington Fen Solar Park (HFSP) is a ground mounted solar photovoltaic (PV) electricity generating and energy storage facility covering approximately 644.5 hectares of land within the administrative areas of Lincolnshire County Council (LCC), North Kesteven District Council (NKDC), and Boston Borough Council (BBC). The proposal includes the main Energy Park (approx. 524ha) which would house the solar PV, energy storage system and associated infrastructure and the Cable Route Corridor which covers a further area of around 120ha which would provide the underground cable connection to the Bicker Fen substation.

A 40 year Development Consent Order for the construction, operation and maintenance of the development is being sought. Lincolnshire County Council as a 'host authority' has been invited to provide its comments on this application to the Examining Authority who will, following a six month examination, make a recommendation to the Secretary of State for Energy Security and Net Zero as to whether the Development Consent Order should be granted or not.

As a host authority, the Council has been invited to submit a Local Impact Report to the Examining Authority setting out its views on the likely impact of the development and whether the Council considers those impacts to be positive, negative or neutral. The Council has also been asked to provide confirmation of its view on whether it supports or objects to the development and to submit a formal Written Representation at this stage.

Recommendation:

That the Committee resolves to:-

(A) Approve the Local Impact Report at Appendix A to be submitted to the Examining Authority.

(B) That a formal Written Representation be submitted to the Examining Authority which confirms the Council's overall view/position on the project at this stage. This statement being as follows:

Although the Heckington Fen Solar Park offers benefits in terms of producing clean renewable energy that would help support the UK's transition towards Net Zero; deliver significant biodiversity net gains and offer community benefits through the provision of a new permissive recreational route and a community orchard, these positives and benefits are not outweighed by the significant and negative impacts the development would have in particular on the landscape character and appearance of the area and on best and most versatile agricultural land. Nearly 50% of the total area of the main Energy Park comprises of best and most versatile agricultural land and the development would take this land out of productive arable use for the life of the development (i.e. 40 years). The loss of this high-grade land is not only of significant concern to the Council in respect of this specific project and location but is also of significant concern given the cumulative and in-combination effects of such loss when taking into account other NSIP scale solar developments that are also currently being promoted across Lincolnshire that are similarly seeking to use high-grade agricultural land. Given the strategic importance of the County as a food producer for the nation, any development on BMV land should start from a position of refusal with the emphasis for Applicants to prove otherwise. The Council's view is that the impacts of this proposal are of such significance that the Development Consent Order should be refused.

The Application

1. The Heckington Fen Solar Park (HFSP) is proposed by Ecotricity (Heck Fen Solar) Limited (the Applicant). The HFSP is a ground mounted solar photovoltaic (PV) electricity generating and energy storage facility covering approximately 644.5 hectares (ha) of land (the Order limits) within the administrative areas of Lincolnshire County Council (LCC), North Kesteven District Council (NKDC), and Boston Borough Council (BBC). The Order Limits include the main Energy Park (approx. 524ha) which would house the solar PV, energy storage system and associated infrastructure and the Cable Route Corridor which covers a further area of around 120ha which would provide the underground cable connection to the Bicker Fen substation.

2. The Council is not the determining Authority for the proposal; this is because HFSP is proposed to have a generating capacity exceeding 50 MW and, as such, is classified as a Nationally Significant Infrastructure Project (NSIP). This means that to gain permission to build the project, the developer is required to submit a Development Consent Order (DCO) application to the Planning Inspectorate (PINS)

which will be considered by independent Inspector(s) - known as the Examining Authority – ExA. The ExA will have six months to carry out an Examination of the application and during this stage Interested Parties are invited to submit their comments, views and representations to the ExA so that these can be taken into account.

3. A DCO application for the HFSP was made on 15 February 2023 and PINS confirmed that the application had been accepted for Examination on 13 March 2023. On 13 June 2023 the Applicant notified the ExA of its intention to carry out targeted consultation upon proposed changes to the Order Limits so as to include an additional 0.9ha of land at the Bicker Fen Substation. This additional land is required to accommodate works needed to facilitate the Grid connection. Consultation on this change was carried out in July/August 2023 and on 21 July 2023 the ExA issued its 'Rule 6' letter setting out the draft timetable for the Examination. The 'Rule 6' letter includes various deadlines for the submission of information and the dates of planned Hearings that are to be held during the Examination period where specific issues and matters will be discussed. The first of these sessions took place on the 19 and 20 September which comprised of the Preliminary Meeting and first Issue Specific Hearings on the content of the draft DCO and a high-level discussion regarding the wider Environmental Matters associated with this development. Of particular note and importance is also Deadline 1 which is the deadline for when the ExA requires Local Impact Reports (LIR) from any Local Authority to be made.

4. A LIR is a report giving details of the likely impact of the proposed development on the authority's area and should centre on whether the local authority considers the development would have a positive, negative or neutral effect on the area. The LIR does not need to contain a balancing exercise between positives and negatives as this will be for the ExA to carry out when making its decision. As a host authority, the Council has been invited to submit a LIR by Deadline 1 (i.e. 3 October 2023) and proposes to also submit a formal Written Representation which will form the basis of the Council's formal response to the DCO application.

5. The attached LIR sets out the likely issues and impacts that LCC considers will arise from the construction and operation of the MPSF in so far as it affects Lincolnshire. The LIR has identified positive, neutral and negative effects at this stage and has primarily focused on the Council's statutory areas of responsibility or on areas where we hold a particular interest or expertise. North Kesteven District Council and Boston Borough Council, who are also 'host authorities', will be submitting their own LIRs setting out their authorities views on the project. These other LIRs may cover some of the same themes/topics as well as a broader range of topics/issues where the County does not have a remit (e.g. noise, air quality, etc). Officers therefore propose to work with the other host authorities throughout the Examination process and make submissions on these topics where relevant and/or advise the ExA that its views and comments on these matters are deferred to those authorities and/or other statutory bodies such as the Environment Agency,

Lincolnshire Wildlife Trust and Natural England who have expertise in certain matters/area.

Recommendation

6. The report before the Committee today is different to that which deals with planning applications that the Committee normally determines as the decision maker acting it is role as County and Minerals and Waste Planning Authority. In this case the development subject of this report and the LIR is made under the procedures of the Planning Act 2008 and therefore the Council's comments on the application are required to be reported to the Planning Inspectorate for consideration during the Examination stage of the application. Whilst the Council can make observations on any element of the proposal the attached LIR has primarily focused on the Council's statutory areas of responsibility or on areas where we hold a particular interest or expertise.

7. The attached LIR sets out the likely issues and impacts that LCC considers will arise from the construction and operation of the HFPS. The LIR has identified positive, neutral and negative effects at this stage. Officers recommend that the Planning and Regulation Committee review and endorse the attached LIR for submission to the ExA and in doing so request that the ExA and SoS have regard to LIR when making its decision. It is also recommended that a formal Written Representation be submitted at Deadline 1 (as set out below) which confirms the Council's overall view/position on the project at this stage.

8. Although the Council accepts the project offers benefit would secure significant biodiversity net gains including a new community orchard and offers an opportunity to extend recreational routes in the local area as an extension to the current PROW network, these positives are not outweighed by the significant and negative impacts this proposal would have on the landscape character and appearance of the area and loss of productive arable agricultural land, the vast majority of which is classed best and most versatile. Thes impacts not only arise from the scheme itself but also when considered cumulatively and in-combination with the loss of land from other NSIP scale solar developments that are also being promoted both within the District but also across Lincolnshire. incolnshire County Council objects to the Heckington Fen Solar Park proposal.

RECOMMENDATIONS

That the Committee resolves to:-

(A) Approve the Local Impact Report at Appendix A to be submitted to the Examining Authority.

(B) That a formal Written Representation be submitted to the Examining Authority which confirms the Council's overall view/position on the project at this stage. This statement being as follows:

Although the Heckington Fen Solar Park offers benefits in terms of producing clean renewable energy that would help support the UK's transition towards Net Zero; deliver significant biodiversity net gains and offer community benefits through the provision of a new permissive recreational route and a community orchard, these positives and benefits are not outweighed by the significant and negative impacts the development would have in particular on the landscape character and appearance of the area and on best and most versatile agricultural land. Nearly 50% of the total area of the main Energy Park comprises of best and most versatile agricultural land and the development would take this land out of productive arable use for the life of the development (i.e. 40 years). The loss of this high-grade land is not only of significant concern to the Council in respect of this specific project and location but is also of significant concern given the cumulative and in-combination effects of such loss when taking into account other NSIP scale solar developments that are also currently being promoted across Lincolnshire that are similarly seeking to use high-grade agricultural land. Given the strategic importance of the County as a food producer for the nation, any development on BMV land should start from a position of refusal with the emphasis for Applicants to prove otherwise. The Council's view is that the impacts of this proposal are of such significance that the Development Consent Order should be refused.

Appendix

These are listed below and attached at the back of the report	
Appendix A	Local Impact Report - Heckington Fen Solar Park
Appendix B	Comments from LCC appointed landscape consultants (AAH)

Background Papers

The following background papers as defined in the Local Government Act 1972 were relied upon in the writing of this report.

Document title	Where the document can be viewed
National Planning Policy Framework (2023)	The Government's website www.gov.uk
Central Lincolnshire Local Plan (2023)	City of Lincoln Council's website www.lincoln.gov.uk North Kesteven District Council's website www.n-kesteven.gov.uk West Lindsey District Council's website www.west-lindsey.gov.uk
South East Lincolnshire Local Plan (2019)	Boston Borough Council's website www.mybostonuk.com South Holland District Council's website www.sholland.gov.uk

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Nationally Significant Infrastructure Project EN010123: Heckington Fen Solar Park

Local Impact Report - October 2023

Contents

1. Introduction

1.1 The Heckington Fen Solar Park (HFSP) is proposed by Ecotricity (Heck Fen Solar) Limited (the Applicant). The HFSP is a ground mounted solar photovoltaic (PV) electricity generating and energy storage facility covering approximately 644.5 hectares (ha) of land (the Order limits) within the administrative areas of Lincolnshire County Council (LCC), North Kesteven District Council (NKDC), and Boston Borough Council (BBC).

1.2 Also referred to as the Heckington Fen Energy Park, the HFSP would be capable of exporting 400 megawatts (MW) Alternating Current (AC) of electricity, connecting to the National Grid at the Bicker Fen 400kV Substation. As the total capacity of the facility exceeds 50MW, the Applicant has made an application to the Secretary of State for Energy Security and Net Zero (SoS) for a Development Consent Order (DCO), pursuant to Section 37 of the Planning Act 2008 (PA2008). A panel of independent examining inspectors (referred to as the Examining Authority (ExA)) are examining the application before making a recommendation to the Secretary of State for the Department of Energy Security and Net Zero (the SoS) who will then decide whether a DCO for the project should be granted.

2. Purpose and Structure of the Report

2.1 LCC is classed as a 'host authority' as all of the HFSP falls within its administrative area. LCC have therefore been invited by the ExA to submit a Local Impact Report (LIR). A LIR is defined under Section 60(3) of the PA2008 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).'* Upon the conclusion of the examination, the SoS must have regard to any LIRs produced.

2.2 The purpose of this LIR is to give an overview of the likely issues and impacts that LCC considers will arise from the construction and operation of the HFSP in so far as it affects Lincolnshire. As host authorities, NKDC and BBC will also look to submit their own LIRs setting out the impacts of the development in their respective areas.

2.3 This LIR contains a brief overview of the Proposed Development and description of the site and surroundings associated with the HFSP. The LIR also identifies relevant national and local development plan policies and principally covers topics/areas where LCC has a statutory function or holds a particular expertise or interest due to the potential impacts/implications of the development on Lincolnshire. It should however be noted that the absence of reference to a specific topic/matter within this LIR should not be read as LCC having no interest in that topic/matter but rather we have no specific technical comments and in such instances the ExA are advised to refer to the comments and/or advice from other bodies, authorities or interested parties. However, LCC may wish to, and reserve the right, make formal written representations and submissions on other topics/matters during the Examination process should we feel this necessary.

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

3. Overview of the Proposed Development

3.1 The Applicant is seeking a DCO to construct, operate, maintain, and decommission a ground mounted solar PV electricity generating facility, an energy storage system (ESS) facility, and an underground cable connection to the National Grid. The HFSP and associated infrastructure would be capable of exporting 400MW AC (or approximately 500MW Direct Current (DC)) of electricity, connecting to the National Grid at the Bicker Fen 400kV Substation. The ESS facility would provide import/export storage capacity of approximately 200 - 400MW (depending on the technology) for use during periods of peak energy production.

3.2 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. However, the land required temporarily and/or permanently for the construction, operation, and maintenance of the HFSP (the Order limits) comprises of three key areas, which are:

- Energy Park – an area of approximately 524ha proposed for solar development (comprising of PV modules, mounting racks, inverters, transformers, and switchgears) and an ESS facility, as well as the onsite substation and other associated ancillary infrastructure (e.g. construction compounds, security fencing, and fire safety infrastructure);
- Cable Route Corridor – a 25m wide corridor required to lay below ground cables from the Energy Park's onsite substation to the National Grid connection point. This corridor extends approximately 8.5km south from the Energy Park and crosses arable land, the A17, drainage ditches, a high-pressure gas pipe, a railway line, and the South Forty Foot Drain Local Wildlife Site;
- Existing National Grid Substation – located south of the Energy Park, an extension is required to the existing National Grid Bicker Fen Substation in order to facilitate connection to the Proposed Development. The extension will include a new generation bay and control room on a 145m x 45m area of land.

3.3 Subject to the necessary consents being granted, construction work is anticipated to commence in Spring 2025 (at the earliest) and is expected to be completed in a single continuous build lasting 30 months. The earliest the Proposed Development will commence commercial operation is Autumn 2027. The operational life of the Proposed Development is to be 40 years and therefore decommissioning is estimated to take place no earlier than 2067 (taking 6 - 18 months to complete).

4. Description of the Site and Surroundings

4.1 The Energy Park site is located on an area of greenfield agricultural land within East Heckington, approximately 3.7km east of the village of Heckington and 8.9km west

of the town of Boston. The village of Heckington is separated from the main Energy Park site by agricultural land within the surrounding fenland landscape.

4.2 The Energy Park itself lies wholly within the administrative area of NKDC, abutting BBC's administrative boundary along the eastern edge of the site. The Cable Route Corridor straddles the two administrative areas, with the section within the Energy Park running southwards from the proposed onsite substation to the edge of the site. The majority of the Offsite Cable Route Corridor lies within BBC's administrative area. The existing National Grid Bicker Fen Substation also lies wholly within BBC's administrative area.

4.3 The site is bounded by Head Dike to the north, a smaller watercourse to the east, agricultural land to the south, and the B1395 Sidebar Lane and further agricultural land to the west. To the south of the Energy Park site are three existing access points which connect to the A17.

4.4 The nearest residential and commercial properties are along the A17 and the B1395 Sidebar Lane to the south and west of the Energy Park site (the majority of which are over 150m from the development). A facility called 'Build-A-Future East Heckington', which offers educational and vocational courses to children with learning difficulties, lies on the southwestern boundary of the site.

4.5 The Energy Park will utilise an area of approximately 524ha of agricultural land for the solar panel arrays and associated infrastructure. Just over half of this land (50.6%) is Grade 3b agricultural land (considered to be poorer quality land). The remaining 49.4% of the area is a combination of Grade 1 (11.1%), Grade 2 (7.4%) and Grade 3a (30.5%) agricultural land (classed as 'best and most versatile' (BMV) land) and 0.4% of the site area is non-agricultural land.

4.6 The site is situated on the Lincolnshire Fens (National Character Area 46), a coastal plain in the East of England which comprises a large area of broad marshland. As such, the site is very flat and low-lying (at between 2 - 3m Above Ordnance Datum (AOD) across the entire site). The Energy Park site is predominantly located in Flood Zone 3, which is an area classed as having a high risk from fluvial or tidal flooding (1%≤ probability of flooding from rivers or 0.5%≤ probability of flooding from the sea, as indicated by the Environment Agency Flood Map for Planning).

4.7 There are no designated archaeological remains located within the Energy Park however, there are a number of known and potential non-designated built and archaeological remains located within the site's boundary. In addition, there is one Scheduled Monument and four Grade II Listed Buildings which lie within a 2km radius of the Energy Park site.

4.8 There are a number of environmental constraints and designations that lie within (or within proximity to) the Order limits, including:

- The Wash - situated approximately 4.9km from the Offsite Cable Route Corridor at its nearest point. This is a European and national designated site (Special Protection Area, Special Area of Conservation, Site of Specific Scientific Interest, and National Nature Reserve);
- Local Wildlife Sites - South Forty Foot Drain, and Cole's Lane Ponds;
- Sites of Nature Conservation Interest - Old Wood South Kyme, and Heckington Grassland;
- Public Rights of Ways (PRoWs) - which include:
    - Footpath HECK/15/1 - this footpath routes along the northern boundary of the Energy Park, crossing only a small part (c.280m) of the site;
    - Footpaths SWHD/14/1 and SWHD/15/2 - these footpaths route along the north and south embankments of the South Forty Foot Drain respectively;
    - Bridleway SWHD/13/1 – this bridleway runs along the southern embankment of the South Forty Foot Drain, west of the A17.

5. Planning History

5.1 Consent was granted by the Secretary of State on 8 February 2013 to construct and operate a 22 turbine onshore windfarm of up to 66MW capacity on part of the proposed solar farm site subject to a number of conditions including that it must commence within 5 years of the date of the decision and that a Radar Mitigation Scheme (RMS) must be prepared, submitted and approved prior to the commencement of development (reference: 09/1067/S36).

5.2 The Applicant subsequently applied to the Department of Energy and Climate Change (DECC) on 6 February 2015 to vary the original consent, through proposing alterations to some sections of the onsite access track, relocation of the onsite substation and an increase in the rotor diameter of the turbines to maximise the renewable energy generation of the site. No changes were proposed to the overall tip height of the turbines (125m), the maximum number of turbines (22) or the locations of the turbines (reference: 15/0416/S36).

5.3 The 2015 variation application also sought to vary condition 5 of the original consent to allow the discharge of the RMS condition prior to installation of the turbines rather than prior to the commencement of the development. The Applicant considered that this variation still provided the necessary protection for military and civilian radar whilst allowing the development to be commenced whilst studies continued in parallel to identify, test and agree (in consultation with the relevant aviation and military bodies) an appropriate mitigation scheme. No decision was made on the 2015 variation.

5.4 In 2018 a further variation application(reference: 18/1384/S36) was made and sought to extend the date by which the development must be commenced from 5 years to 10 years from the date on which consent was granted (i.e. that development must commence by 8 February 2023). The 2018 application was received by the Secretary of State on 2 February 2018, shortly before the original consent was due to expire.

5.5 The Secretary of State refused the 2018 variation application by notice dated 28 July 2022, noting that there was no valid RMS, nor had the Secretary of State seen any credible prospect of one being secured within the extended timeframe sought by the Applicant. The decision letter noted this to be a factor which '*weighed significantly against the granting of the variation'* and having considered all matters raised concluded that it was of sufficient weight to mean that the planning balance overall weighed against consent being granted for the 2018 variation application. The 2018 decision letter also noted that given that the original consent could no longer be implemented (unless the 2018 variation application had been granted) the Secretary of State considered that the 2018 variation application was, in effect, an application for a new consent and was therefore subject to the revised local and national policy provisions (of general prohibition) relating to onshore wind issued through Written Ministerial Statement HCWS42 dated Thursday 18 June 2015.

5.6 The Applicant accepts that the windfarm has not been constructed and become operational due to difficulty in satisfying the Grampian RMS condition, and that whilst the development process for a technical solution is still progressing, to date a suitable solution for the MoD has not been found. The Applicant's view is that the wind farm consent remains extant however that if the proposed solar scheme was to gain consent and become operational the wind turbines would not be progressed further and the wind farm consent would be allowed to lapse.

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suitable solution for the MoD has not been found. The Applicant's view is that the wind farm consent remains extant however that if the proposed solar scheme was to gain consent and become operational the wind turbines would not be progressed further and the wind farm consent would be allowed to lapse.

5.10 Whilst the Applicant's view is noted both LCC and NKDC's view (which would appear to be supported by the 2018 variation application decision letter) is that the original consent has now lapsed and therefore the wind farm is not capable of being implemented. Therefore there is no realistic prospect of the previous wind farm development being implemented and so does not represent a 'fall-back' position.

6. Policy Context

6.1 National Planning Policy Statements

6.1.1 The SoS is required to have regard to any relevant national policy statements (NPSs), amongst other matters, when deciding whether or not to grant a DCO. Where there is a relevant NPS in place, the 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 take into account 'important and relevant' matters, which includes this LIR and any matters which the SoS thinks are both important and relevant to its decision.

