Nationally Significant Infrastructure Project
West Burton Solar Project

Local Impact Report - December 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.

Purpose and Structure of the LIR

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

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

1.4 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.

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

2. Summary of Proposal

2.1 The Scheme will comprise the construction, operation, maintenance, and decommissioning of ground mounted solar photovoltaic (PV) generating stations with accompanying grid connection infrastructure and energy storage, as well as cable route corridors. The total capacity of the stations exceeds 50MW and the scheme overall will have an anticipated operation life of 60 years.

2.2 The land within the Order limits is partly contained within areas governed by Lincolnshire County Council (LCC) and within the lower tier council area of West Lindsey District Council (WLDC), who will both act as the host authorities for the development. The remaining land within the order limits is contained within Nottinghamshire County Council (NCC) and the lower tier council area of Bassetlaw District Council (BDC), who will also act as host authorities.

2.3 The development's Order Limits consist of three separate sites: West Burton 1, West Burton 2, and West Burton 3. These sites, along with their associated substations and energy storage, will be connected to the National Grid at West Burton Power Station. The Scheme will connect to the National Grid substation via a new 400kV substation constructed as part of the Scheme to provide the connections to the various solar sites. The substations, cable connections and energy storage will be required for the duration of the Scheme.

2.4 The substations and energy storage will be decommissioned and removed at the end of the lifetime of the Scheme but the underground cables are anticipated to be decommissioned in situ to minimise environmental impacts.

3. Description of the Area

West Burton 1

3.1 West Burton 1 totals an area of 91.32ha and is located to the east of Broxholme with the village of Bransby to the northwest, being contained within the parishes of Broxholme and Scampton. The developable area containing solar panels, substation, and associated infrastructure totals 73.51ha. The remaining area is set aside for landscape and ecological mitigation.

3.2 The Site consists almost entirely of agricultural fields used for arable crops, with a relatively flat topography and effective screening from the immediate surroundings by tall hedges around its boundaries. The fields are generally large and typically have dividing hedgerows, with some isolated trees existing outside of the field margins. There are several existing farm access tracks and field accesses within the Site, and part of the Site adjoins the bank of a watercourse that drains into the River Till. Overhead lines cross part of the landholding. The site is traversed by Main Street, a public highway linking Broxholme village, and Tillbridge Lane.

3.3 There are no Listed Buildings or Scheduled Monuments within the Site and it is not within a Conservation Area. There are no Statutory or Non-Statutory ecological designations or Ancient Woodland on the Site, and the site does not include

nationally designated landscape or West Lindsey Area of Great Landscape Value (AGLV).

3.4 The surrounding area is predominantly arable farmland, interspersed with a significant number of woodland blocks. Immediately to the east of the Site is North Carlton Covert, a small block of woodland immediately adjacent to the Site's eastern boundary. The nearest settlement is the small village of Broxholme located immediately to the southwest of the Scheme. To the west lie the hamlets of Bransby and Ingleby and to the east lies the village of North Carlton. Except for the villages/hamlets mentioned above, the area is relatively sparsely populated with isolated residential properties and farmsteads dotted throughout the surrounding countryside.

West Burton 2

3.5 West Burton 2 sits to the west of West Burton 1 and is located to the north of the village of Saxilby. It lies within the parish of Saxilby with Ingleby and covers an area of 306.98ha. The developable area containing solar panels, substation, and associated infrastructure totals 149.62ha. The remaining area is set aside for landscape and ecological mitigation.

3.6 The Site at West Burton 2 consists almost entirely of agricultural fields used for arable crops. The topography is relatively flat and is predominantly well screened from its immediate surroundings by tall hedges around the boundaries. The fields are generally large and typically have dividing hedgerows. There are only isolated trees outside of field margins. There are a number of existing farm access tracks and field accesses within the Site. Part of the Site adjoins the bank of the River Till. Overhead lines cross part of the landholding. The B1241 Saxilby Road/Sturton Road runs north/south through West Burton 2. In the south-eastern corner of the holding, Broxholme Lane cuts across the land in an east/west direction.

3.7 There are no Listed Buildings or Scheduled Monuments within the Site and it is not within a Conservation Area. There are no Statutory or Non-Statutory ecological designations or Ancient Woodland on the Site. The Site does not include nationally designated landscape or West Lindsey Area of Great Landscape Value (AGLV).