6.1.2 The following NPSs are considered relevant to the determination of this DCO application however, none 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 take into account. The NPSs are as follows:

- EN-1: Overarching National Policy Statement for Energy
- EN-3: National Policy Statement for Renewable Energy Infrastructure
- EN-5: National Policy Statement for Electricity Networks Infrastructure

6.1.3 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 dramatically increase 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, decreasing greenhouse gas emissions, and providing economic opportunities. Solar is noted within the document as being an intermittent renewable technology.

6.1.4 EN-3 (National Policy Statement for Renewable Energy Infrastructure) was published in 2011 and covers those technologies which were technically viable at generation capacities of over 50MW onshore and 100MW offshore. Solar PV is not included in the EN-3 because at the time it was published, utility scale solar development was

not considered to be commercially or technically viable. Nonetheless, it is a material planning consideration in the determination of the DCO application which the SoS will no doubt take into account.

6.1.5 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 and 230kV from transmission substations to the end-user) which can either be carried on towers/poles or underground"* and *"associated infrastructure, e.g. substations (the essential link between generation, transmission, and the distribution systems that also allow 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.

6.2 Draft Revised National Planning Policy Statements

6.2.1 The Government is reviewing and updating the NPSs in order to ensure that the policy framework enables the delivery of infrastructure required to support the transition to Net Zero. Revised draft versions of EN-1 and EN-3 were first published and consulted upon in 2021. The revised drafts recognised and included reference to Nationally Significant Infrastructure Project (NSIP) scale solar projects and contained specific policies and factors that should be taken into consideration when assessing such proposals. The draft NPSs have been updated and revised since 2021, with the latest changes being focused principally on seeking views on the importance of both onshore and offshore wind and cutting down the time to process applications relating to such projects. These changes have also included proposals to update the civil and military aviation and defence interests to reflect the status of energy developments and how impacts to civil and military aviation, meteorological radars and other types of defence interests should be managed. Much of the content relating to solar development as proposed within the first revised draft versions of EN-1 and EN-3 remains unchanged.

6.2.2 The revised draft EN-3 states that solar is a key part of the government's strategy for low-cost decarbonisation of the energy sector and the government expects a five-fold increase in solar development 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.

6.2.3 Sections 3.10.9 to 3.10.39 of the revised draft EN-3 sets out the key considerations and factors that will need to be taken into consideration when selecting sites (including 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 Sections

3.10.40 to 3.10.63 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 in Sections 3.10.64 and 3.10.117 and include biodiversity and nature conservation, landscape, visual and residential amenity, glint and glare, cultural heritage, construction including traffic and transport noise, and vibration.

6.2.4 Both draft EN-1 and EN-3 are not yet designated and therefore do not 'have effect' for the purposes of Section 104 of the PA2008. However, the transitional arrangements set out in these documents confirm that any emerging draft energy NPSs (or those designated but do not have effect) are potentially capable of being important and relevant considerations in the decision-making process. The extent to which they are relevant is a matter for the SoS to consider within the framework of the Planning Act and with regard to the specific circumstances of each DCO application. Therefore, both the current and draft NPSs identified above, are likely to be matters the SoS will consider 'important and relevant' and take into account in the determination of the application.

6.3 National Planning Policy Framework (NPPF), National Planning Policy Guidance, and Written Ministerial Statement

6.3.1 The NPPF was published in 2012 and updated in 2018, 2019, 2021 and just recently in September 2023.

6.3.2 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 frameworks set out in the PA2008 and relevant NPSs for nationally significant infrastructure, as well as any other matters that are considered 'important and relevant' (which might include the NPPF).

6.3.3 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.

6.3.4 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.

6.3.5 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.

6.3.6 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 Statement (WMS). 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'*.

6.4 Local Planning Policy

6.4.1 Whilst not determinative under the PA2008, there are a number of local development plan policies that LCC considers to be of relevance to this application and which the ExA and the SoS are therefore advised to take into account in the determination of the application.

6.4.2 It is envisaged that the relevant policies from the development plan will be agreed within the SoCG to be produced between the Applicant and LCC. However, it is considered relevant and necessary to consider the compliance of the proposal with the development plan policies at this stage, and to identify where there is conflict and the nature of impacts that would arise from such conflict.

6.4.3 The relevant plans and policies in so far as the development affects Lincolnshire are as follows:

Central Lincolnshire Local Plan 2023-2040 (adopted April 2023) (CLLP) – there are several planning policies contained within this document that are relevant to the consideration of the proposal. These are as follows:

- Policy S1 - The Spatial Strategy and Settlement Hierarchy
- Policy S5 - Development in the Countryside
- Policy S10 - Supporting a Circular Economy
- Policy S11 - Embodied Carbon
- Policy S12 - Water Efficiency and Sustainable Water Management
- Policy S14 - Renewable Energy
- Policy S16 - Wider Energy Infrastructure
- Policy S21 - Flood Risk and Water Resources
- Policy S47 - Accessibility and Transport
- Policy S50 - Community Facilities
- Policy S53 - Design and Amenity
- Policy S54 - Health and Wellbeing
- Policy S57 - The Historic Environment
- Policy S59 - Green and Blue Infrastructure
- Policy S60 - Protecting Biodiversity and Geodiversity

- Policy S61 - Biodiversity Opportunity and Delivering Measurable Net Gains
- Policy S66 - Trees, Woodland and Hedgerows
- Policy S67 - Best and Most Versatile Agricultural Land

South East Lincolnshire Local Plan 2011-2036 (adopted March 2019) (SELLP) - there are several planning policies also contained within this document that are relevant to the consideration of the proposal. These are as follows:

- Policy 1 - Spatial Strategy
- Policy 2 - Development Management
- Policy 3 - Design of New Development
- Policy 4 - Approach to Flood Risk
- Policy 28 - The Natural Environment
- Policy 29 - The Historic Environment
- Policy 30 - Pollution
- Policy 31 - Climate Change and Renewable and Low Carbon Energy
- Policy 33 - Delivering a More Sustainable Transport Network

7. Local Impacts

7.0.1 The following sections identify, under separate topic headings, the relevant policies, the key issues and impacts raised by the Proposed Development, and whether LCC considers those impacts to be positive, neutral, or negative. As stated earlier, the topics covered in this LIR are focused primarily on those where LCC has a statutory function or holds a particular expertise or interest due to the potential impacts/implications of the development on Lincolnshire. The absence of reference to a specific topic/matter within this LIR should not be read as LCC having no interest but rather we have no specific comments to make at this stage. In such cases the ExA are instead advised to refer to the comments and/or advice from other bodies, authorities or interested parties. LCC may wish however to make further representations as appropriate during the Examination and at Issue Specific Hearings relating to matters that are not contained within this LIR. Therefore the comments contained within this LIR are provided without prejudice to the future views that may be expressed by LCC in its capacity as an Interested Party in the examination process.

7.1 Landscape and Visual

Key Policies

- CLLP Policy S14 - Renewable Energy
- CLLP Policy S53 - Design and Amenity
- SELLP Policy 3 - Design of New Development
- SELLP Policy 31 - Climate Change and Renewable and Low Carbon Energy

7.1.1 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 landscape character and visual amenity are, or can be made, acceptable.

7.1.2 CLLP Policy S53 (Design and Amenity) states that all development must achieve high quality sustainable design that contributes positively to local character and landscape. Development proposals should be based on a sound understanding of the context, integrate into the surroundings, relate well to the site, contribute to the sense of place, and protect any important local views into, out of, or through the site.

7.1.3 Policy 3 (Design of New Development) states that development proposals will be required to demonstrate, where relevant, how the landscape character of the location will be secured. Design which is inappropriate to the local area, or which fails to maximise opportunities for improving the character and quality of the area, will not be acceptable.

7.1.4 SELLP Policy 31 (Climate Change and Renewable and Low Carbon Energy) states that development of renewable energy facilities and associated infrastructure will be permitted provided, individually, or cumulatively, there would be no significant harm to visual amenity and landscape character or quality. Provision should be made for post-construction monitoring, and the removal of the facility and reinstatement of the site if the development ceases to be operational.

7.1.5 The following elements within the Proposed Development have been identified by the Applicant as having the potential to result in adverse landscape and visual effects. These include:

- Extensive areas of fixed PV mounting (solar modules) up to 3.5m high;
- Up to 127 Inverter and Transformer Stations located amongst the solar modules;
- The Main Onsite Substation Compound with an overall footprint of approximately 185m x 110m and a maximum assumed height of 15m (but mainly between 4 - 6m, with three 'step-down' transformers of up to 12m in height);
- The ESS facility (comprised of energy storage containers, inverters, transformers, switchgears, and control room) with an overall footprint of approximately 280m x 280m, and with infrastructure up to 6m in height;
- 3m high perimeter security fencing with 3.5m high CCTV mounted on steel poles within the perimeter fence and within the Energy Park;
- One main gatehouse and two minor gatehouses with overall footprints of 5m x 5m x 4m and 3m x 3m x 4m respectively;
- National Grid Bicker Fen Substation extension works with an overall footprint of approximately 145m x 45m. The maximum heights of the generator bay and control room would be 15m and 4m, respectively.

7.1.6 The general approach to the Landscape Visual Impact Assessment (LVIA) was agreed between the Applicant and the landscape consultant acting on behalf of LCC, with feedback also provided by officers at NKDC and BBC. This agreed approach included the scope of work, the study area (preliminary 5km radius), methodology and viewpoint selection (which was expanded upon at the statutory consultation stage).

7.1.7 On a national level, the landscape associated with the Order Limits falls within Character Area 46 'The Fens' of the National Landscape Character Area. The key landscape characteristics are as follows:

- Expansive, flat, open, low-lying wetland landscape influenced by the Wash estuary, and offering extensive vistas to level horizons and huge skies throughout, providing a sense of rural remoteness and tranquillity;
- Sparse woodland cover notably comprising of a few small woodland blocks, occasional avenues alongside roads, and isolated field trees;
- Predominant arable land use;
- Open fields bounded by a network of drains and the distinctive hierarchy of rivers (some embanked) which strongly influence the geometric/rectilinear landscape pattern;
- Scattered isolated farmsteads and villages dispersed along the main arterial routes through the settled fens.

7.1.8 Similar landscape characteristics are described in the 2007 'North Kesteven Landscape Character Assessment' and the 2009 'Landscape Character Assessment of Boston' published by NKDC and BBC, respectively.

7.1.9 The Order Limits and surrounding landscape are not subject to any nationally designated landscape areas (e.g. a National Park or Area of Outstanding Natural Beauty) or Areas of Great Landscape Value. Whilst this is true, the Applicant concludes that the local landscape is of 'high sensitivity' to the Proposed Development. Site visits and field work confirm that views from within the Energy Park site are medium to long range but, in places, particularly to the south, are interrupted by built form and vegetation that line the A17 (including Elm Grange, Home Farm, Rectory Farm, Rakes Farm, the A17 petrol station, and a group of semi-detached houses in East Heckington identified as No. 1 - 12 Council Houses).

7.1.10 Theoretical visibility of the Energy Park extends across parts of South Kyme Fen, Mary Land, Holland Fen, Amber Hill, Algarkirk Fen, Ewerby Fen, and Howell Fen (beyond the 5km LVIA assessment radius). Whilst this is reflective of the level landform of the fenland landscape and lack of any substantial areas of woodland, views in reality will still be interrupted by roadside vegetation. The Energy Park is also enclosed by embankments associated with Head Dike, Holland Dike, and Skerth Drain which bound the site to the north, north east and east respectively. These will interrupt the inter-visibility with the wider countryside.

7.1.11 With regard to the National Grid Bicker Fen Substation extension works, the existing 400kV Bicker Fen Substation is not evident in views from the medium or long-range

landscape of West Low Grounds or East Low Grounds. Views from the north and east are screened by the mitigation planting that encloses the Substation.

7.1.12 As a result of these preliminary observations, the Applicant determined that the primary focus of the landscape character and visual assessment should be on the study area of up to 1.5km radii, acknowledging that some of the selected viewpoints may lie beyond this distance. The study area is not intended to provide a boundary beyond which the Proposed Development will not be seen, but rather to define the area within which to assess its potential significant landscape and visual effects. The LVIA considered the impacts of development from 23 viewpoints which represent views experienced by a range of receptor groups (e.g. residents/local community, PRoW users, and road users). After a scoping out process was applied, 12 of the 23 viewpoints were deemed to have the potential to be significantly affected and were taken forward for detailed assessment.

7.1.13 There are a number of PRoWs within the vicinity of the Order limits which have been analysed during the site visits and field work to establish the level of inter-visibility between these linear receptors and the land within the Order limits. The four following PRoWs were deemed relevant or informative to the LVIA:

- Public Footpath SKym/2/1 along the western section of Head Dike;
- Public Footpath HECK/15/1 between Sidebar Lane and the Energy Park. The route partially coincides with Crab Lane but there is no continuation along the eastern section of Head Dike and along the northern edge of the Energy Park due to lack of access;
- Public Footpath Swhd/14/1 leading from Swineshead Bridge along the railway line;
- Public Footpath Ambe/4/1, at Claydike Bank, near Amber Hill, Sutterton Fen.

7.1.14 The Applicant's LVIA concludes that the construction stage of the Proposed Development will result in temporary short-term significant adverse effects upon the local fenland landscape associated with the Order Limits and its immediate context (up to approximately 500m). Beyond the immediate context, the effects have been assessed as minor, thus, not significant. Impacts upon visual receptors at East Heckington, road users along localised sections of the A17 and the B1305 Sidebar Lane, and passengers travelling west along the railway line from Swineshead Bridge, will be 'major and significant'. The visual effects for users of the Public Footpaths SKym/2/1, HECK/15/1, and Swhd/14/1 are also assessed to be 'major and significant'.

7.1.15 The operational phase of the Proposed Development has been assessed as potentially causing geographically highly limited yet significant adverse effects upon the character of the fenland landscape within the Energy Park itself and its immediate context of up to approximately 500m. Again, beyond this immediate context the effects have been assessed as minor, thus, not significant. With regard to the visual receptors, the operational phase has been considered to bring about significant adverse effects upon the receptors within East Heckington, road users

travelling along the central and southern section of the B1395 Sidebar Lane, and users of both the Public Footpaths SKym/2/1 and HECK/15/1, and the proposed permissive path within the Energy Park site. The static viewpoints 1, 2, 4 and 6 have also been assessed as potentially experiencing significant adverse effects.

7.1.16 The Applicant highlights that the Proposed Development has incorporated a number of built-in mitigation measures through the iterative design process in order to address the assessment of potential significant effects, including increased offset distances from properties in East Heckington; decreased height of the solar modules, utilisation of existing built form and tree vegetation, and the change to a single centralised onsite substation and ESS facility. Additional proposed landscape mitigation includes planting of a new hedgerow of varied height along the perimeter of the Energy Park site to break up lines of sight between the nearby visual receptors and the interior of the Energy Park. In general, this hedgerow would be grown and maintained at approximately 3 - 3.5m in height (with some taller sections of 5m).

7.1.17 As part of the Applicant's assessment, they also reviewed a number of NSIP and TCPA 1990 scale projects within the county, at varying distances from the HFSP. The potential significant cumulative landscape character effects relating to two approved solar energy projects at Vicarage Drove and land west of Cowbridge Road, Bicker Fen, Boston, where identified as being relevant to the ES Landscape and Visual chapter due to their context, inter-visibility, and geographical relationship with the Proposed Development. It was noted that for these significant effects to occur, construction work for these two solar schemes would have to coincide with the construction of the Offsite Cable Route Corridor and the National Grid Bicker Fen Substation extension works. No cumulative effects during the operational phase of the Proposed Development where identified.

7.1.18 The Landscape Consultant appointed by LCC has reviewed the information presented within the ES and has commented that in general the LVIA and the associated figures, appendices and documents provide a thorough analysis of the proposal. The collective assessment is considered thorough, easy to navigate and largely complies with best practice methodology although the Applicant's conclusion that only Major or Moderate-Major effects should be considered as Significant is not a standard conclusion and so does somewhat downplay the impacts of the development. In line with the Landscape Institute Guidance, LCC's position is that all effects assessed as being Moderate and above should be considered as Significant and as a result we do have concerns and dispute some of the conclusions made at this stage regarding the landscape and visual impact.

7.1.19 The rationale for both the selection of viewpoints and the omission for others is explained and whilst the 3km study area is considered appropriate, given the open nature of the landscape, there is the possibility of long-range and intermittent views to be gained by receptors beyond the study area and these cannot be ignored. Although LCC agrees within the Applicant's assessment that the construction phase would result in short-term significant adverse effects and that these would revert to

minor-adverse (and therefore not significant) during the operation phase outside of a distance of 500m from the Energy Park, again given the open nature of the landscape, then whilst this might be the case more generally, this statement does appear to be too generalised given the open nature of the landscape and therefore potential to afford long-distance views.

7.1.20 Overall, and notwithstanding that the ES, appendices and figures provide a clear process of assessment, by reason of its mass and scale, the HFSP would lead to significant adverse effects upon landscape character and visual amenity. The development would transform the local landscape by affecting the current openness, tranquillity, and agricultural character of the area and would also lead to significant adverse effects on views from receptors as a result of changing views of an agricultural or rural landscape to that of a landscape containing large scale solar development. From close range views, the HFSP has been identified in the LVIA as resulting in a significant change to high and medium sensitivity receptors, including several along the A17 and A1121 corridors, as well as the isolated farmsteads along the B1395. The area is predominantly flat which would help to limit long distance views, however, with limited existing vegetation cover long distance and intermittent views of the site and the development could still be possible especially from the railway line, which follows the A1121 before heading towards Heckington to the south of the site along Heckington Fen. The Council therefore concludes that both construction and operational landscape and visual impacts of the Proposed Development will be **negative**.

7.1.21 LCC also has concerns about the cumulative landscape and visual effects of the Proposed Development when assessed alongside other proposed NSIP scale projects being promoted in the area - in particular the Beacon Fen Energy Park which at its closest will be located around 2.9km north west of the HFSP. The Applicant's cumulative assessment will need to be updated to take into account that project as further details emerge however the Council's view is that **negative** cumulative impacts are likely to arise when this project is considered in conjunction with the proposed Beacon Fen Solar Park.

7.2 Residential Visual Amenity

Key Policies

- CLLP Policy S53 - Design and Amenity
- SELLP Policy 3 - Design of New Development

7.2.1 CLLP Policy S53 (Design and Amenity) states that development should be compatible with neighbouring land uses and not result in likely conflict with existing uses unless it can be satisfactorily demonstrated that both the ongoing use of the neighbouring site will not be compromised, and that the amenity of occupiers of the new development will be satisfactory with the ongoing normal use of the neighbouring site. In addition to this, buildings should not result in harm to people's amenity

either within the proposed development or neighbouring it through overlooking or overshadowing.

7.2.2 SELLP Policy 3 (Design of New Development) states that development proposals will be required to demonstrate, where relevant, how visual closure, landmarks, and views will be secured.

7.2.3 A Residential Visual Amenity Assessment (RVAA) was carried out by the Applicant. This is a detailed assessment of the visual effects upon the nearby residential receptors associated with the settlement of East Heckington and other nearby properties identified within the 1km radii study area from the boundaries of the Energy Park. Due to the construction of the residential receptors in East Heckington, and the long-term nature of the proposed Energy Park, the Applicant considers this part of the Proposed Development to be relevant in terms of RVAA issues and potential overbearing effects. The proposed Offsite Cable Route Corridor would be underground during the operational stage of the Proposed Development, and the existing National Grid Substation extension will be located on a discreet area of land, away from any nearby residential receptors, to cause any major significant or overbearing effects.

7.2.4 The assessment notes that it is a widely accepted and long held planning principle that no individual person has a private right to a view however, there are situations where the effect on the outlook or the visual amenity of a residential property and associated living conditions would be so great that it would not be considered in the public interest to permit such conditions to occur where they did not previously exist. This is a high threshold in terms of what would be regarded as 'unacceptable' in relation to residential visual amenity, and the impact for large scale solar PV developments of low vertical elevation is relatively novel. This threshold has become widely known as the 'Lavender Test' (established through the Carland Cross Windfarm Appeal - reference APP/D840/A/0921030260). This 'test' requires that the magnitude of change and the scale of effects must be of such a degree (in terms of being overbearing and overwhelming) that a property would become widely regarded as an unattractive place to live.

7.2.5 As part of the RVAA assessment, 105 letters were sent to relevant residential properties identified based upon postcode data, to request access to the individual properties, curtilages, and private gardens for the assessment. 9 residential properties responded to the request and were included within the scope of the RVAA. Where no response was received, 'proxy viewpoints' were undertaken from publicly accessible locations.

7.2.6 The sensitivity of areas within these residential properties were then graded as either high, medium, or low. High sensitivity areas might include views from ground floor windows on principal elevations likely corresponding to primary living rooms such as a lounge or kitchen, and views from rear gardens where an appreciation of the surrounding landscape is likely to be fundamental to the enjoyment of the space. Medium sensitivity areas included views from upper floor windows likely

within bedrooms or study/office spaces, and front gardens with a reduced 'landscape appreciation' role. Finally, areas of low sensitivity within these residential properties included views from side windows (e.g. from a utility room or bathroom), and purely functional areas such as driveways.

7.2.7 Taking account of the previous sensitivity assessment, the Energy Park site layout, orientation of properties, and the presence of any screening or intervening structures, the Applicant's RVAA identified that the proposed Energy Park would result in major adverse visual effects on 22 individual or clustered properties.

7.2.8 The layout of the proposed Energy Park incorporates a number of built-in mitigation measures (including an increased physical separation distance from nearby residential properties; reduction in panel height; and the relocation of the onsite substation and ESS facility to the centre of the site) in an attempt to reduce the visual effects. In addition to these, in order to reduce the anticipated visual effects on the identified properties to 'moderate', the proposed Energy Park would be enclosed by 3 - 3.5m tall native hedgerows (5m tall in some sections) along its perimeter, in order to break the lines of sight between the edge of the site and the identified residential receptors from ground floor windows and amenity gardens. It should be noted however, that this benefit would only be present from year five onwards once the hedgerows had become established.

7.2.9 Through the RVAA, the Applicant determined that none of the 22 identified properties would be subject to any overbearing effects and therefore 'pass' the Lavender Test (i.e. these properties would continue to provide an attractive outlook and good living environment, from a visual point of view, albeit affected by the proposed Energy Park site).

7.2.10 The Council concludes that even with the built-in mitigation measures, the magnitude of change means that construction and operational visual amenity impacts on the 22 identified properties would be **negative**.

7.3 Ecology and Ornithology

Key Policies

- CLLP Policy S14 - Renewable Energy
- CLLP Policy S59 - Green and Blue Infrastructure Network
- CLLP Policy S60 - Protecting Biodiversity and Geodiversity
- CLLP Policy S61 - Biodiversity Opportunity and Delivering Measurable Net Gains
- CLLP Policy S66 - Trees, Woodland and Hedgerows
- SELLP Policy 3 - Design of New Development
- SELLP Policy 28 - The Natural Environment

7.3.1 CLLP Policy S14 (Renewable Energy) states that the proposals for renewable energy schemes, including ancillary development, will be supported where the direct,

indirect, individual and cumulative impacts are, or will be made, acceptable, including in relation to biodiversity and geodiversity considerations.

7.3.2 CLLP Policy S59 (Green and Blue Infrastructure Network) states that the Central Lincolnshire Authorities will safeguard green and blue infrastructure from inappropriate development and work actively with partners to maintain and improve the quantity, quality, accessibility and management of the green infrastructure network. This policy also notes that proposals that cause loss or harm to the green and blue infrastructure will not be supported unless the need for and benefits of the development demonstrably outweigh any adverse impacts. Where adverse impacts on green infrastructure are unavoidable, development will only be supported if suitable mitigation measures for the network are provided.

7.3.3 Policy S60 (Protecting Biodiversity and Geodiversity) states that development proposals will be considered in the context of the relevant Local Authority's duty to promote the protection and recovery of priority species and habitats. Where adverse impacts are likely, development will only be supported where the need for and benefits of the development clearly outweigh these impacts. In such cases, appropriate mitigation or compensatory measures will be required.

7.3.4 Development will only be supported where the proposed measures for mitigation and/or compensation, along with details of net gain, are acceptable. All development should:

- Protect, manage, enhance and extend the ecological network of habitats, species and sites of international, national and local importance (statutory and non-statutory);
- Minimise impacts on biodiversity and features of geodiversity value;
- Deliver measurable and proportionate net gains in biodiversity in accordance with policy S61; and
- Protect and enhance the aquatic environment within or adjoining the site, including water quality and habitat.

7.3.5 CLLP Policy S61 (Biodiversity Opportunity and Delivering Measurable Net Gains) states that all qualifying development proposals must deliver at least a 10% measurable biodiversity net gain (BNG) attributable to the development. The net gain should be calculated using Natural England's Biodiversity Metric and be provided on-site where possible. Unless specifically exempted by Government, a biodiversity gain plan should be submitted providing clear and robust evidence for biodiversity net gains and losses. This plan should also include details of the pre-development biodiversity value of the onsite habitat, the post-development biodiversity value of the onsite habitat following implementation of the proposed ecological enhancements/interventions, and an ongoing management strategy for any BNG proposals.

7.3.6 CLLP Policy S66 (Trees, Woodland and Hedgerows) states that planning permission will only be granted if the proposal provides evidence that it has been subject to

adequate consideration of the impact of the development on any existing trees and woodland found on-site. Proposals for new development will also be expected to retain existing hedgerows where appropriate and integrate them fully into the design, having regard to their management requirements.

7.3.7 SELLP Policy 3 (Design of New Development) states that development will be required to demonstrate, where relevant, how the incorporation of existing hedgerows and trees, and the provision of appropriate new landscaping to enhance biodiversity and green infrastructure, will be secured.

7.3.8 SELLP Policy 28 (The Natural Environment) states that gaps in the ecological network will be addressed by ensuring that all development proposals provide an overall net gain in biodiversity. This can be achieved by:

- Protecting the biodiversity value of land, buildings and trees (including veteran trees) minimising the fragmentation of habitats;
- Maximising the opportunities for restoration, enhancement and connection of natural habitats and species of principal importance;
- Incorporating beneficial biodiversity conservation features on buildings, where appropriate, and maximising opportunities to enhance green infrastructure and ecological corridors, including water space; and
- Conserving and enhancing biodiversity or geodiversity conservation features that will provide new habitat and help wildlife to adapt to climate change.

7.3.9 The Applicants assessment confirms that the main Energy Park site is comprised of flat, low-lying farmland in intensive arable winter wheat-production, subdivided into rectilinear field parcels by long, linear tracks, grass margins and drainage ditches. Some of the ditches support occasional shrubs and trees, reeds and emergent aquatic vegetation and there are intermittent hedgerows forming additional boundary features in places. Tree cover is limited to four small plantation woodland blocks and one line of trees within the centre of the Energy Park. The proposed grid connection corridor comprises of largely similar intensively farmed arable land.

7.3.10 Extended Phase 1 surveys of the Main Energy Park and Cable Route Corridor have been carried out and individual species surveys conducted in relation to bats, breeding and wintering birds, great crested newts, badgers, water vole and otters. In terms of habitats, the surveys confirm that there are no internationally important statutory designated sites (Ramsar, SAC & SPA) within 10km of the Energy Park Site, and the nearest Site of Special Scientific Interest (SSSI) is Horbling Fen SSSI located 11.5km to the southwest of the Energy Park. In addition there are no non-statutory designations within the Energy Park Site. There are four Local Wildlife Sites (LWS) within 5km of the Energy Park Site these being South Forty Foot Drain LWS; the Great Hale Eau; Broadhurst Drain East and Old Forty Foot Drain. These are all located between 1.5 and 4km south of the Energy Park Site and increases to 9 LWS's within 5km of the Grid Connection Route.

7.3.11 In terms of individual species, static bat surveys record up to maximum of 12 species of bat using the site with the vast majority being common pipistrelle. Breeding bird surveys recorded a total of 68 species with these mainly being common farmland birds nesting the banks of drainage ditches, woodland, Copse and farm buildings or along hedgerows. Three Schedule 1/Annex I species was found breeding in the area during the surveys - one pair of marsh harrier, three pairs of barn owl and one pair of kingfisher, and a further twelve Birds of Conservation Concern (BOCC)/Red List species were also recorded. This increased to 9 and 13 species respectively during wintering bird surveys.

7.3.12 In terms of Biodiversity Net Gains (BNG), it is stated that the project aims to deliver 424ha of grazing species grass with nearly 67ha of species rich grassland being located to a dedicated BNG area in the north of the site and along field boundaries. Approximately 2.15ha of wildflower mix would be secured as part of a Community Orchard and about 8.5 linear kilometres of hedgerow would be secured. Overall the Applicants Metric assessment estimates that the development would secure a 102% BNG increase in habitat units and a 230% BNG in hedgerow units relative to the existing baseline.

7.3.13 The Applicant's assessment identifies generally minor adverse construction impacts for boundary habitats, woodland blocks, breeding birds and aquatic areas within the Energy Park and proposes that these would be mitigated through a Construction Environmental Management Plan (CEMP) – to be secured as part of the DCO. Minor adverse effects are predicted for works along the cable corridor and temporary minor beneficial/positive effects are predicted for a number of species benefitting from seeding of watercourse boundaries, including breeding birds. As LCC does not have an in-house ecologist we do not dispute the Applicants conclusions in terms of effects at this stage. Therefore LCC recommend that the ExA take into account any specific technical advice and views of those bodies, persons and organisations who have expertise in this area such as comments offered by NKDC (who have commissioned external advice from an ecologist), Boston Borough Council, Natural England and the Lincolnshire Wildlife Trust. Notwithstanding this position, given the Applicants own findings the Council considers that the construction effects arising from this development would be **negative.** In terms of BNG, the Applicants own assessment has identified a potential to achieve well in excess of the 10% gain that is advocated at a national level and so if this is secured and delivered then this would be a **positive** impact of the development.

7.4 Hydrology, Hydrogeology, Flood Risk and Drainage

Key Policies

- CLLP Policy S12 - Water Efficiency and Sustainable Water Management
- CLLP Policy S14 - Renewable Energy
- CLLP Policy S21 - Flood Risk and Water Resources
- CLLP Policy S59 - Green and Blue Infrastructure
- SELLP Policy 2 - Development Management

- SELLP Policy 3 - Design of New Development
- SELLP Policy 4 - Approach to Flood Risk

7.4.1 CLLP Policy S12 (Water Efficiency and Sustainable Water Management) states that in addition to the wider flood and water related policy requirements of policy S21, all residential or other development comprising new buildings with outside hard surfacing, must ensure such surfacing is permeable (unless there are technical and unavoidable reasons for not doing so).

7.4.2 CLLP Policy S14 (Renewable Energy) states that proposals for renewable schemes, including ancillary development, will be supported where the direct, indirect, individual, and cumulative impacts of development on flood risk are, or can be made, acceptable. There are no further references to flood risk under the 'additional matters for solar based energy proposals' subheading of this policy.

7.4.3 CLLP Policy S21 (Flood Risk and Water Resources) states that all development proposals will be considered against the NPPF, including application of the sequential and, if necessary, the exception test. Proposals should demonstrate that they are informed by and take account of the best available information from all sources of flood risk and by site specific flood risk assessment where appropriate; that the development will be safe during its lifetime taking into account the impacts of climate change; how the wider scope for flood risk reduction has been positively considered; and that they have incorporated Sustainable Drainage Systems (SuDS)/Integrated Water Management into the proposals, unless they can be shown to be inappropriate.

7.4.4 CLLP Policy S59 (Green and Blue Infrastructure Network) states that proposals that cause loss or harm to the green and blue infrastructure network will not be supported unless the need for and benefits of the development demonstrably outweigh any adverse impacts.

7.4.5 SELLP Policy 2 (Development Management) states that proposals requiring planning permission for development will be permitted provided that sustainable development considerations are met, specifically in relation to any impact upon sustainable drainage and flood risk. Similarly, SELLP Policy 3 (Design of New Development) states that development proposals will be required to demonstrate, where relevant, how the mitigation of flood risk through flood-resilient design and SuDS will be secured.

7.4.6 SELLP Policy 4 (Approach to Flood Risk) states that development proposals within an area at risk of flooding (Flood Zones 2 and 3) will be permitted where the application is supported with a site-specific flood risk assessment, covering risk from all sources including the impacts of climate change, and which:

- Demonstrates that the vulnerability of the proposed use is compatible with the flood zone;

- Identifies the relevant predicted flood risk level, and mitigation measures that demonstrates how the development will be made safe;
- Incorporates the use of SuDS (unless it is demonstrated that this is not technically feasible) and confirms how these will be maintained/managed for the lifetime of development;
- Demonstrates that the proposal will not increase risk elsewhere and that opportunities through layout, form of development and green infrastructure have been considered as a way of providing flood betterment and reducing flood risk overall; and
- Ensures suitable access is safeguarded for the maintenance of water resources, drainage, and flood risk management infrastructure.

7.4.7 The Applicant's Flood Risk Assessment (FRA) states that the Proposed Development is located a few metres above sea level on land that generally slopes very gently towards the north / north east. The lowest point within the proposed Energy Park site is identified at 0.77m AOD along the northern boundary, whilst the highest point is 3.3m AOD along the southern boundary. AOD levels at the existing National Grid Bicker Fen Substation are approximately 2m.

7.4.8 As mentioned in the assessment, the Environment Agency's (EA) flood map indicates that the majority of the Proposed Development lies within Flood Zone 3 ('high probability' – land which has a 1 in 100 or greater annual probability of fluvial flooding). The Head Dike and Skerth Drain, which bound the Energy Park site along its northern boundary are identified by the EA as the source of flooding for this part of the Proposed Development. The South Forty Foot Drain is identified as the flooding source for the Offsite Cable Route Corridor and the National Grid Bicker Fen Substation. These principal watercourses are characterised by fluvial defences in the form of earth embankments. The EA's 'Flood Risk from Surface Water' map indicates that the majority of the Energy Park site, the Offsite Cable Route Corridor, and the National Grid Bicker Fen Substation are at 'very low' risk of surface water flooding.

7.4.9 The FRA finds that construction activities have the potential to impact upon the surface water drainage regime and increase surface water run-off from the Proposed Development, as well as give rise to the contamination of surface water as a result of spilled hydrocarbons and petrochemicals. The assessment also notes that construction works in close proximity to the flood defences have the potential to affect the stability of the embankments and therefore the structural integrity of the defences. The significance of these likely effects is considered to be negligible and therefore not significant, on account of embedded mitigation measures that are either 'built-in' to the proposals from the offset or secured through a DCO requirement.

7.4.10 During the operational phase of the Proposed Development, the assessment finds that an increase in the impermeable area within the Energy Park site has the potential to increase surface water run-off to the adjacent drains, increasing potential flood risk elsewhere. The assessment also notes that the raising of ground

levels to locate flood-sensitive infrastructure above the flood level has the potential to reduce the volume of storage available within the floodplain. Again, the Applicant considers these effects to be negligible and therefore not significant in light of embedded mitigation measures and the Proposed Development being located within a significant expanse of floodplain. The operational phase of the Offsite Cable Route Corridor and National Grid Bicker Fen Substation were not scoped out as part of the assessment due to a lack of identified operational impacts.

7.4.11 The design philosophy that underpins the Proposed Development includes a number of measures to prevent, reduce, and offset any significant adverse effects upon hydrology, hydrogeology, flood risk and drainage. These 'built-in' and additional mitigation measures are proposed to be secured through implementation of a Construction Environmental Management Plan (CEMP) under Requirement 13 of the DCO. Likely mitigation measures would include:

- Management systems and best practice working methods to manage water pollution and adverse impacts upon the surface water drainage regime;
- Appropriate storage of hydrocarbons and petrochemicals in accordance with Control of Substances Hazardous to Health (COSHH) Regulations 2002, and Control of Pollution (Oil Storage) (England) Regulations 2001;
- Laying of cables at a sufficient depth beneath watercourses/drains to avoid causing damage to the integrity of flood defence embankments;
- Implementation of SuDS (i.e. swales); and
- Elevated floor levels and flood resilient construction measures.

7.4.12 The assessment also notes that the construction and operation of the Proposed Development could occur simultaneously with other NSIP and TCPA 1990 scale schemes located in the vicinity. The Applicant highlights that as part of compliance with local and national planning policy, these other developments will be required to demonstrate that flood risk is not increased, that the surface water drainage regime and quality are not adversely affected, and that ground water aquifers are not affected. Without demonstrating this compliance, DCO consent/planning permission would not be granted, and construction could not commence. In this regard, the Applicant concludes that these schemes will not give rise to any significant effects and therefore there will be no cumulative effects in combination with the HFSP.

7.4.13 With the implementation of the outlined mitigation measures, the Applicant concludes that effects on the hydrology, hydrogeology, flood risk and drainage of the area would be negligible and therefore not significant. LCC as the lead local flood authority agrees with the principles of the FRA and the draft DCO includes appropriate conditions requiring detailed design of drainage to be approved by the Local Planning Authority prior to commencement of the Proposed Development. Subject to those details being acceptable, at this stage, the Council concludes that the impacts in relation to hydrology, hydrogeology, flood risk and drainage will be **neutral**.

7.5 Cultural Heritage

Key Policies

- CLLP Policy S57 - The Historic Environment
- SELLP Policy 2 - Development Management
- SELLP Policy 3 - Design of New Development
- SELLP Policy 29 - The Historic Environment

7.5.1 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 take into account 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.

7.5.2 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.

7.5.3 SELLP Policy 2 (Development Management) states that proposals requiring planning permission for development will be permitted provided that sustainable development considerations are met, specifically in relation to any impact upon or enhancement of historical buildings and heritage assets. Similarly, SELLP Policy 3 (Design of New Development) states that development proposals will be required to demonstrate, where relevant, how a sense of place will be created by complementing and enhancing designated and non-designated heritage assets.

7.5.4 SELLP Policy 29 (The Historic Environment) states that distinctive elements of the South East Lincolnshire historic environment will be conserved and, where appropriate, enhanced. Opportunities to identify a heritage asset's contribution to the economy, tourism, education, and the local community will be utilised, including the historic archaeological and drainage landscape of the Fens. As such, development proposals will be required to conserve and enhance the character and appearance of designated and non-designated heritage assets.

7.5.5 A Heritage Settings Assessment was undertaken in accordance with the industry-standard methodology provided by Historic England. A search area of a minimum

5km radius from the Proposed Development was applied for this assessment however, the proposed Energy Park site is deemed to have greater potential than the Offsite Cable Route Corridor to impact upon the significance of heritage assets through change to their setting. There are a total of 123 Listed Buildings located within this 5km radius (the majority being Grade II Listed), as well as eleven Scheduled Monuments. The Heritage Settings Assessment indicated that only three heritage assets could be sensitive to the construction and/or operation of the Proposed Development. These are:

- Scheduled Monument of settlement site 600m east of Holme House;
- Grade I Listed Building of Kyme Tower at South Kyme; and
- Non-Listed Mill Green Farmhouse.

7.5.6 The Applicant's assessment concludes that the land being considered for the Proposed Development does not contribute through setting to the significance of the Scheduled Monument settlement site and therefore no effect/harm is predicted to occur to the significance of this asset. The Energy Park site may be visible from the top floor and battlement of Kyme Tower, although it is not possible to gain access to confirm this as there is no surviving stairwell. As the geographical and topographical context of the Tower, and the current potential range of views from it, will not change, the Applicants suggests that no effect/harm is predicted to occur to the significance of this Grade I Listed Building.

7.5.7 The Energy Park site will also be visible in designed views from the Non-Listed Mill Green Farmhouse (particularly from the first-floor windows) however, it is considered that the significant and extensive change to the late 19th century landscape character will only result in minor (not significant) harm to the significance of this non designated asset. This is because the asset's significance is primarily derived from its built form (which will be unaffected by the Proposed Development).

7.5.8 The Energy Park site was also subject to extensive pre-determination archaeological evaluation using a mix of archaeological desk-based assessment, geophysical surveys, and trial trenching evaluation. A total of 962 trial trenches were excavated and recorded across the Energy Park, 194 of which contained archaeological features and deposits. The earliest archaeological activity found was a small assemblage of Mesolithic and Neolithic flints recovered from the northern area of the site. The trial trenching evaluation of the Energy Park identified much more Romano-British archaeology (including enclosures, a possible settlement, and evidence of salt processing) than had been indicated by the geophysical surveys, especially across the central and southern portions of the site. Evidence of post-medieval hunting activities were also found on the site in the form of a duck decoy pond.

7.5.9 There are no designated archaeological remains (e.g. Scheduled Monuments) located within the land being considered for the Proposed Development however, there are a number of known and potential non-designated built and archaeological

remains located within the Energy Park site which are regarded as either regionally or locally significant heritage assets. Whilst none of these are considered to be of the highest level of significance requiring preservation in situ, the upstanding boundary wall near Elm Grange, the cottages and barn of Six Hundreds Farm, and the drainage pump at Head Dike will all be retained within the Proposed Development through mitigation measures.

7.5.10 Construction works associated with the Proposed Development will most certainly have below-ground impacts such as soil compaction, reduction of the protective depths of topsoil and subsoil, and potential changes to the moisture levels and chemical composition of soils. These impacts may affect the survival of any archaeological and/or paleoenvironmental deposits contained therein. Construction activities could also remove, truncate, or compress the known and potential buried archaeological remains located within the Energy Park site. Due to their finite nature, the direct development effects upon the known and potential buried archaeological resource would be long-term, permanent, and adverse, with the two Mesolithic/Neolithic pits and the Roman saltern possibly being wholly destroyed by construction activities. The Applicant's devised mitigation strategy will seek to minimise impacts where possible on known below-ground archaeological assets.

7.5.11 Whilst the operational phase of the Proposed Development is considered to have no direct physical effects over and above that already identified at construction, the removal of ground-mounted infrastructure and plant movements during the decommissioning phase may result in further disturbance to shallow-buried archaeological deposits. These activities may result in further destruction of features that were partially destroyed during construction (and would therefore be considered significant in EIA).

7.5.12 LCC considers that sufficient evaluation (including trenching) has been undertaken on the proposed Energy Park site to inform an adequate mitigation strategy in respect of non-designated heritage assets. Trial trenching for the Offsite Cable Route Corridor commenced in July 2023 and as such, the results are not yet available to inform the Applicant's assessment. LCC considers these trial trenching results to be necessary in order to provide sufficient baseline data to be able to identify and assess potential development impacts, and for a mitigation strategy to be proposed. Notwithstanding the evaluation carried out to date, and whilst mitigation measures to ensure that any features within the Order Limits are appropriately recorded, the development would nevertheless have an impact on heritage assets (both above and below ground) and therefore consistent with the Applicant's own conclusions within the ES, agrees that the Proposed Development will have a **negative** impact on heritage assets.

7.6 Climate Change

Key Policies

- CLLP Policy S14 - Renewable Energy

- CLLP Policy S16 - Wider Energy
- CLLP Policy S53 - Design and Amenity
- SELLP Policy 31 - Climate Change and Renewable and Low Carbon Energy

7.6.1 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.

7.6.2 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.

7.6.3 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.

7.6.4 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.

7.6.5 SELLP Policy 31 (Climate Change and Renewable and Low Carbon Energy) states that development of renewable energy facilities and associated infrastructure will be permitted provided, individually, or cumulatively, there would be no significant harm to the environment.

7.6.6 The Applicant's emissions assessment adopts a 'whole life' approach to calculating the Greenhouse Gas (GHG) emissions of the Proposed Development. This considers all the major lifecycle sources of GHG emission and includes both direct GHG

emissions as well as indirect emissions from activities such as the transportation of materials and embodied carbon with construction materials.

7.6.7 A likely worst-case country of origin of China has been assumed as a conservative estimate for products and equipment, with distances estimated from ports with a proximity to relevant manufacturing facilities in Shanghai. Corresponding HGV and sea freight distances of 350km and 21,900km respectively have been assumed by the Applicant for the transportation of materials.

7.6.8 A 1-way distance of 30km per journey has also been assumed for the worker transportation calculations, which is again a conservative estimate. Where possible, staff will reside much closer to the Order Limits, and employees not from the local area would stay in local accommodation.

7.6.9 The greatest GHG emissions during the construction phase is as a result of the embodied carbon contained within the construction materials which accounts for 96.3% of the total emissions during the construction phase. The total amount of GHG emissions during this phase of the Proposed Development is expected to equate to 269,000 tCO2e (tonnes of carbon dioxide equivalent) across the 30-month period (resulting in annual construction emissions of 107,000 tCO2e). GHG emissions from construction will fall under the 4th UK Carbon Budget which sets out an annualised carbon budget of 390,000,000 tCO2e. As the annual construction emissions would only relate to 0.028% of this annual UK budget, the Applicant considers that the construction of the Proposed Development will therefore have a negligible to minor adverse effect on the climate.

7.6.10 The greatest GHG emissions during the operational phase are estimated to result from maintenance activities associated with the embodied carbon of replacement parts and equipment (accounting for 93.1% of the total operational emissions). The total GHG emissions for the operational phase of the Proposed Development are estimated to equate to 292,000 tCO2e over its 40-year design life (or an average annual basis of 7,290 tCO2e per year of operation).

7.6.11 Over the 40-year operational lifetime, the Proposed Development is estimated to produce a cumulative energy generation of 14,000,000 MWh. Using the 2022 Grid Factor as the GHG emission intensity for the generation of this energy supply, it has been estimated that 1,910,000 tCO2e would be emitted in order to generate this equivalent amount of electricity from the projected grid energy mix. Based on this difference between the operational GHG emissions of the Proposed Development (292,000 tCO2e) and the estimated emissions that would result from sourcing the equivalent energy supply from the grid (1,910,000 tCO2e), it is therefore estimated that the Proposed Development would result in avoided emissions of 1,620,000 tCO2e.

7.6.12 The Applicant's assessment concludes that, even when taking a conservative approach, the estimated annual operational GHG intensity of the Energy Park is considerably less than the relevant annual projected decarbonised grid GHG

intensity. As such, the Applicant considers the operational phase of the Proposed Development on GHG emissions to have a moderate beneficial effect. However, the assessment does not account for GHG emissions associated with the recycling or disposal of components and panels at specialist disposal facilities at the decommissioning stage. Instead an assumption is made that all material is highly recyclable and that improvements in recycling technologies and efficiencies are likely to have occurred by the time decommissioning is to commence and that this would mitigate the impacts of initial embodied carbon produced for the first time use of the development.

7.6.13 Officers do not dispute the Applicants conclusions at this stage would agree that, adopting a 'whole life' approach, there would be significant **positive** impacts that would accrue in relation to GHG emission reduction.

7.7 Transport, Access and Public Rights of Way

Key Policies

- CLLP Policy S47 - Accessibility and Transport
- SELLP Policy 31 - Climate Change and Renewable and Low Carbon Energy
- SELLP Policy 33 - Delivering a More Sustainable Transport Network

7.7.1 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 through the use of 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.

7.7.2 SELLP Policy 31 (Climate Change and Renewable and Low Carbon Energy) states that development of renewable energy facilities and associated infrastructure will be permitted provided, individually, or cumulatively, there would be no significant harm to highway safety (including public rights of way).

7.7.3 SELLP Policy 33 (Delivering a More Sustainable Transport Network) states that Local Planning Authorities will work with developers to make the best use of, and seek improvements to, existing transport infrastructure and services within, and connecting to South East Lincolnshire. Development proposals are required to have regard to the need for better promotion and management of the existing transport network and the provision of sustainable forms of transport. In addition, this policy states that existing footpaths, cycle routes, and particularly public rights of way, will be protected from development.

7.7.4 Access to the proposed Energy Park during the construction and operational phases will be created via a new junction with the A17 to the south of the Energy Park site, approximately 900m northwest of the junction with Six Hundreds Drove. Whilst this proposed access is under construction, a temporary construction access point will be provided via an existing junction with the A17, approximately 600m southeast of the B1395 Sidebar Lane junction at Elm Grange.

7.7.5 Access for the construction of the Offsite Cable Route Corridor is proposed in two locations – one to the north of the South Forty Foot Drain via an existing junction with the A17 located approximately 430m north of the A17 - A1121 junction; and one to the south of the Drain via the Triton Knoll access with the A17. Localised access is also proposed via Royalty Lane and Timms Drove however, the Triton Knoll access will predominantly form the southern access for the Offsite Cable Route Corridor. Access to the existing National Grid Bicker Fen Substation is currently achieved via a haul road from the A52. This will not change as a result of the Proposed Development and therefore access for construction vehicles associated with the extension to the Substation will continue via this access, in line with the National Grid's existing arrangements.

7.7.6 The Applicant's assessment considered the baseline and predicted traffic flows for the estimated 30-month construction period at three 'link' locations along the A17 (located between the temporary and permanent access points for the Energy Park site). Baseline two-way daily traffic flow data collected in March 2022 recorded between 20,373 and 21,249 vehicle movements (all types) through these links. Of these, between 3,485 and 4,350 movements were attributable to HGV traffic.

7.7.7 The Applicant has estimated that during the course of the Proposed Development's construction period, a total of 11,082 (12,190 if allowing for a 10% contingency) HGV construction vehicles will require access to and from the Energy Park site. Of this estimation, 4,195 vehicles will relate to 'materials', 1,500 to the solar modules, and 1,200 to cabling. An allowance of 107 vehicles has also been made for escorting abnormal load deliveries (substation transformers and crane).

7.7.8 Assuming a 30-month construction period and a six-day working week (720 days total), there will be on average around 17 HGV deliveries (or up to 34 two-way movements) per day. This could be higher or lower at times depending on the stage of construction. A 10% contingency has also been applied to account for the fact that some deliveries could be made using smaller vehicles. Given the predicted maximum peak of 400 construction workers (average figure of 150) on the Energy Park site at any one time, the Applicant has estimated a total of 92 two-way movements per day on average (including the allowance of the 34 HGV trips) during these busiest construction periods. When compared to the recorded baseline flows of the assessed A17 links, the Applicant concludes a 'negligible' impact on the capacity and operation of the A17.

7.7.9 The Applicant has advised that in terms of the construction of the Offsite Cable Route Corridor, the majority of vehicles/machinery will generally be brought to the

site at the start of the project and stored overnight within a temporary fenced area in close proximity to where the construction works are being carried out. As such, the Applicant estimates that there will only be around five vehicles moving between the Energy Park and the Offsite Cable Route Corridor each day (ten two-way movements). The proposed access arrangements will seek to ensure that no vehicles associated with this construction will pass through the village of Bicker, as far as practicable. Should it however be necessary to route vehicles via Bicker, the Applicant determines that the number of vehicles are likely to be considered negligible and would be on a temporary basis.

7.7.10 There is not considered to be any underlying safety problems on the A17 close to the Proposed Development. The Energy Park access would operate a "left in - left out" only basis and banksmen can be made available if considered necessary at the site access point to indicate to drivers when it is safe to enter or exit the site access junction. The access arrangement would also enable HGVs to pull off the A17 in one movement and allow two HGVs to pass one another on the internal site access road, preventing the need for large vehicles to stop on the highway. The Offsite Cable Route Corridor will be accessed using existing junctions with the A17 or the A52 Bicker Road, none of which have a material highway safety problem. As such, it is therefore considered that there will be no increase in incidents associated with the temporary 30-month construction phase.

7.7.11 Once operational, it is anticipated that vehicle movements will not exceed five visits per day to the Energy Park site for equipment maintenance, tending of sheep, and maintenance of Biodiversity Net Gain Areas (including the community orchard); and is therefore considered to be a negligible impact on the local highway network. Decommissioning is expected to generate the same number of movements as construction (or potentially less as the underground cables will be left in situ) and is therefore also considered negligible by the Applicant.

7.7.12 A Construction Transport Management Plan (CTMP) will be implemented during the Proposed Development's construction phase in order to minimise the impact on local residents, businesses, and the highway network. The CTMP will contain a package of mitigation measures which are expected to include:

- A "left in - left out" arrangement at the permanent Energy Park site access;
- Provision of a contractor's compound within the site, providing an area for HGVs to park and manoeuvre, off the local highway;
- Control of HGV arrivals/departures by the site manager to ensure that no HGVs are required to wait on the public highway;
- Provision of (dry) wheel washing facilities for use before allowing vehicles to return to the local highway; and
- Generally agreed working hours of 08:00 - 18:00 Monday to Friday and 09:00 - 13:00 on Saturdays.

7.7.13 The Applicant also considered cumulative transport impacts associated with 15 other projects (primarily solar-related) located within Lincolnshire. The Applicant

concluded that due to these project sites being located some distance from the Energy Park, and the temporary nature of the Proposed Development's construction phase, it is not considered necessary to assess the cumulative transport and access impacts.

7.7.14 With reference to impacts on Public Rights of Way, there is only a single PRoW (HECK/15/1) which runs across the northern boundary of the Energy Park site. This footpath would remain open and useable throughout the entire lifetime of the Proposed Development (only being separated from the Energy Park by security fencing during the construction phase). Reinstatement of footbridges on the eastern and western boundaries of this footpath is currently under discussion between the LCC PRoW team, the EA, landowners, and the Black Sluice Internal Drainage Board. If an agreement is reached, the Applicant has stated that they will help facilitate the construction of these reinstated footbridges. In addition to this footpath, PRoWs Swhd/14/1 and Swhd/13/1 are located within the vicinity of the Offsite Cable Route Corridor. These two PRoWs boarder the north and south east of the South Forty Foot Drain for two kilometres respectively.

7.7.15 As part of the Proposed Development, a new community orchard (2.15ha in size) is being proposed in the south western corner of the Energy Park site and immediately north of the 'Build-A-Future East Heckington' facility. It is envisaged that this community orchard would not offer any additional areas of car parking in order to limit vehicular movement, disturbance to the adjacent school and Elm Grange residents, and avoid any additional congestion along the A17. The main function of the orchard would be to provide an area for BNG and also a new amenity space for the local community (including for use by the educational facility).

7.7.16 Public access in the area would be further enhanced with the creation of a new permissive path, linking to both Public Footpath HECK/15/1 and the proposed community orchard. The path would provide a circular route of about 4.2km in length across the western part of the Energy Park site. The Applicant advises that this permissive path will be open to the general public once construction of the Energy Park is completed and will remain open for the 40-year projected lifetime under legal agreement between the Applicant and the landowner.

7.7.17 LCC agrees that there are **positive** impacts associated with the provision of a new permissive footpath within the scheme insofar as it offers additional walking and recreational opportunities that extend and link to the PROW network. The actual enjoyment and value this route offers to users of this route is perhaps more subjective however given it passes through part of the solar park and so users would be exposed to vies of the panels and associated infrastructure for sustained periods as they use this route. Nevertheless the provision of, and access to, a community orchard is also another positive effect of the scheme overall especially as this can be accessed without restriction to users of the PROW route.

7.7.18 In terms of traffic and transport effects, as the Local Highway Authority, LCC deems the assessment within the 'Transport and Access' chapter of the ES to be

appropriate and that it provides a reasonable estimate of HGV and car traffic associated with the development during construction, showing that the impact will be within acceptable levels on the highway network. The draft DCO includes conditions requiring detailed design approval of access and parking to be approved by the Local Planning Authority prior to commencement. Therefore, if the DCO is granted then there would be an opportunity for the Highway Authority to review and ensure those details are acceptable before the development can commence. At this stage however, the Council concludes that traffic and transport impacts during the construction, operation, and decommissioning (subject to agreement of a CTMP) would be **neutral**.

7.8 Land Use and Agriculture

Key Policies

- CLLP Policy S14 - Renewable Energy
- CLLP Policy S67 - Best and Most Versatile Agricultural Land
- SELLP Policy 32 - Climate Change and Renewable and Low Carbon Energy

7.8.1 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.

7.8.2 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.

7.8.3 SELLP Policy 31 (Climate Change and Renewable and Low Carbon Energy) states that the development of renewable energy facilities and associated infrastructure will be permitted provided, individually, or cumulatively, there would be no significant harm to agricultural land. Provision should be made for post-construction monitoring, and removal of the facility and reinstatement of the site if the development ceases to be operational.

7.8.4 The agricultural land quality within the Energy Park was assessed using a system of Agricultural Land Classification (ALC). This system is based on the long-term physical limitations for agricultural use and recognises climate, site, and soil characteristics (and the important interactions between them) as factors which can affect the 'grade' of the agricultural land. The ALC system divides land into five grades (1 to 5), with grade 3 divided into subgrades 3a and 3b. The NPPF places grades 1, 2 and 3a within the definition of 'best and most versatile agricultural land'. Natural England estimates that 42.0% of the agricultural land in England is of BMV quality.

7.8.5 Sampling across the Energy Park site was carried out in two stages, in consultation with Natural England and NKDC. Initially, a semi-detailed ALC was carried out involving sampling on a regular 200m by 200m grid (resulting in 138 auger samples being taken across the northern part of the site). A further 313 samples were taken in August and September 2022, covering most of the area identified as BMV in the semi-detailed survey. These additional samples showed a more complex mix of grades across the majority of the Energy Park and brought the total number of auger samples to 451 sampling points across 589ha.

7.8.6 It was agreed that the Offsite Cable Route Corridor would not be subject to an ALC assessment as it only involves temporary disturbance of the soils to enable a trench to be dug and the cabling to be inserted. Therefore, construction of the Offsite Cable Route Corridor would not involve the sealing or downgrading of the land quality.

7.8.7 Some of the agricultural fields were identified as a complex mix of ALC grades, which significantly affects the potential for farming the different land grades in a different manner. In light of this, the Proposed Development has been amended and the area for the Energy Park site reduced. Fields to the south and west (mostly ALC grades 1 and 2) have been excluded from the site, resulting in a reduced area of 524ha for the Energy Park site. The proposed site no longer includes any fields which are wholly Grade 1 or 2.

7.8.8 The soil sampling identified that 49.0% of the site (an area of 257ha) falls within the BMV category (ALC grades 1, 2 and 3a). This is split into 11.1% (58ha) of grade 1 land, 7.4% (39ha) of grade 2 land, and 30.5% (160ha) of grade 3a land. The remaining 51.0% of the Energy Park site is split between grade 3b agricultural land (50.6% / 265ha) and non-agricultural land (0.4% / 2ha).

7.8.9 Through a desktop exercise using published mapping, the Applicant's assessment also considered the relative proportions of ALC across both Lincolnshire and North Kesteven. It was noted that across Lincolnshire the estimated amount of BMV agricultural land as a proportion of all ALC grades is 71.2% (split between 14.6% grade 1, 36.0% Grade 2, and 20.6% Grade 3a). In comparison, across North Kesteven the estimated amount of BMV agricultural land is slightly lower at 67.0% (split between 1.4% Grade 1, 44.9% Grade 2, and 20.7% Grade 3a).

7.8.10 The Applicant highlights that there should be no direct loss (permanent sealing or downgrading of land quality) caused by the installation of the PV arrays on the Energy Park site. Only those areas of land proposed for the fixed infrastructure (e.g. the onsite substation, energy storage system, and access tracks) should be treated as sealed-over or irreversibly lost. This amounts to a total of 20.2ha of agricultural land (2.8ha of which is BMV land).

7.8.11 A cumulative agricultural land impact assessment was undertaken by the Applicant, considering the effects of 16 NSIP and TCPA scale schemes (primarily solar) across NKDC, BBC, and the wider county. The timing of this assessment meant that it did not however account for three further solar NSIP schemes that are now proposed in the district (Springwell, Beacon Fen and Fosse Green). This assessment notes that if all of the assessed schemes were to gain planning consent alongside the HFSP, and all of the land within the applications' redlines was used for solar development, the total use of agricultural land would amount to 5,950ha (of which approximately 4,200ha would be BMV land). It can therefore be concluded that if all of the 16 schemes became operational and none carried out any ongoing agricultural practices within their application sites for their operational lifetimes, 1% of Lincolnshire's agricultural land (and 1.2% of its commercially farmed area) would be used for solar production.

7.8.12 A Farming Report has also been submitted by the Applicant which sets out the practical limitations to wider-scale farming of the agricultural land in which the proposed Energy Park site will be located. This report draws attention to the farm's significant blackgrass problem (a perennial arable weed), in addition to the land's division by deep ditches which cause a physical barrier between fields (with usually only a single bridge entry point to most fields). The Applicant argues that whilst this block of farmland within the Energy Park site covers 524ha, in the context of England and regional production, the effect of non-production of arable crops from this area will be modest (the utilised agricultural area of England in 2022 was 8.9 million ha, 55% of which was croppable (some 4.9 million ha)).

7.8.13 The land management and farm enterprises will inevitably change for the duration of the Proposed Development's lifetime. Continued agricultural use of the land within the Energy Park is however possible by using it for grazing sheep and grassland management (especially to encourage nesting and flowering). The use of land under and around solar panels for sheep grazing is common as it is an effective way to manage the grass, provide an income, and improve soil nutrient value. The details within the Farming Report suggest that sheep farming labour is comparable to cereals production and that the overall sheep enterprise could be made up of 4 ewes per ha (resulting in approximately 2,000 breeding ewes across the Energy Park site). With a typical rearing percentage of 1.65% lambs per ewe, this would equate to 3,300 lambs being produced per year for food production across the site.

7.8.14 LCC acknowledges that the development has been revised to remove areas of BMV land and it is proposed to graze sheep on the land in lieu of the current arable use. Despite this a large proportion of BMV land would be 'lost' due to the presence of

the solar panels and equipment as this would take this land out of productive arable use. Although an agricultural enterprise may still be carried out on the land (e.g. sheep grazing) at this stage it is unclear how this would be secured as part of any DCO and there is uncertainty and ambiguity in the current drafting of the Outline Landscape and Ecology Plan submitted as part of the application (which is indicates this would be secured) about exactly who will be responsible for managing any sheep, a commitment to exact herd densities and whether this would be implemented for the life of the development. As a result, LCC has concerns about the impact of the development in terms of the loss of productive arable farmland not only from this site but also when considered in combination with a large number of other NSIP scale projects that are not only being promoted across the County but also within the same District. As such, the LCC's position is therefore that the construction, operational and decommissioning impacts holistically across land use and agriculture are **negative**.

8. Conclusions

8.1 This LIR has undertaken a consideration of several likely issues and impacts that LCC considers will arise from the construction and operation of the HFSP in so far as it affects Lincolnshire. The report has identified positive, neutral and negative effects at this stage.

8.2 The HFSP, by its nature, offers positive impacts in terms of the production of clean renewable energy and the UK's transition towards Net Zero as well as the potential to deliver significant biodiversity net gain through the creation of mitigation and enhancements proposed as part of the development. The scheme also offers an opportunity to extend recreational routes in the area as an extension to the current PROW network and includes access to a new community orchard which would be open to users of the PROW network and others (by arrangement). Whilst the Council recognises these potential benefits, there are also a number of negative impacts which would need to be balanced against these positives. These negative impacts have been identified by the Applicant themselves and exist across the majority of the topics/matters covered by the ES. Although some of these impacts may be capable of being reduced, mitigated or off-set and/or addressed through the submission of information as part of subsequent DCO Requirements (should the DCO be confirmed), the negative impacts of most significance and concern to LCC are those in relation to landscape and visual impact and the impact of the development on best and most versatile agricultural land not only arising from this scheme itself but also when considered cumulatively and in-combination with the loss of land from other NSIP scale solar developments that are also being promoted both within the District but also across Lincolnshire.

8.3 LCC requests that the ExA and SoS have regard to this Local Impact Report when making its decision in addition to any further written representations that LCC may wish to make during the Examination and at Issue Specific Hearings relating to matters that are not contained within this LIR.

Appendix B – Comments from LCC appointed landscape consultants (AAH)

LANDSCAPE AND VISUAL REVIEW

OF THE DEVELOPMENT CONSENT ORDER (DCO) APPLICATION

FOR THE HECKINGTON FEN SOLAR PROJECT

FOR

LINCOLNSHIRE COUNTY COUNCIL

September 2023

Landscape and Visual Review

Quality Assurance – Approval Status

Version	Date	Prepared by	Checked by	Approved by	Version Details
1	15/09/2023	Kevin Gillespie	Tom Ferraby	Oliver Brown	Initial Draft for client comment
2	XX/09/2023	Kevin Gillespie	Paul Booth	Oliver Brown	Issued for Proofing
3	XX/09/2023	Kevin Gillespie	Tom Ferraby	Oliver Brown	Issued for client comment

Landscape and Visual Review

Contents

Appendices:

Appendix A: Previous AAH Consultation documents:

AAH TM01 Viewpoint comments 05/05/22

AAH TM02 Viewpoint comments 31/05/22

AAH TM03 PEIR comments 02/08/22

AAH TM04 RR Comments 07/06/23

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).*

Figures:

Figure 1: xx

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 Heckington Fen Solar Project (the '**Development'**), submitted to the Planning Inspectorate in March 2023, 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 (**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.**

1.3 This report will be utilised to inform and guide LCC input into further stages of work through the Examination of the application for a DCO for the Development, which is 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 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 (LI) and the Royal Town Planning Institute (RTPI).

1.5 This review has been prepared by Kevin Gillespie, who is a Chartered Landscape Architect within AAH with over 20 years' experience in landscape design and assessment.

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://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/EN010123/EN010123-000343-Examination%20Library.pdf
- https://national-infrastructure-consenting.planninginspectorate.gov.uk/projects/EN010123/documents
- Environmental Statement Chapter 6: Landscape and Visual Impact Assessment February 2023;
- Chapter 6 Appendices:
  - Appendix 6.1 LVIA Methodology (document reference 6.3.6.1);
  - Appendix 6.2 Omitted Viewpoints A1 and A3 at Great Hale Fen (document reference 6.3.6.2);

- Appendix 6.3 Arboricultural Survey, Impact Assessment and Protection Plan (document reference 6.3.6.3);
- Appendix 6.4 Extract from National Character Area 46 The Fens (document reference 6.3.6.4);
- Appendix 6.5 Extract from the North Kesteven Landscape Character Assessment (document reference 6.3.6.5);
- Appendix 6.6 Extract from the Landscape Character Assessment of Boston (document reference 6.3.6.6);
- Appendix 6.7 Scoping Out – Landscape Character Receptors (document reference 6.3.6.7);
- Appendix 6.8 Scoping Out - Visual Assessment (document reference 6.3.6.8);
- Appendix 6.9 Detailed Visual Assessment (document reference 6.3.6.9);
- Appendix 6.10 Summary of Section 42 Consultation Responses since PEIR (document reference 6.3.6.10).
- Appendix 6.11 Legislative and Policy Framework (document reference 6.3.6.11).
- Appendix 7.4 Design and Access Statement

Chapter 6 Figures:

- Figure 1.1 Order Limits (document reference 6.2.1);
- Figure 1.4 Filed Plan (document reference 6.2.1);
- Figure 2.1 Indicative Site Layout (document reference 6.2.2);
- Figure 2.2a Cumulative Sites - Shortlisted (Regional Context) (documentreference 6.2.2);
- Figure 2.2b Cumulative Sites - Shortlisted (Local Context) (document reference 6.2.2);
- Figure 2.3 Proposed Development (document reference 6.2.2);
- Figure 3.5 Indicative Cable Route (document reference 6.2.3);
- Figure 3.6 Environmental Designation Plan (document reference 6.2.3);

- Figure 4.3 Indicative Phasing Plan (document reference 6.2.4);
- Figure 6.1a Site Location Plan – Energy Park (document reference 6.2.6);
- Figure 6.1b Site Location Plan – Off-site Cable Route Corridor & NationalGrid Bicker Fen Substation Extension Works (document reference 6.2.6);
- Figure 6.2a and 6.2b Landscape Strategy Plan (document reference 6.2.6);
- Figure 6.3 Landscape Character Plan (document reference 6.2.6);
- Figure 6.4 Visual Receptors Plan (document reference 6.2.6);
- Figure 6.5a Screened Zone of Theoretical Visibility - Solar Areas and Proposed Viewpoint Locations Plan (document reference 6.2.6);
- Figure 6.5b Screened Zone of Theoretical Visibility - Substation Equipment with EES and Proposed Viewpoint Locations Plan (document reference 6.2.6);
- Figure 6.5c Screened Zone of Theoretical Visibility - National Grid Bicker FenSubstation Extension Works and Proposed Viewpoint Locations Plan (document reference 6.2.6);
- Figure 6.6 Context Baseline Views and Photoviews (document reference 6.2.6);
- Figure 6.7 Photomontages (document reference 6.2.6);

The Landscape and Visual chapter was read, and is assessed, in conjunction with the following documents;

- Appendix 6.7 Scoping out Landscape Character receptors (document reference 183)
- Appendix 6.9 Design and Access Statement (document reference 185)
- Appendix 7.8 Outline Construction Environmental Management Plan (oCEMP) (document reference 239);
- Appendix 7.7 Outline Operational Environmental Management Plan (oOEMP) (document reference 239);
- Appendix 7.9 Outline Decommissioning & Restoration Plan (document reference 240);
- **Figure 1.1** Order Limits (document reference 6.2.1);
- **Figure 1.4** Filed Plan (document reference 6.2.1);
- **Figure 2.1** Indicative Site Layout (document reference 6.2.2);
- **Figure 2.2a** Cumulative Sites - Shortlisted (Regional Context) (document reference 6.2.2);
- **Figure 2.2b** Cumulative Sites - Shortlisted (Local Context) (document reference 6.2.2);
- **Figure 2.3** Proposed Development (document reference 6.2.2);
- **Figure 3.5** Indicative Cable Route (document reference 6.2.3);
- **Figure 3.6** Environmental Designation Plan (document reference 6.2.3);

- **Figure 4.3** Indicative Phasing Plan (document reference 6.2.4);
- **Figure 6.1a** Site Location Plan – Energy Park (document reference 6.2.6);
- **Figure 6.1b** Site Location Plan – Off-site Cable Route Corridor & NationalGrid Bicker Fen Substation Extension Works (document reference 6.2.6);
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- **Figure 6.7** Photomontages (document reference 6.2.6);
- **Appendix 6.1** LVIA Methodology (document reference 6.3.6.1);
- **Appendix 6.2** Omitted Viewpoints A1 and A3 at Great Hale Fen (documentreference 6.3.6.2);
- **Appendix 6.3** Arboricultural Survey, Impact Assessment and Protection Plan(document reference 6.3.6.3);
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- **Appendix 6.5** Extract from the North Kesteven Landscape CharacterAssessment (document reference 6.3.6.5);
- **Appendix 6.6** Extract from the Landscape Character Assessment of Boston(document reference 6.3.6.6);
- **Appendix 6.7** Scoping Out – Landscape Character Receptors (documentreference 6.3.6.7);
- **Appendix 6.8** Scoping Out - Visual Assessment (document reference6.3.6.8);
- **Appendix 6.9** Detailed Visual Assessment (document reference 6.3.6.9);
- **Appendix 6.10** Summary of Section 42 Consultation Responses since PEIR(document reference 6.3.6.10).

  Appendix 6.11 Legislative and Policy Framework (document reference6.3.6.11).

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 developer 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 AAH have subsequently issued four Technical Memos summarising comments and consultation through the Pre-application period, the details of which are summarised;

- TM01 Viewpoint comments (May 2022)
- TM02 Viewpoint comments (May 2022)
- TM03 Preliminary Environmental Information Report (PEIR) Comments (August 2022)
- TM04 Relevant Representation (RR) Comments (June 2023)

The AAH Technical Memos are included within **Appendix A**.

1.9 The consultation is summarised within the LVIA from section 6.3.5 detailing consultation with both Lincolnshire County Council and North Kesteven District Council relating to viewpoint selection. Table 6.1 summarises the consultation with AAH through LCC, this will be considered in detail in sections 2,3 and 4 of this LVIA review.

2.0 Presentation of the LVIA

The following section provides a review of the presentation of the LVIA:

- *Is the LVIA appropriate and in proportion to the scale and nature of the proposed Development;*
- *Are the 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 considers in detail the consultation including feedback from the Secretary of State, Lincolnshire County Council (LCC) and North Kesteven District Council recommending that the ES considers the worst-case scenario in regards to panel types, as well as assessing the impact of overhead lines as well as underground where uncertainty remains. The matters raised by LCC included considering the dimensions and potential effects of the energy storage elements of the proposed Development, alongside the impact of the construction compounds. Table 6.1 summarises the consultation regarding the viewpoints and clarifies the stance taken within the LVIA with some viewpoints reviewed to illustrate a lack of inter-visibility and others included as viewpoints 20 to 22.

2.2 The preliminary study area within the scoping report, submitted January 2022 was set at 5km and this was supported by a preliminary Screened Zone of Theoretical Visibility (SZTV), which assumed a maximum panel height of 4.5m. The "SZTV was based on the OS dataset, which included larger areas of woodland and tree planting, but excluded small areas of woodland, tree belts, and hedgerow vegetation". The PEIR, which followed fieldwork assessment refined the SZTV including substation assessment at a maximum of 15m height and continued panel assessment height of 4.5m. the dataset was refined to consider the impact of smaller groups of trees and larger hedgerows.

2.3 The design has evolved following the PIER submission, and subsequent consultation, this includes decisions regarding the design and orientation of the arrays as well as adopting a single centralised substation.

2.4 The LVIA introduction confirms compliance with GLVIA3, and reiterates that the purpose is to identify and assess the significance of and the effects of change resulting from the

Development on both landscape as an environmental resource and on people's view and visual amenity. Paragraph 6.2.8 identifies the elements of the project resulting in adverse landscape and visual effects including the short-term construction activity, the fixed mounted panels set at 3.5m and the inverter/ transformer stations located within the panels. Other elements such as the fencing, the gates and the sub-stations are considered in detail in this section also.

2.5 Section 6.3 details the assessment approach in determining both direct and indirect impacts on visual amenity during the three phases of the proposed project: construction, operation, and decommissioning. Assessment is determined by a combination of desk-based and fieldwork appraisal alongside reviews of feedback both from the scoping review and the PIER stage submission. Best-practice methodology has been followed in this aspect by considering all of the stages of the project.

2.6 The LVIA considers in detail the feedback received following the intermediate submissions and reiterates how the design, and particularly viewpoint selection has developed following these responses. Table 6.1 summarises the consultation and clearly justifies the decision making in response to the feedback including the selection or omission of particular viewpoints. This helps with the transparency of decision making and assists in the fieldwork review process.

2.7 The desk-based assessment, supported by the fieldwork, concluded with an assertion that 3.5km represented the maximum extent of visibility and that any visual effect beyond 1.5km would not be significant. This is a plausible summation, but the scale of the Development will be a notable insertion into the wider landscape and considering the topography some long-distance views are evident throughout the study area.

LVIA Appendices

2.8 The Appendices produced as part of the LVIA provide very detailed supporting information relating to the assessment.

LVIA Figures

2.9 The Figures produced as part of the LVIA are appropriate both in level of detail provided and clarity of information presented.

3.0 Methodology and Scope

The following section provides a review of the LVIA Methodology:

- *Has the LVIA been prepared by 'competent experts';*
- *Is the methodology in accordance with relevant guidance and meet 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.*

Methodology

3.1 The Methodology to the LVIA is presented in Appendix 6.1; 6.3.6.1. Beginning by reiterating the compliance with GVLIA3 guidance in assessing landscape elements, character, and visual amenity as related but different components. Reference is made to industry best-practice guides including IEMA, Natural England and LI technical guidance notes.

3.2 The series of tables and text define the method of assessment by explaining value, susceptibility, sensitivity, and magnitude of change, to determine the overall degree of landscape and visual effects. Cross-reference is made to GLVIA3 in aspects such as defining sensitivity to reinforce the contents of the tables. The determination of magnitude of change is presented clearly as a process of professional judgement.

3.3 The effects on landscape character is introduced in section 3 of the methodology highlighting the criteria for determining sensitivity and magnitude to clearly identifying the change resultant from the development. A series of tables highlight the criteria for assessment by explaining how magnitude of change is assessed alongside the determination of value and assessment of susceptibility. These are used to assess visual susceptibility as shown in Table 9.

3.4 Visual amenity is considered in section 4, and commences by reiterating the GLVIA3 definition, using this to inform the reader that the LVIA considers the changes to views arising from the proposals in relation to visual receptors including settlements, residential properties, transport routes, recreational facilities, and attractions. The assessment of these is reinforced by the prudent selection of representative viewpoints.

3.5 Section 5 of the methodology details the process of the assessment of cumulative effects. This is defined as “the study areas for two or more solar farms or other infrastructure, considered relevant to the assessment, overlap so that the cumulative schemes are experienced at proximity where they may have a greater incremental effect.” Paragraph 5.3 extensively defines the cumulative magnitude of change as an expression of the degree to which landscape character receptors and views will be changed by the addition of the proposed solar Development to the identified solar schemes and other infrastructure, that are already existing, consented or proposed. The different variables contributing to this assessment of change is defined within the paragraph and reinforced by paragraph 5.5 which defines the different ways a viewer can perceive the Development and the degree of change, these include simultaneous or in combination, in succession, in sequence or perceived, each of these are defined to assist understanding of how the assessment and application of professional judgement has been undertaken.

3.6 The final section of the methodology determines the significance of landscape and visual effects, again using tables and text to introduce significant, which is defined as ‘having a definitive effect on the view’ and not significant which is considered as ‘not definitive, and the effect continues to be defined principally by its baseline condition.’ Table 12 determines

that a significant change is set within the threshold of major effect, however best-practice determines that both moderate and major impacts are considered as significant, so there is divergence of opinion on this matter.

3.7 The body of the LVIA repeats many of the points detailed within the methodology document and uses a section of the tables to highlight the criteria used to apply professional judgement to determine the effect.

3.8 A section commencing with paragraph 6.3.52 explains the graphic techniques used across the LVIA, including the process of establishing the effects of the Development through the production of SZTV plans.

4.0 Appraisal of Landscape Baseline and Effects

The following section provides a review of the Landscape Baseline and Effects:

- *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 visual 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 6.4 of the LVIA, the section begins by describing the character of the local landscape in relation to published Landscape Character Assessments, particularly in regards to identified receptors. The assessments referenced range from a national context provided by Natural England through to local assessments undertaken by North Kesteven Council for the Energy Park and the Cable Route Corridor, and Boston Borough Council for the Off-site cable route corridor. The landscape Character plan is referenced and listed as Figure 6.3.

4.2 The Site is located within National Character Area 46: The Fens, and the key features of this are described in paragraph 6.4.6. Paragraph 6.4.10 describes the key characteristics of the Fens Regional Character Area, within which the Energy Park falls. Within a finer grain context, the Fenland Landscape Character sub-area occupies the majority of the 5km study area. The off-site cable route corridor and substation site at Bicker Fen fall within the Landscape type A: Reclaimed Fen, which is distilled down to a Landscape Character Area A1: Holland Reclaimed Fen. All of the Character areas are described in detail within the chapter.

4.3 Paragraph 6.4.18 references Appendix 6.3- Arboricultural Survey, Impact Assessment and Protection Plan (document reference 6.3, 6.3) this describes some of the features of the area including woodland blocks, farm buildings, lines of trees and hedgerows.

4.4 The surrounding landscape is described in paragraph 6.4.21, the order limits landscape is described as typical of the managed fenland agricultural landscape. It is an area that fits within the wider context and does not contain any distinguishing features of note. There are no statutory landscape designations either within the order limits or the wider context. Table 6.4 draws a useful assessment of the landscape values, with an appraisal of the differing assets.

4.5 Susceptibility is considered from paragraph 6.4.25, the Site, containing a number of large fields; described as a large-scale landscape dominated by big skies. It is said that this is typical of NCA 46, which is noted for “large-scale, flat, open landscape with extensive vistas to level horizons. The level, open topography shapes the impression of huge skies which convey a strong sense of place, tranquillity, and inspiration.” The section considers in detail the degree of susceptibility in relation to the open character, the flat topography as well as the lack of prominent landmarks, before reaching a conclusion that the landscape appears settled, quiet and remote in places.

5.0 Appraisal of Visual Baseline and Effects

The following section provides a review of the Visual Baseline and Effects:

- *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; and*
- *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 receptors

5.1 Desk-based assessment was initially undertaken to generate SZTV plans, which were presented in the PEIR stage of assessment. Two site visits were undertaken during late Spring 2022. All of the research, which is in line with best-practice, determined that the views from within the Site are of medium to long-range. Paragraphs 6.4.43 to 6.4.49 describes the characteristics of the Site and surrounding area and offers an accurate summation. The assessment process determined that a study area of 1.5km radii should be used, with the caveat that some of the selected viewpoints should be beyond that limit. This is an acceptable approach to use viewpoints beyond the focus area to determine the actual effect of the Development on the medium and long-range views.

Landscape Assessment

5.2 The Landscape Assessment focuses on the appraisal of impact from selected viewpoints which the LVIA reiterates were not selected to cover every possible view of the Development, but rather are a representation of the range of receptor types. The different receptor types are shown to include residents, users of PRoW and road users. The final selection of the viewpoints was revised following advice from LCC.

5.3 Table 6.5 identifies the 23 selected viewpoints and provides a useful summation as to the rationale of selection. It is useful to identify why 11 of the shortlisted viewpoints were not selected for further assessment, this rationale is further detailed in Appendix 8.8 (ref 6.3.6.8).

5.4 The effect on different receptor types are considered from paragraph 6.4.57, and dividing the appraisal into succinct paragraphs is a useful approach and enables effective on-site assessment of the findings of the LVIA. The overall assessment of PRoW is summarised further from paragraph 6.4.69, the following paragraph then describes in detail the paths omitted from further assessment. Again, the approach here enables effective cross assessment of the LVIA findings.

Visualisations/Photomontages

5.5 The representative viewpoints are covered in figures 6.7 and 7.3, and omitted viewpoints are identified within Appendix 6.2. The images are clear and follow best-practice, with relevant information presented to support the view. The assessment was undertaken during April 2022 and December 2022 and the viewpoints cover the study area effectively and are selected carefully to assess the effect on different receptors. The clear identification of the omitted viewpoints is useful to cross-reference the approach and findings through site assessment.

Assessment of effects

5.6 Section 6.5 considers the likely significant effects, commencing with the construction effects, the type of impacts is detailed, and this is then broken-down to consider the effects into distinct categories including elements within the order limits, topography, groundcover, trees and hedgerows, PRoW, water features and drainage. It is useful to have these different receptors identified in detail and makes the appraisal process easier to conduct.

5.7 The section then moves on to consider the effect on Landscape Character, progressing from national character area to local finer grain landscape types.

5.8 Table 6.6 is a summation of the predicted effects on the viewpoints during the construction phase. Settlements and transport routes are then assessed. It is useful to consider the transport routes as the network in the study area is likely under significant pressure from the volume of traffic as well as the scale of the vehicles, so it is important to appraise these in detail.

5.9 The considered effects of construction on the study area's PRoW is considered within table 6.7, where each is assessed alongside a useful summation of the reasoning behind the assessment.

5.10 The process is then repeated in the same level of detail for the operation phase and then decommissioning. Overall, the assessment of effects is clear, concise and covers all of the aspects with clarity.

5.11 Table 6.10 provides a summary of the effects of the receptors during construction and operation, it includes the impact of mitigation. It is noted that within this table moderate is not considered to be significant, this would need to be consistent approach across the whole ES and not just the LVIA chapter.

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):

- *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; and*
- *Are any residential properties (receptors) likely to experience significant effects to their visual amenity.*

Appraisal of Cumulative Landscape and Visual Effects

6.1 Cumulative schemes are considered in section 6.7 of the LVIA, the section commences by referencing GLVIA3 and Planning Inspectorate Advice Note Seventeen (2019) in regards defining potential cumulative landscape and visual effects of the proposed Development. With reference to Chapter 2, It is considered that there are no inter-project effects. Appendix 2.3 identifies a long and shortlist of cumulative sites.

6.2 Paragraph 6.7.11 identifies a number of Developments which have been excluded from the LVIA, all of which fall outside of the 3km study area. Whilst it is likely they the distance reduces intervisibility it is important to understand that given the potential for long-range views across the relatively open landscape that the 3km distance is not the only defining reason for omission. This section of the LVIA does not make it clear if fieldwork has been used to reinforce the theoretical assumption that distance renders intervisibility as negligible, therefore resulting in omission.

6.3 Paragraph 6.7.14 introduces the three solar energy schemes, including one awaiting determination, located within the study area, each of the two operational schemes are considered in detail in the following paragraphs.

7.0 Mitigation and Design

The following section provides a review of the Mitigation and Design:

- *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; and*

- *Is the long-term management of existing and proposed vegetation properly addressed in any long-term management plans to promote establishment.*

Evidence of Iterative Process

7.1 Mitigation proposals are considered in section 6.6 of the LVIA. During design development following the PEIR submission the height of the arrays has been reduced from 4.5m to 3.5m. Similarly, there have been refinements to the layout to enhance separation from residential properties and the public highways. This process of design-led mitigation is welcomed.

Mitigation Measures

7.2 Other mitigation measures are detailed within paragraph 6.6.5 and include protecting existing trees and providing offsets from watercourses and vegetation. Individual properties have had the offset increased, and the proposed 12v substation has been omitted from the design of the Energy Park. The change to a single centralised onsite substation alongside the energy storage system increases separation distances from East Heckington.

7.3 The design has evolved and appears to have responded to the consultation process, there is clear evolution from the PEIR presentation. The mitigation has responded to the recommendations of the local landscape character area reports.

7.4 In addition to the LVIA the mitigation section is supported by the outline Construction Environmental Management Plan (oCEMP) (doc ref 7.7), the outline Landscape and Ecological Management Plan (oLEMP) (doc ref 7.8), and the outline Decommissioning and Restoration Plan (oDRP) (doc ref 7.9).

7.5 Paragraph 6.6.9 onwards details aspects of mitigation considered as enhancements including areas which will be utilised for habitat enhancement, and it is acknowledged that the modest interventions which include offsets will increase separation distances. Whilst this is commendable, the advantages of these would come from a significant scale and not merely a token effort. Given the size of the scheme it would be useful if the idea of 'modest' enhancement could be scaled up somewhat. One element considered in this section is the creation of a community orchard, but whilst this appears a good idea, it is a sparsely populated area so is there a community present close enough to manage it and benefit fully?

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. 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)* and whether it is sufficient to support making an informed decision.

Also, the Landscape and Visual elements of the supporting information (as listed in **Section 1.6** of this report) has been reviewed and comments made where relevant.

Finally, recommendations for further information to be sought are provided to assist in the Examination of the DCO Application.

Summary and Conclusions on the LVIA

6.1 The LVIA and the associated figures, appendices and documents provides a thorough analysis of the Development. The collective assessment is thorough, easy to navigate and complies with best practice methodology. The viewpoints and photomontages cover the study area effectively and the figures are clear and well-presented. The document has shown the rational for both selection of viewpoints and the omission for others and this enables effective on-site examination and assessment.

6.2 The 3km study area is appropriate but since the open nature of the landscape provides the possibility for long-range views there is the possibility that receptors beyond the study area will experience the Development within the landscape. It is noted that over the application period the Development design has evolved including reducing the array height from 4.5m to 3.5m along with changes in the sub-station numbers and locations.

6.3 The assessment has considered all phases of the Development in detail and accounted for the impact on the wider road network during construction and decommissioning , during which the volume of traffic and the numbers of vehicles will be unprecedented for the local network.

6.4 Paragraph 6.8.8 commences the summation of the likely effects of the Development. The assessment considers the effects during the different phases of the Development, and the construction is considered to result in short-term significant adverse effects, with this reverting to minor-adverse (and therefore not significant) during the operation phase outside of a distance of 500m from the Energy Park. This is likely to be the case generally but given the open nature of the landscape affording long-distance views this does appear to be too generalised a determination.

6.5 Table 6.10 provides a useful collective table to review the different receptors. The assessment is thorough and logical, although the conclusion that only Major or Moderate-Major are to be considered as significant is not a standard conclusion. In line with the Landscape Institute guidance we consider all effects moderate and above to be significant, so therefore dispute some of the conclusions regarding impacts. However, the process of assessment is thorough and well-explained in the volumes.

6.6 The 3km study area selection was explained in detail and whilst it is likely that most effects do arise within that circumference, the impacts beyond the 3km boundary, however intermittent, cannot be ignored.

6.7 Overall, the chapter, appendices and figures provide a clear process of assessment, with sufficient detail, that is not repetitive or onerous, and the process of reviewing is easier as a result of the clarity of information provided.

Technical Memorandum 1 (AAH TM01)

Lincolnshire County Council, Heckington Fen Solar Project

Visual Amenity: Viewpoint Comments

A meeting was held on Monday 11th April 2022 over Microsoft Teams between landscape architects from AAH and Pegasus (Radek Chanas) to go over the general site visibility, viewpoints and potential receptors. We have reviewed the information presented to date and provided by Pegasus, including the Heckington Scoping Report, and subsequently attended site over the week commencing 11th April 2022. We walked the Heckington Fen Solar site and surrounding area and visited all the viewpoints currently proposed by Pegasus. The proposed viewpoints were identified on the draft drawing: *P20-2370_12 Rev A* (23/03/2022) that was that was issued via email from Pegasus. However, following the discussion on 11th April 2022, it was highlighted by Pegasus that through further fieldwork and consultation the viewpoints would be refined further, so the viewpoints proposed have been treated as draft at this stage. Therefore AAH have proposed to provide further comments when a more definitive list of viewpoints has been developed by Pegasus. We will subsequently re-visit site and review each viewpoint and provide further detailed comments.

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. Could an updated ZTV be issued to LCC/AAH when available with any additional proposed viewpoints illustrated. This would be a particularly useful set of information if this included the selected viewpoints, PROW and Roads marked on also. It should also be clear as to the height, extent and location of any proposals that the ZTV has been generated upon. Once these viewpoints have been located, AAH will be able to review on site;

3. When available/agreed, please could further details be provided about the final PV Array extents and final selection from the two options indicated on Images "4", on pg.13 (*Image Of A Bifacial Solar Panel System*; and *Image Of A Tracker Solar Panel System*), and within paras. 3.4 to 3.7 of the Scoping Report. The final dimensions should also be clarified at this point and ZTV updated accordingly;

4. When available/agreed, please could further details be provided about the final Inverter locations and selection from the two options indicated within paras. 3.8 to 3.11 of the Scoping Report. The final dimensions should also be clarified at this point and ZTV updated accordingly (and if appropriate);

5. When available/agreed, please could further details be provided about the final Transformer location and dimensions indicated within paras. 3.12 and 3.13 of the Scoping Report. The final dimensions should also be clarified at this point and ZTV updated accordingly (and if appropriate);

6. At this stage, it is assumed all cabling will be underground, however the Scoping Report indicated within para. 3.15 that onsite cabling may require some above ground cabling. Please provide details and extents of any overhead cabling onsite when available. We would recommend, from a visual perspective, that overhead cabling is avoided where possible;

7. 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;

8. Please could further details be provided about any on-site substation and control buildings (paragraph 3.26 to 3.27 of the scoping report), including location, size/massing and height, including what features would be 15 metres in height. As at this stage we do not have this information, the location of this would likely have visual impacts that would require additional viewpoints beyond those initially identified;

9. 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, at this point one option/route does not appear to be preferable to the others, and would expect the LVIA to provide a clear evaluation and likely impacts of any route;

10. Please could further details be provided about the connection to the National Grid at Bicker Fen and the extent of any development associated with this (paragraph 3.28 and 3.29 of the scoping report), including location, size/massing and height, including what features would be 15 metres in height. As at this stage we do not have this information, the location of this would likely have visual impacts that would require additional viewpoints beyond those initially identified;

11. Please could further details be provided about the implications on existing vegetation to facilitate construction access along the A17 (paragraph 4.1 of the scoping report), both on site and along the access route to the site. As at this stage we do not have this information, the implication of this enabling work may have visual impacts that would require additional viewpoints beyond those initially identified;

12. While viewpoints from the railway line are not likely to be able to be safely obtained, potential views from receptors traveling on trains should be considered within the assessment; and

13. In regards to heritage assets (Listed Building and Scheduled Monuments), we would like to see the intervisibility with each of the key designated heritage assets (or groups of assets) identified within the study area be considered and where appropriate evaluated as part of the assessment, and the steps to mitigate the impact need to be set out.

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 at a further workshop prior to finalising. This is not an exhaustive list of potential viewpoints and in response to the viewpoints already proposed on the Pegasus drawing: *P20-2370_12 Rev A* (23/03/2022). Once a more detailed viewpoint list is produced we will review and provide further comments. All viewpoint photography should provide the most advantageous views of the site and proposed development:

A. **Potential additional viewpoint included from B1395 Clay Lane at edge of settlement of South Kyme.** While a long distance view (3km+), the landscape is very open from this aspect, and there are potential views south and south east to the site, which may include taller elements of the development;

B. **Potential additional viewpoints included from along B1395 Clay Lane, south of Pattingden House.** While providing medium and long distance views the landscape is very open from this aspect, and there are potential views from users of this road travelling south looking tio the south and south east to the site, which may include taller elements of the development;

C. **Potential additional viewpoints included from the access track to Mill Green Farm**. This would provide a close view from the north, however while the flood defences may screen the PV arrays, they may still be visible above the flood embankments.

D. **Potential additional viewpoints included from along the PROW SKym/2/1.** This would provide views o the site from the west, however while the flood defences may screen the PV arrays, they may still be visible above the flood embankments;

E. **Potential additional viewpoint included from along the PROW Heck/13/1 at section on top of flood defence embankments.** This elevated position, while long distance, may provide views east to the site from the west;

F. **Potential additional viewpoint included from along the PROW Heck/2/4 looking east.** It is unclear as to whether vegetation would screen the site from views from along this PROW;

G. **Potential additional viewpoint included from along Littleworth Drove at bridge over A17 at Heckington.** While a long distance view (4km) it is unclear as to whether vegetation would screen the site from views from this elevated position;

H. **Potential additional viewpoints included from along PROW Heck/15/1.** These constitute close range views of the site from sensitive receptors;

I. **Potential additional viewpoint included from junction of PROW Ambe/4/1 and Claydike Bank.** Represents views from the east looking west to the site, however it is unclear as to whether vegetation would screen the site from views from along this PROW;

J. **Potential additional viewpoint included from junction of PROW Ambe/3/1 south of Old Amber Hill.** Represents views from the east looking west to the site, however it is unclear as to whether vegetation would screen the site from views from along this PROW;

K. **Potential additional viewpoints included from Maryland Bank, south of Chestnut House Farm, looking south.** While a long distance view (2km), represents views from the north across an open landscape with limited vegetation cover.; and

L. **Potential additional viewpoints included from Browns Drove looking north west.** Represents views north west from this lane and residential properties along it.

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 would require additional viewpoints beyond those initially identified.

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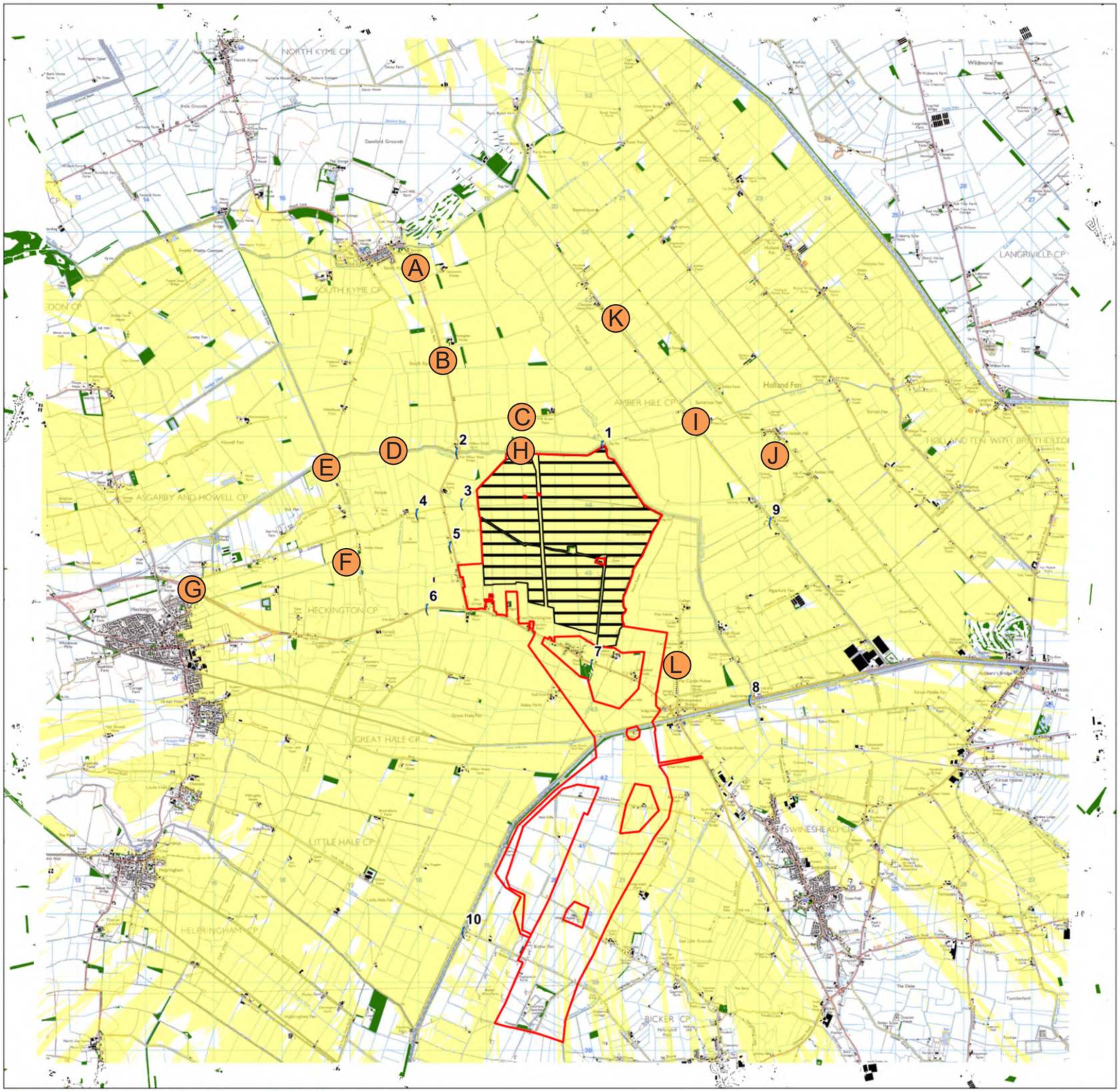
05 May 2022



KEY

- Site Boundary
- Proposed Area of Development
- Proposed Viewpoint Location
- OS Open Map Local Buildings
- OS Open Map Local Woodland
- ZTV - 4.5m High Development Visible

Screened ZTV Production Information -
- DTM data used in calculations is OS Terrain 5 that has been combined with OS Open Map Local data for woodland and buildings to create a Digital Surface Model (DSM).

- Indicative woodland and building heights are modelled at 15m and 8m respectively.
- Viewer height set at 1.7m (in accordance with para 6.11 of GLVIA Third Edition) - Calculations include earth curvature and light refraction

NB. This Zone of Theoretical Visibility (ZTV) image illustrates the theoretical extent of where the development may be visible from, assuming 100% atmospheric visibility, and includes the screening effect from vegetation and buildings, based on the assumptions stated above.

DESIGN | ENVIRONMENT | PLANNING | ECONOMICS | HERITAGE

0 3.25 km

Revisions:
First Issue 13/12/2021 AD
A - 23/03/2022 CR Revised boundary

Screened Zone of Theoretical Visibility and Proposed Viewpoint Locations

Heckington Fen Solar

AAH MARK UP

REFER TO AAH TM01

May 2022

A

AAH consultants

Technical Memorandum 2 (AAH TM02)

Lincolnshire County Council, Heckington Fen Solar Project

Visual Amenity: Viewpoint Comments

A meeting was held on Monday 11th April 2022 over Microsoft Teams between landscape architects from AAH (Oliver Brown) and Pegasus (Radek Chanas) to go over the general site visibility, viewpoints and potential receptors. We have reviewed the information presented and provided by Pegasus, including the Heckington Scoping Report, and subsequently attended site over the week commencing 11th April 2022 to carry out an initial visual survey. However, following the discussion on 11th April 2022, it was highlighted by Pegasus that through further fieldwork and consultation the viewpoints would be refined further, therefore initial comments were not issued by AAH until this fieldwork was carried out.

Following this, drawing: *P20-2370_12 Rev B* (13/05/2022) was issued via email from Pegasus which included updated viewpoint locations. Subsequently, AAH re-visited the site week commencing 30th May 2022 and walked the Heckington Fen Solar site and surrounding area and visited all the viewpoints currently proposed on drawing: *P20-2370_12 Rev B.*

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 current layouts, 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. When available/agreed, please could further details be provided about the final PV Array extents and final selection from the two options indicated on Images "4", on pg.13 (*Image Of A Bifacial Solar Panel System*; and *Image Of A Tracker Solar Panel System*), and within paras. 3.4 to 3.7 of the Scoping Report. The final dimensions should also be clarified at this point and ZTV updated accordingly;

3. When available/agreed, please could further details be provided about the final Inverter locations and selection from the two options indicated within paras. 3.8 to 3.11 of the Scoping Report. The final dimensions should also be clarified at this point and ZTV updated accordingly (and if appropriate);

4. When available/agreed, please could further details be provided about the final Transformer location and dimensions indicated within paras. 3.12 and 3.13 of the Scoping Report. The final dimensions should also be clarified at this point and ZTV updated accordingly (and if appropriate);

5. At this stage, it is assumed all cabling will be underground, however the Scoping Report indicated within para. 3.15 that onsite cabling may require some above ground cabling.

Please provide details and extents of any overhead cabling onsite when available. We would recommend, from a visual perspective, that overhead cabling is avoided where possible;

6. 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;

7. Please could further details be provided about any on-site substation and control buildings (paragraph 3.26 to 3.27 of the scoping report), including location, size/massing and height, including what features would be 15 metres in height. As at this stage we do not have this information, the location of this would likely have visual impacts that would require additional viewpoints beyond those initially identified;

8. 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, at this point one option/route does not appear to be preferable to the others, and would expect the LVIA to provide a clear evaluation and likely impacts of any route;

9. Please could further details be provided about the connection to the National Grid at Bicker Fen and the extent of any development associated with this (paragraph 3.28 and 3.29 of the scoping report), including location, size/massing and height, including what features would be 15 metres in height. As at this stage we do not have this information, the location of this would likely have visual impacts that would require additional viewpoints beyond those initially identified;

10. Please could further details be provided about the implications on existing vegetation to facilitate construction access along the A17 (paragraph 4.1 of the scoping report), both on site and along the access route to the site. As at this stage we do not have this information, the implication of this enabling work may have visual impacts that would require additional viewpoints beyond those initially identified;

11. While viewpoints from the railway line are not likely to be able to be safely obtained, potential views from receptors traveling on trains should be considered within the assessment; and

12. In regards to heritage assets (Listed Building and Scheduled Monuments), we would like to see the intervisibility with each of the key designated heritage assets (or groups of assets) identified within the study area be considered and if/where appropriate evaluated as part of the assessment, and the steps to mitigate the impact need to be set out.

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. We would suggest these are discussed at a further workshop prior to finalising. Unless otherwise stated, all viewpoint locations proposed on drawing *P20-2370_12 Rev B* are appropriate, and the following should be considered in addition to these. All viewpoint photography should provide the most advantageous views of the site and proposed development:

A. **Potential additional viewpoint(s) included from south west of the site around Little Hale and/or Great Hale looking north east.** While providing long distance views the landscape is open from this aspect, and there are potential views from users in this area. There is currently little viewpoint coverage proposed south west of the site and this would serve to cover this area, even if to illustrate lack of visibility. Potential location for a viewpoint (or viewpoints) include:
    - A1: Access road to the Farm House and The Last House at Great Hale Fen
    - A2: Access road to White House Farm at Great Hale Fen
    - A3: Little Hale Drove at Little Hale Fen.

B. **Potential additional viewpoints included from along B1395 Clay Bank, south of Pattingden House and woodland blocks.** While providing medium and long distance views the landscape is very open from this aspect, and there are potential views from users of this road travelling south looking to the south and south east to the site, which may include taller elements of the development. This would offer a less screened view from the north than proposed VP19;

C. **Potential additional viewpoints included from the access track to Mill Green Farm/PROW SKym/3/1**. This would provide a close/medium range view from the north, however while the flood defences may screen the PV arrays, they may still be visible above the flood embankments.

D. **Potential additional viewpoints included from along the PROW SKym/2/1.** This would provide views of the site from the west (sequential view along with VP 1 and bullet D below), however while the flood defences may screen the PV arrays, they may still be visible above the flood embankments;

E. **Potential additional viewpoint included from along the PROW Heck/13/1 at section on top of flood defence embankments.** This elevated position, while long distance, may provide views east to the site from the west (sequential view along with VP 1 and bullet E above);

F. **Potential additional viewpoints included from along PROW Heck/15/1.** These constitute close range views of the site from sensitive receptors along the PROW to the north;

G. **Potential additional viewpoint included from junction of PROW Ambe/4/1 and Claydike Bank.** Represents views from the east looking west to the site, however it is unclear as to whether vegetation would screen the site from views from along this PROW and may provide similar view to proposed VP 12;

H. **Potential additional viewpoints included from Browns Drove, north of terraced housing, looking north west.** Represents views north west from this lane and residential properties along it.

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 would require additional viewpoints beyond those initially identified.

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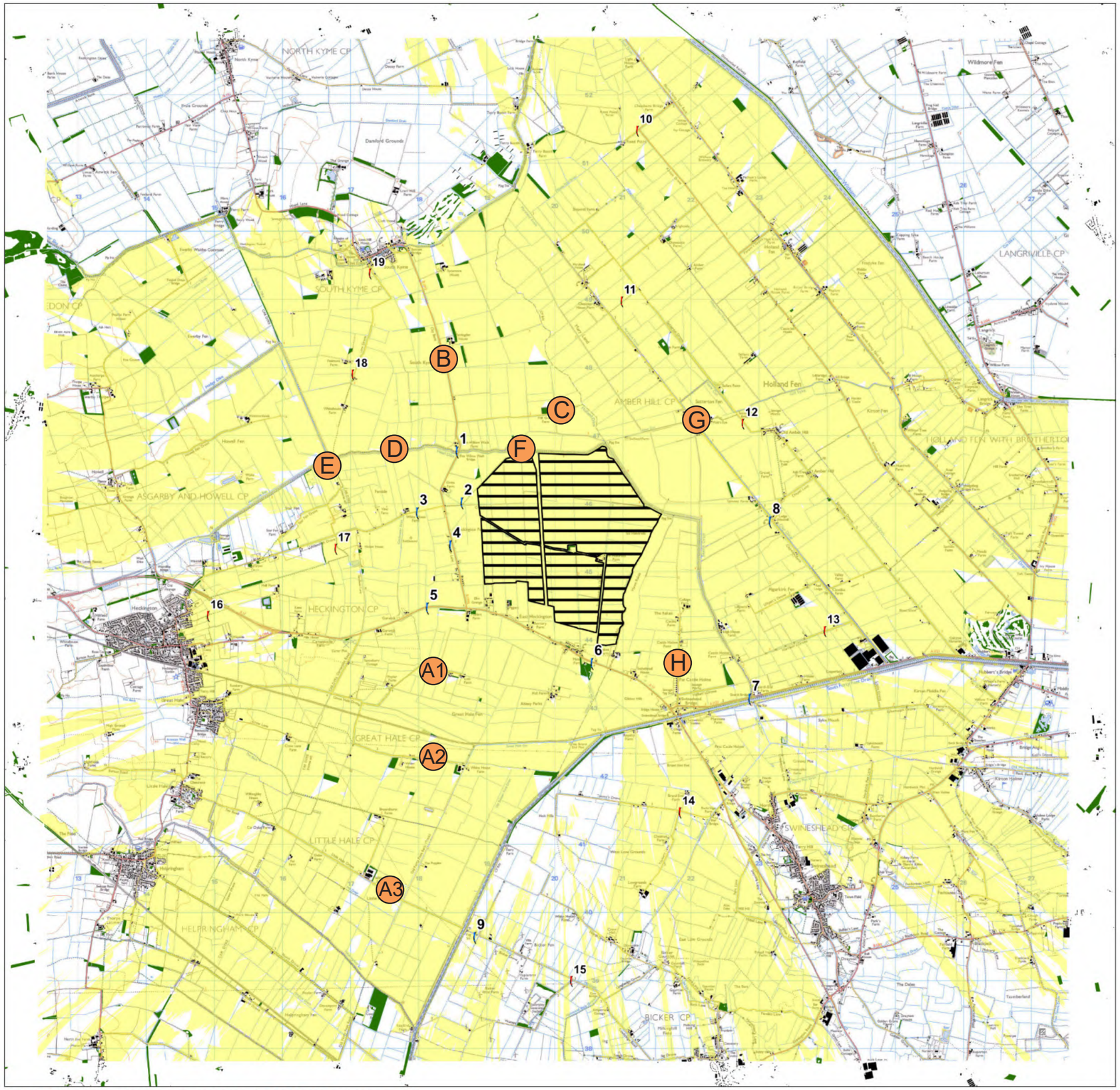
31st May 2022



DESIGN | ENVIRONMENT | PLANNING | ECONOMICS | HERITAGE

0 3 km

KEY

- Proposed Area of Development
- Proposed Viewpoint Location (Scoping report stage)
- Additional Viewpoints
- OS Open Map Local Buildings
- OS Open Map Local Woodland
- ZTV - 4.5m High Development Visible

NB. Scoping report VP 1 omitted, remaining VPs subsequently renumbered

Screened ZTV Production Information -
- DTM data used in calculations is OS Terrain 5 that has been combined with OS Open Map Local data for woodland and buildings to create a Digital Surface Model (DSM)

- Indicative woodland and building heights are modelled at 15m and 8m respectively.
- Viewer height set at 1.7m (in accordance with para 6.11 of GLVIA Third Edition)
- Calculations include earth curvature and light refraction

N.B. This Zone of Theoretical Visibility (ZTV) image illustrates the theoretical extent of where the development may be visible from, assuming 100% atmospheric visibility, and includes the screening effect from vegetation and buildings, based on the assumptions stated above.

Revisions:
First Issue- 13/12/2021 AD
A - 23/03/2022 CR Revised boundary B - 13/05/2022 AJH Additional viewpoints

Screened Zone of Theoretical Visibility and Proposed Viewpoint Locations

Heckington Fen Solar

AAH MARK UP

REFER TO AAH TM02

May 2022

B

Technical Memorandum 3 (AAH TM03):

Lincolnshire County Council, Heckington Fen Solar Project: PEIR Landscape and Visual Comments

Introduction

AAH Consultants have reviewed the Heckington Fen Solar Project: *Land at Six Hundreds Farm, Six Hundred Drove, East Heckington, Sleaford, Lincolnshire. Preliminary Environmental Information Report, June 2022* (PEIR), on behalf of Lincolnshire County Council (LCC), in relation to Landscape and Visual matters. PEIR information downloaded from: https://www.ecotricity.co.uk/our-green-energy/heckington-fen-solar-park-consultation and the documents that have been referenced, are as follows:

- **Preliminary Environmental Information Report. Volume 1: Main Report and Figures:**
  - Chapters 1 to 5 (not formally reviewed, but used to provide context to the site, development layout and proposals that would form the parameters for assessment) including the following figures:
    - Figure 1.1 Site Location Plan
    - Figure 1.2 Administrative Boundaries
    - Figure 1.3 Energy Park Boundary
    - Figure 2.1 Indicative Site Layout
    - Figure 2.2 Cumulative Sites
    - Figure 3.1 Working Indicative Site Layout
    - Figure 3.2 Working Indicative Site Layout (Revision E)
    - Figure 3.3 Site Search Exercise
    - Figure 3.4 Indicative Grid Routes
    - Figure 3.5 Environmental Designations Plan
    - Figure 4.1a Current Assets on Energy Park Site
    - Figure 4.1b Proposed Site Access and internal access
    - Figure 4.1c Proposed Solar PV Development Areas
    - Figure 4.1d Proposed Battery Storage and New Infrastructure
    - Figure 4.1e Proposed Ecological Enhancements for Operational Energy Park
    - Figure 4.1f Proposed Permissive Footpath
    - Figure 4.2 Fixed Solar PV Panel Technology
    - Figure 4.3 Tracker Solar PV Panel Technology
    - Figure 4.4 Indicative Security Fence Design
    - Figure 4.5 Proposed Bicker Fen Extension Design
  - Chapter 6: Landscape and Visual (main focus of AAH review), including the following figures:
    - Figure 6.1 Landscape Character Plan
    - Figure 6.2 Visual Receptors Plan
    - Figure 6.3 Screened Zone of Theoretical Visibility and Proposed Viewpoint Locations for Substation Locations, Energy Storage Areas, and Solar Area (3 separate SZTVs combined into one figure)
    - Figure 6.4 Context Baseline Views
    - Figure 6.5 Cumulative Sites- Regional Context
    - Figure 6.6 Cumulative Sites- Local Context

    - Figure 6.7 Photomontages
  - Chapter 7: Residential Visual Amenity, including the following figures:
    - Figure 7.1 Site Location Plan and Residential Receptors
    - Figure 7.2 Residential Panoramas
  - Chapter 8: Ecology And Ornithology (not formally reviewed, but to provide ecology context to the layout and landscape and visual matters).
  - Chapter 17: Glint And Glare, including the following figures:
    - Figure 17.1 Energy Park and ZTV
    - Figure 17.2 Fixed Panel Array
    - Figure 17.3 Cross Section of Single Axis Tracker
    - Figure 17.4 Receptors of Interest

- **Preliminary Environmental Information Report. Volume 2: Appendices**
  - Appendix 6.1 LVIA Methodology
  - Appendix 7.1 RVAA Methodology

The review takes into account previous AAH comments (Refer to Heckington Fen comments within: *AAH TM01* and *AAH TM02*), as well as meetings held with Pegasus and any subsequent meeting minutes. The comments provided are intended to assist in guiding the next (final) stage of the process, development, and 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. <u>Main Overarching Comments on the PEIR:</u>

1. The proposed development is subject to EIA, and a Scoping Report was issued by the developer: *Environmental Impact Assessment Scoping Report Land At Six Hundreds Farm, Six Hundreds Drove, East Heckington, Sleaford, Lincolnshire On Behalf Of Ecotricity (Heck Fen Solar) Limited,* prepared by Pegasus, which contained a section on LVIA. Subsequently, a *Scoping Report Review* was carried out by LCC (1st February 2022) which was appended to the *Scoping Opinion* issued by PINS dated: 17th February 2022. Overall the scope of the LVIA is generally aligned with the scoping report and scoping opinion, as well as other AAH comments (*AAH TM01* and *AAH TM02*) and meetings held with Pegasus.

   However, Paragraph 6.3.15 of the PEIR states that *"Representative and illustrative viewpoints have been agreed with Lincolnshire County Council and North Kesteven District Council through the Scoping Report submitted to the Planning Inspectorate".* This is not correct, and as part of the scoping report it was requested that further consultation be carried out with the relevant councils in regards to the viewpoint locations and visualisations. Subsequently, AAH/LCC issued *AAH TM02*, that provided general comments on the landscape and visual aspects of the scheme as well as comments on proposed viewpoints, which included recommendations for additional views. These have not been incorporated into the PEIR, or shown on Figures 6.3a, 6.3b, and 6.3c at this stage. Therefore we request that further consultation is carried out between Pegasus and AAH/LCC and other relevant consultees, in regards to agreeing the viewpoints and visualisations.

2. As outlined within Chapters 3 and 4 of the PEIR, the development proposals are still being developed and finalised. This includes the type of panel and location and design of taller/larger elements such as substations and battery storage. While it is understood that

some aspects of the scheme are unlikely to be detailed until the tendering stage has been completed, we would expect a reasonable level of design fix for the final ES which would clearly set out the parameters of the development, such as heights and locations of elements that have been used in the assessment, which if there are still some outstanding design and layout elements to be finalised would be based on a "worst case" scenario to ensure any effects are not underplayed. This is particularly important for larger and taller elements such as sub stations or battery storage.

3. As mentioned within paragraph 6.3.15 of the PEIR, it is requested that further landscape and visual consultation is carried out between AAH/LCC and District Authority landscape specialists and the developer team (Pegasus) following the conclusion of this second formal consultation phase. This would likely cover the PEIR comments, *AAH TM02,* as well as development proposals and the mitigation scheme, and location of any larger structures or buildings such as the substations and development at Bicker Fen Substation, extent of vegetation loss for highways works, and also subsequent knock-on effects such as any requirement for additional viewpoints or AVRs.

B. <u>Detailed Comments on Preliminary Environmental Information Report Volume 1: Main Text:</u>

1. In regards to the landscape and visual matters of the Environmental Impact Assessment Methodology chapter (**Chapter 2 of the PEIR**):
   - Comments on the ***Development Parameters And Rochdale Envelope*** (Sections 2.4) are as follows:
     - As stated in previous correspondence (refer to paragraphs 1 to 4 of *AAH TM02*), at this stage, we do not have details on the final location and appearance/extent of taller/larger elements that form part of the development. Section 2.4 of the PEIR explains that the design parameters of the development are provided within chapters 3 and 4, and Paragraph 2.4.3 states:
       "Where flexibility is required, guidance produced by the Planning Inspectorate with regard to the use of the 'Rochdale Envelope' approach has therefore been applied within the EIA to ensure a robust assessment of the likely significant environmental effects of the Scheme. This involves assessing the maximum (and where relevant, minimum) parameters for the elements where flexibility needs to be retained, recognising that the worst-case parameter for one technical assessment may differ from another.".
     - While this is a reasonable approach for the solar arrays, we have concerns in regards to the larger and taller elements, and further comments are provided below on chapter 4 of the PEIR.

2. In regards to the Site Description, Site Selection And Iterative Design Process chapter (**Chapter 3 of the PEIR**):
   - Paragraphs 3.2.5 and 3.2.10 provide a narrative on the process of refining the grid connection corridor from the site to the Bicker Fen National Grid Substation. We would expect this route to confirmed as part of the ES and if there are potential landscape and visual effects, these would be assessed as part of the LVIA.

   - Paragraphs 3.2.11 and 3.2.12 provide a brief overview of the extension to the Bicker Fen National Grid Substation. We would expect this to clarified as part of the ES and if there are potential landscape and visual effects, these would be assessed as part of the LVIA.

- While it is understood the PEIR represents a moment in time, and layouts are evolving, *Figure 2.1 - Indicative Site Layout (Revision H),* has been assumed by AAH to be the most up to date layout. Therefore, it is assumed Figures 3-1 and 3.2 have been included to provide detail on the evolution of the layout based on consultee comments.

3. In regards to the Proposed Development chapter (**Chapter 4 of the PEIR**):
   - Section 4.2 covers the "*Rochdale Envelope*" or worst case approach to the assessment, and paragraph 4.2.1 and Table 4.1 cover flexibility within the DCO and plans. While we understand the need for flexibility to accommodate new and evolving technology, the location of taller and larger elements such as the substations and battery storage with have greater visual effects than PV panels, and as such we would expect the locations of these elements be indicated within the ES to allow for the LVIA to accurately assess and viewpoints and/or visualisations to illustrate.
   - Paragraphs 4.5.1 to 4.5.39 provide detailed information on the components of the development and Tables 4.2 and 4.3 of the PEIR usefully provide details of the design parameters used for the PEIR. However, we have concerns in regards to the larger and taller elements, such as the bunding (up to 6m), Substation and Control Building Parameters as outlined in table 4.3. The final location and layout of these elements will have likely greater visual effects in this flat, open rural landscape than PV panels. We would expect the approximate 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 which will be much more visible and conspicuous.
   - Paragraphs 4.5.40 to 4.5.42 provide information on offsite cabling, the route of which is still being developed, and confirms that no above ground cabling is proposed off site. However we have concerns in regards to the visual and landscape impacts, as well as potential ecological impacts, where cables cross obstacles, such as watercourses or the train line, which we assume would be carried out by directional drilling to minimise effects, particularly at construction. This should be clearly stated and assessed as part of the assessment and existing landscape and ecological assets in these locations should be protected and surveyed if appropriate to ensure effects are minimised.
   - Paragraphs 4.5.43 to 4.5.45 provide information on the Bicker Fen Substation works. The ES should clearly state the proposed works in this location as they have likely landscape and visual effects, particularly if impacting existing trees, as referenced within paragraph 4.5.45. At this stage, limited viewpoints have been proposed in this location, and once works are understood, we would suggest consultation is carried out with AAH/LCC and the district councils to ascertain any additional viewpoint requirements to assess visual effects.
   - Mitigation proposals are provided in Table 4.3, which identifies Biodiversity Net Gain Area and Community Orchard. While these areas are shown on illustrative layouts, having these included in the design parameters allows for them to be accurately captured as part of the scheme, and parameters plan clearly illustrating these areas would be recommended. Figures 4.1C , 4.1 D and 4.1E appear to be good examples of plans to submit as potential parameter plans to accompany the design parameters tables. This would allow for transparency and clarity of development areas, areas of taller/larger development and mitigation when reviewing the LVIA and allow for an understanding of how the development has been assessed.

- Regarding the community orchard: at this stage it is unclear why this has been included within the scheme or if consultation has been carried out with the community to include this element. While it would undoubtably be a positive addition to the landscape, it is unclear what community would benefit, use or maintain the orchard being in a relatively remote location and likely accessed primarily by car. The adjacent Elm Grange School would undoubtably benefit from this asset, however could an explanation and justification be provided, and are there other assets that may be more appropriate in this location?
- Regarding vegetation loss:
  - The extent of any vegetation loss to facilitate construction access or the permanent site access points from the A17, outlined in Table 4.3, is not identified. While it is assumed that site access will be taken from existing agricultural tracks and field entrances to minimise effects, it is likely these may need vegetation cut back for sight lines and/or widening.
  - Any vegetation loss to facilitate any potential wider highways works (as illustrated on highways figures within Appendix 14.1 of the PEIR) for construction access is not identified. Paragraph 4.7.1, bullet 15 identifies widening of highways access points, which may result in vegetation removal, and bullet 16 identifies vegetation removal at Bicker Fen Substation. This removal is likely to open up views and remove valuable elements of the local landscape.
  - We would expect any vegetation works or loss all to be clearly illustrated and included within any assessment, as this has the potential to remove existing valuable features (that make up the character area) and open up views into or across the site or the wider area. 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 as part of the proposals.
- Regarding Overhead/ground lines: Could it be clarified the height of any above-ground cabling and associated poles are proposed within the site, as these will likely have additional visual effects and would need to be considered within the LVIA.
- If the plans and sections for the LVIA are still intended to be indicative, the LVIA needs to clearly state what layout, offsets and mitigation the assessment has been based upon, as different mitigation strategies will likely alter potential effects. Also, we would expect the layout to not just deliver green infrastructure to the minimum offsets provided on Figure 4.1 C and seek opportunities for positive contributions to the landscape of the site. We would recommend an Outline Landscape and/or Ecological Management Plan, or similar, be developed to provide a clear strategy to secure any mitigation and enhancement areas.

4. In regards to the Landscape and Visual chapter (**Chapter 6 of the PEIR**):
   - The visual receptors and viewpoints were previously discussed with AAH, and subsequently AAH issued *AAH TM02* via email to Pegasus with initial comments on receptors and viewpoints, recommending additional viewpoints or amendments to those proposed, and suggested a follow up workshop. It is therefore requested that further landscape and visual consultation is carried out between AAH/LCC and District Authority landscape specialists and the developer team (Pegasus) following the conclusion of this second formal consultation phase.

- For the LVIA, the elements within the Proposed Development, detailed in paragraph 6.2.5, should all reference design parameters, clearly stating extent (location and area) and size (including maximum height) of each element that makes up the development.
- The PEIR identifies the extent of the Study Area of the development of up to 3km at paragraph 6.3.9, which defines the spatial scope of the area to be addressed. The ZTV (Figures 6.3) shows a study area of 5km and along with PEIR (paragraph 6.3.6 and 6.3.7) does identify potential visibility beyond 3km, and from AAH site visits potential visibility of the site and development were identified beyond 3km. The LVIA Chapter should therefore include a clear statement, similar to that provided within paragraphs 6.3.6 to 6.3.9, on the study area (3km or 5km), justification for the extent of the Study Area and figures should also clearly illustrate this extent.
- Paragraph 6.3.10 provides an overview of the proposed development at Bicker Fen Substation, and we would expect the LVIA to fully assess these landscape and visual effects and include viewpoints and visualisations as appropriate.
- Paragraph 6.3.12 states that landscape effects would be limited to the area occupied by the Proposed Development. This may not always be the case, and would anticipate there may be potential effects in the area immediately surrounding the site where the landscape character may indirectly change, for example, currently being an open rural landscape, to one that contains development and artificial landform (bunds) that screen views and effect the perception of openness and "big skies".
- Paragraph 6.3.15 states that *"Representative and illustrative viewpoints have been agreed with Lincolnshire County Council and North Kesteven District Council through the Scoping Report submitted to the Planning Inspectorate".* As stated previously, this is not correct, and as part of the scoping report it was requested that further consultation be carried out with the relevant consultees in regards to the viewpoint locations and visualisations. Subsequently, AAH/LCC issued *AAH TM02*, that provided general comments on the landscape and visual aspects of the scheme as well as comments on proposed viewpoints, which included recommendations for additional views. Paragraph 6.3.67 also identifies (indirectly) comments and initial discussions held between AAH/LCC and Pegasus. The AAH comments have not been incorporated into the PEIR, or shown on Figures 6.3a, 6.3b, and 6.3c at this stage. Therefore we request that consultation is carried out between Pegasus and AAH/LCC in regards to agreeing the viewpoints and visualisations.
- Paragraph 6.3.24 identifies: *"overhead electricity cables on 30m high poles within the Energy Park"*. The extent and location of these needs clarifying as part of the ES to allow for the LVIA to consider these within the assessment.
- In regards to lighting (paragraph 6.3.25), the ES should clearly state what the proposed lighting scheme will comprise, including technical information such as lux levels and how it would be controlled. We would expect the LVIA to provide a visual assessment of this lighting.
- In regards to Assessment of Significance (paragraphs 6.3.33 to 6.3.39), it is assumed the PEIR is stating that only effects of a Major level would be considered as Significant. Therefore, moderate or moderate to major landscape and visual effects may not be considered significant. We disagree with this, which is a variation from typical assessments that may class effects moderate (and above) as significant: no justification in the methodology is provided for this and could lead the assessment as being deemed as underplaying the identification of significant effects.
- Paragraph 6.3.72, bullet 7, states: "*The assessed Proposed Development is based on application drawings that accompany this PEIR and is assessed on the assumption that*

the Proposed Development is delivered in line with these drawings and associated timescales.". This statement causes some confusion as layouts are currently labelled indicative, which we assume is commensurate with the preliminary nature of the PEIR. The submission and LVIA should clearly detail the scheme that the submission will be based upon: indicative layouts or parameter plans.

- Paragraph 6.4.5 identifies PROW Heck/15/1 running along the northern boundary of the site, and also its termination at Head Dyke. This correlates with the online LCC PROW mapping, and while does not connect into a wider network to the east, is a relatively long section (more than 1.6 miles) of PROW that should be considered in the assessment.

Identification of receptors:

- The PEIR identifies a range of landscape and visual receptors within the Study Area.

- The correct National and Local 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 or those that are at a large scale and would provide context only, such as NCAs.

- Potential landscape receptors at varying scales are identified for consideration in the LVIA within paragraphs 6.4.14 6.4.19. We would also expect a finer-grained site-level (and immediate context) assessment and identification of individual elements or features of the site and landscape/landscape character areas to form the baseline of the LVIA.

- 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: Historic Landscape Characterisation – Lincolnshire County Council

- Nineteen viewpoints have been identified (paragraphs 6.4.34 and Table 6.3) within the PEIR, which are located on Figures 6.3a, 6.3b, and 6.3c. The visual receptors and viewpoints were previously discussed with AAH, and subsequently AAH issued *AAH TM02* via email with initial comments on receptors and viewpoints, recommending additional viewpoints or amendments to those proposed. At this stage, this consultation or *AAH TM01* has not been incorporated into the PEIR, and we would request further discussions and meetings are held between AAH and other stakeholders with Pegasus.

  Also, as stated and noted in previous correspondence, at this stage, there are not fixed details on the location and appearance/extent of taller/larger elements that form part of the development, which would likely have visual impacts that may require additional viewpoints beyond those initially identified. Additional viewpoints of development at the Bicker Fen Substation (currently on viewpoint 15 would likely cover this) may also be required once final design or parameters have been developed.

- For the PEIR, three viewpoints have been selected by Pegasus to be developed as photomontages (VPs 6, 8, 18). At this stage, these have not been discussed or agreed with AAH/LCC, or as we understand any other stakeholders or appropriate consultees. We request consultation is held with AAH/LCC and other stakeholders in regards to agreeing the views taken forward as photomontages, 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 and what Type (would likely be Type 3 or 4), to Landscape Institute *TGN 06/19 Visual Representation of Development Proposals.*

- Paragraph 6.4.32 identifies groups of visual receptors:
  - The extent of views (approximate start point and endpoint) that are available to receptors traveling along linear elements (such as roads or PROW) would be useful, e.g. along a 200m stretch of the road looking north, or: from receptors traveling south along high points of the PROW.
  - In regards to the receptor groups: *Road Users,* while many of the surrounding lanes and tracks within the study area are rural and remote in character and primarily used for motor vehicles and farm access, they are also used by dog walkers, horse riders and leisure cyclists, and subsequently the assessment should consider this within the baseline and methodology. The local value of these networks should be considered beyond being simply vehicle "road networks", they also provide suitable connections for walkers improving the connectivity of the wider recreational footpath/PROW network.

- The assessment of Landscape Character Effects (from paragraph 6.5.2) gives an initial judgement on the level of effect; however we would urge caution in regard 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. Using this approach, any development in a large character area will always be deemed relatively "small". 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 elements or characteristics.

5. In regards to the Residential Visual Amenity chapter (**Chapter 7 of the PEIR**):
   - No comments on this chapter, however would suggest reference is made in the RVAA to considering residential views along the cable route and works associated with the Bicker Fen Substation.

C. Detailed Comments on Figures included within Preliminary Environmental Information Report Volume 1:

1. Generally: Figures are well presented and read well.

2. Figure 2.1 Indicative Site Layout: Could it be clarified if this plan is intended to ultimately be developed to be issued as a parameter plan indicating areas of development and areas of mitigation and enhancement? This would make understanding the scheme proposed and subsequently the LVIA easier as it would be clear where and how areas would be changed from the baseline, or clearly describe/illustrate mitigation used – this would be pertinent where the avoidance of a likely significant effect is reliant upon illustrated mitigation measures. If not, this could be misleading as development could theoretically be anywhere on site, based on a worst case approach, therefore if plans are indicative, they should be very clearly labelled so.

The larger and taller elements such as substations and battery storage are also indicated on this plan. If these elements were accompanied with clear design parameters, it would aid understanding of the scheme as a "worst case".

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 to discuss these landscape and visual comments prior to the final ES and scheme submission, and also that a continued dialogue is maintained in regards to the development proposals, including the location of any larger structures or buildings such as the substation.

3. Figure 3.1 Working Indicative Site Layout and Figure 3.2 Working Indicative Site Layout (Revision E): It has been assumed Figure 2.1 of the PEIR is the most up to date layout, therefore, Figures 3.1 and 3.2 have been included to provide detail on the evolution of the layout based on consultee comments. These provide a useful reference as to how the layout is evolving.

4. Figure 4.1b Proposed Site Access and internal access, Figure 4.1c Proposed Solar PV Development Areas, Figure 4.1d Proposed Battery Storage and New Infrastructure, Figure 4.1e Proposed Ecological Enhancements for Operational Energy Park, and Figure 4.1f Proposed Permissive Footpath: Similarly for the comments for Figure 2.1, could it be clarified if these plans are intended to ultimately be developed in the ES to be issued as a parameter plans indicating areas of development and areas of mitigation and enhancement?

5. Figure 6.2 Visual Receptors Plan: The Sustrans route and PROW are marked on the plan, however other potential visual receptors are not located on the figure which would be useful: settlements, transport routes and the railway are difficult to distinguish from other elements, particularly interspersed with the drainage ditches which criss-cross the study area.

6. Figure 6.3 Screened Zone of Theoretical Visibility and Proposed Viewpoint Locations for Substation Locations, Energy Storage Areas, and Solar Area (3 separate SZTVs combined into one figure): This is a useful figure, and illustrates a lot of pertinent information beyond what has previously been presented. However, for this to be a useable figure for the LVIA, the locations and design parameters of the substations and storage areas would need to be fixed and ZTV run on the maximum parameters. The plan does illustrate additional areas of potential visibility that are not covered by the currently proposed viewpoints. The proposed viewpoints were previously discussed with AAH, and subsequently initial comments on viewpoints within *AAH TM02*, recommending additional viewpoints or amendments to those proposed, have not been incorporated into the figures, and we would request further discussions and meetings are held between AAH and other stakeholders with Pegasus.

7. Figure 6.4 Context Baseline Views: We request additional consultation is carried out to agree additional viewpoints, as per consultation comments within *AAH TM02.*
   - Comments on specific viewpoints as follows:
     - VP01B: View needs rotating to the right (south) to incorporate the southern area of the site. View is currently the same as VP01A.
     - VP08: The view doesn't include the southern section of the site and may benefit from being split over two sheets (to create view 08A and 08B).

8. Figure 6.7 Photomontages: Three viewpoints have been developed in the PEIR as photomontages (VPs 6, 8, 18), which we assume have been included as examples of those to be in included within the LVIA. At this stage, photomontages have not been discussed or agreed with AAH/LCC, or as we understand any other stakeholders or appropriate consultee. We request consultation is held with AAH/LCC and other stakeholders in regards to agreeing the views taken forward as photomontages, 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 and what Type (would likely be Type 3 or 4), to Landscape Institute *TGN 06/19 Visual Representation of Development Proposals.* Taller/larger elements appear to have been shown on the photomontage (purple blocks) which appear as to reflect design parameters. The LVIA should include these elements to the maximum design parameters associated with the application, and the photomontages/methodology should clearly state that this is what is being illustrated. If the locations of these elements are not fixed as part of the application, this should also be clearly stated to aid transparency.

D. Detailed Comments on Preliminary Environmental Information Report. Volume 2: Appendices

1. Appendix 6.1 LVIA Methodology:
   - Paragraph 1.7 refers to a 5km Study Area, however paragraph 6.3.9 of the main text refers to a 3km Study Area. The LVIA should clarify this and clearly state what the study area is and provide justification for its extents. We would also query the statement that views of proposals beyond 1km would not be perceptible. This seems unlikely, particularly larger and taller elements of the development such as the substations.
   - Paragraph 2.1 states that landscape effects would be limited to the area occupied by the Proposed Development. This may not always be the case, and would anticipate there may be potential effects in the area immediately surrounding the site where the landscape character may indirectly change, for example, from currently being an open rural landscape, to one that contains development and artificial landform (bunds) that screen views and effect the perception of openness and “big skies”.
   - Paragraph 2.3 and Table 2 in regards to landscape value should include LI guidance: *Technical Guidance Note (TGN) 2/21 Assessing landscape value outside national designations, May 2021 by the Landscape Institute.*
   - Table 2 implies that only landscapes that are designated may be classed as having high value, which is not always the case and LI guidance (TGN 2/21) in regards to assessing landscape value should be utilised.
   - Table 4 provides criteria for assessing landscape sensitivity based on landscape value and susceptibility. While not a requirement, would this information be clearer presented in a matrix that would guide the judgement of landscape sensitivity?
   - Table 6 focusses mostly on the **scale** of change on Landscape Character and doesn’t cover **duration** and **extent** of change adequately. These aspects should also be covered within the methodology and subsequent LVIA.
   - Table 9 provides criteria for assessing visual sensitivity based on view value and receptor susceptibility. While not a requirement, would this information be clearer presented in a matrix that would guide the judgement of visual sensitivity?
   - Table 10 focusses mostly on the **scale** of change for visual receptors and doesn’t cover **duration** and **extent** of change adequately. These aspects should also be covered within the methodology and subsequent LVIA.
   - Paragraph 5.3 and Table 11 states that only effects of a Major level would be considered as Significant. Therefore the methodology is stating that moderate or moderate to major

landscape and visual effects may not be considered significant. We disagree with this, which is a variation from typical assessments that may class effects moderate (and above) as significant: no justification in the methodology is provided for this and could lead the assessment as being deemed as underplaying the identification of significant effects.

- Table 12 provides typical descriptors of landscape effects, however this approach feels restrictive and could imply, for example, that only low sensitivity receptors may experience minor adverse effects, which is not the case. Could this information be presented in a more flexible way that removes specific judgements from the descriptions?
- Table 13 provides typical descriptors of visual effects, however similarly to Table 12, this approach feels restrictive and could imply, for example, that only low sensitivity receptors may experience minor adverse effects, which is not the case. Could this information be presented in a more flexible way that removes specific judgements from the descriptions?
- No methodology for cumulative landscape and visual effects is provided. We would expect this to be included and carried out within the LVIA.

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30th August 2022

AAH consultants

Technical Memorandum 4 (AAH TM03):

Lincolnshire County Council, Heckington Fen Solar Park Project: Relevant Representation Landscape and Visual Comments

Introduction

AAH Consultants, on behalf of Lincolnshire County Council (LCC), have reviewed the relevant Landscape and Visual elements of the Heckington Fen Solar Park DCO Application to provide initial comment to be incorporated within a combined Relevant Representation statement from LCC. The Heckington Fen Solar Project submission documents are available at: https://national-infrastructure-consenting.planninginspectorate.gov.uk/projects/EN010123/documents

Information downloaded is as follows (which include any associated sub-appendices):

- Environmental Statement Chapter 6: Landscape and Visual;
- Chapter 6 Appendices:
  - **Appendix 6.1** LVIA Methodology (document reference 6.3.6.1)
  - **Appendix 6.2** Omitted Viewpoints A1 and A3 at Great Hale Fen (document treference 6.3.6.2)
  - **Appendix 6.3** Arboricultural Survey, Impact Assessment and Protection Plan (document reference 6.3.6.3)
  - **Appendix 6.4** Extract from National Character Area 46 The Fens (document reference 6.3.6.4)
  - **Appendix 6.5** Extract from the North Kesteven Landscape Character Assessment (document reference 6.3.6.5)
  - **Appendix 6.6** Extract from the Landscape Character Assessment of Boston (document reference 6.3.6.6)
  - **Appendix 6.7** Scoping Out – Landscape Character Receptors (document reference 6.3.6.7)
  - **Appendix 6.8** Scoping Out - Visual Assessment (document reference 6.3.6.8)
  - **Appendix 6.9** Detailed Visual Assessment (document reference 6.3.6.9)
  - **Appendix 6.10** Summary of Section 42 Consultation Responses since PEIR
    (document reference 6.3.6.10)
  - **Appendix 6.11** Legislative and Policy Framework (document reference 6.3.6.11)
- Figures to be read in conjunction with Chapter 6:
  - **Figure 1.1** Order Limits (document reference 6.2.1)
  - **Figure 1.4** Filed Plan (document reference 6.2.1)
  - **Figure 2.1** Indicative Site Layout (document reference 6.2.2)
  - **Figure 2.2a** Cumulative Sites - Shortlisted (Regional Context)

(document reference 6.2.2)

- **Figure 2.2b** Cumulative Sites - Shortlisted (Local Context) (document reference 6.2.2)
- **Figure 2.3** Proposed Development (document reference 6.2.2)
- **Figure 3.5** Indicative Cable Route (document reference 6.2.3)
- **Figure 3.6 Environmental Designation Plan (document reference 6.2.3**
- **Figure 4.3** Indicative Phasing Plan (document reference 6.2.4)
- **Figure 6.1a** Site Location Plan – Energy Park (document reference 6.2.6)
- **Figure 6.1b** Site Location Plan – Off-site Cable Route Corridor & NationalGrid Bicker Fen Substation Extension Works (document reference 6.2.6)
- **Figure 6.2a and 6.2b** Landscape Strategy Plan (document reference 6.2.6)
- **Figure 6.3** Landscape Character Plan (document reference 6.2.6)
- **Figure 6.4** Visual Receptors Plan (document reference 6.2.6)
- **Figure 6.5a** Screened Zone of Theoretical Visibility - Solar Areas and Proposed Viewpoint Locations Plan (document reference 6.2.6)
- **Figure 6.5b** Screened Zone of Theoretical Visibility - Substation Equipment with EES and Proposed Viewpoint Locations Plan (document reference 6.2.6)
- **Figure 6.5c** Screened Zone of Theoretical Visibility - National Grid Bicker Fen Substation Extension Works and Proposed Viewpoint Locations Plan (document reference 6.2.6)
- **Figure 6.6** Context Baseline Views and Photoviews (document reference 6.2.6)
- **Figure 6.7** Photomontages (document reference 6.2.6)

The Proposed Development comprises the construction, operation (including maintenance) and decommissioning of ground mounted solar PV panel arrays, an energy storage system (ESS) facility and supporting infrastructure. The land within the Order limits that forms the subject of this ES extends to approximately 644.5ha, encompassing the entire Proposed Development. The Energy Park extends to approximately 524ha as one site.

The Proposed Development includes the following key components:

- Solar PV panels;
- PV module mounting structures;
- Inverters;
- Transformers;

- Switchgear;
- Cabling (including extra high, high, and low voltage power, earthing, communication, and control) – below ground for the grid connection to Bicker Fen, and in trenches and/or behind the panels on the Energy Park;
- Energy Storage Systems (ESS) (technology not determined at this time);
- Onsite Substation comprising a substation and control buildings;
- Fencing, gatehouses, and security measures;
- Internal access tracks;
- Community orchard;

- Permissive path;
- Construction of new access point onto highway (previously consented as part of the previous wind park application);
- Landscaping including creation of new habitat areas;
- Construction areas, worker facilities, temporary compounds, and infrastructure;
- Digging of cable trench and laying cables for connection to the National Grid Bicker Fen Substation;
- Installing access points along the Cable Route Corridor for the grid connection; and
- Extension of National Grid Bicker Fen Substation and installation of above ground equipment.

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. We are particularly concerned about the landscape character effects through changes to the land use over a large area.

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. From close range views, the development has been identified in the LVIA as resulting in a significant change to high and medium sensitivity receptors, including several along the A17 and A1121 corridors, as well as the isolated farmsteads along the B1395. The area of the DCO is predominantly flat, which would limit long distance views, however, with limited existing vegetation cover long distance views of the site and development are possible. Intermittent views may be possible from the railway line, which follows the A1121 before heading towards Heckington to the south of the site along Heckington Fen.

The cumulative landscape and visual effects of the proposed development are also of concern, particularly when assessed alongside the proposed Beacon Fen solar farm which is proposed to the north and south of Heckington. 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. The cut-off date for inclusion of projects was 31st December 2022, which may explain why the Beacon Fen proposal is not included within the cumulative diagram considering local projects.

The submission has provided detailed information in regards landscape mitigation for the site, in figure 6.2 Landscape Strategy and figure 4.1 Proposed Ecological Enhancements. These are supplemented by the Outline Landscape and Ecological Management Plan, reference 7.8. Document 6.3 the Arboricultural Impact Assessment, Tree Survey and Tree Protection Plan details the trees and hedgerows within the DCO limits and proposes the management and protection. The two plans within the document detail the location of the trees assessed, identifies where access will be entered and where storage compounds will be established. It is unclear the extent of disturbance to hedgerows from construction activity.

It would be beneficial to clarify the extents of any hedgerow removals to ensure the LVIA fully assesses these changes, and also where removed hedgerows may be replanted or potentially translocated. One permanent and one existing access point is shown, but it needs assessment of the impact on vegetation within these areas.

The viewpoints have responded to previous communication and have covered a range of receptors across the study area, which has been set at 5km with a core study area of 1.5km this encompasses a sufficiently wide area to assess the landscape and visual impacts.

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 *Outline Landscape and Ecological Management Plan* and *Figure 6.2: Landscape Strategy*, which should be further explored, and assume would be refined at the detailed design stages.

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7th June 2023

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