3.8 The surrounding area is predominantly arable farmland, interspersed with farms and villages, alongside the larger settlements of Saxilby and Sturton by Stow. The landform is relatively flat with a gentle slope to the east towards the River Till. Around 2.5km to the northwest of the Site lies the settlement of Sturton by Stow and the larger village of Saxilby is located approximately 2.5km to the southwest of the Site. To the west lie the hamlets of Bransby and Ingleby and to the east lies the village of North Carlton. With the exception of these villages/hamlets, the area is relatively sparsely populated with isolated residential properties and farmsteads dotted throughout the surrounding countryside. The landform within the surrounding area is relatively flat with a gentle slope to the east towards the River Till.

West Burton 3

3.9 West Burton 3 sits to the north west of West Burton 2 and is located between the villages of Brampton and Marton within the parishes of Marton, Brampton and Stow. It covers an area of 370.78ha. The developable area containing solar panels, substation and associated infrastructure totals 284.31ha. The remaining area is set aside for landscape and ecological mitigation.

3.10 The Site at West Burton 3 consists almost entirely of agricultural fields used for arable crops. The topography is relatively flat and is predominantly well screened from its immediate surroundings by tall hedges around the boundaries. The fields are generally large and typically have dividing hedgerows. There are only isolated trees outside of field margins. There are a number of existing farm access tracks and field accesses within the Site and a redundant farmhouse which will remain and is not proposed to be redeveloped. The A1500 Stow Park Road/Till Bridge Lane runs along the northern boundary of West Burton 3. Cowdale Lane runs along the southern boundary. A section of public footpath Marton/68/1 runs though the northwest corner of the Site. The railway line between Lincoln and Gainsborough runs north-south between land parcels comprising the West Burton 3 Site.

3.11 The surrounding area is predominantly arable farmland. A Golf Club is located to the southwest of the Site, surrounding the small hamlet of Brampton. A small number of residential properties on the eastern edge of the settlement are located adjacent to the southwestern corner of the Site. Located within the middle of the Site and straddling the railway line are Stow Park Farm and Marton Moor Farm, two large farmsteads with associated outbuildings and sheds that occupy the arable farmland to the south of the A1500.

Cable Route Corridor

3.12 The Sites are to be connected to each other and to the grid connection point by some 21.3km of high voltage cable routes. The cables run from West Burton 1 and 2 into West Burton 3 where the 400kV substation will be located. From there a 400kV cable runs to the Point of Connection (POC) at West Burton Power Station.

3.13 The Cable Route Corridor crosses predominantly agricultural land, taking care to avoid unnecessary disruption or severance of land or ecological features. The cable will need to cross a number of key obstacles via the use of horizontal directional drilling. The main drilling sites will be located where the cable needs to cross the River Till and the River Trent. Smaller drilling sections may be required for crossing other features such as roads and ditches. The cable route avoids villages such as Sturton Le Steeple and Marton.

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:

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. The Local Policies of Relevance to the topic areas covered in this LIR are listed in Appendix 1.

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: Accessibility and Transport** - Reason: the development involves traffic on the highway network.

- **Policy S48: Walking and Cycling Infrastructure** - Reason: "protect, maintain and improve existing infrastructure, including closing gaps or deficiencies in the network and connecting communities and facilities", this being relevant to the PROWs.

- **Policy S53: Design and Amenity** - Reason: "all development, including extensions and alterations to existing buildings, must achieve high quality sustainable design that contributes positively to local character, landscape and townscape, and supports diversity, equality and access for all".

- **Policy S54: Health and Wellbeing** - Reason: 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 possibly 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 three sites and cable corridor.

4.18 Also of relevance is the Sturton by Stow and Stow Neighbourhood Plan (2022). Relevant policies are:

- **(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: identical to the similar ones 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** - Reason: required to give regard to the development's impact on landscapes.

- **Policy DM12: Best and Most Versatile Agricultural Land** - Reason: 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 W1: Future Requirements for New Waste Facilities.**

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 Key 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 West Burton Solar Project would make a significant contribution towards renewable energy generation, providing the electricity to power an equivalent of approximately 144,000 homes. This contribution aligns to key commitments at the national level and within the adopted and emerging NPS 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 West Burton Solar Project , by its nature offers significant positive impacts in terms of the production of clean renewable energy and the transition and movements towards Net Zero, in order to be supported it must be demonstrated that there are no significant adverse environmental impacts that cannot be appropriately managed and/or mitigated through the DCO process. The Council's position is therefore that, adopting a 'whole life' approach to GHG emissions, there are no negative and neutral impacts and that significant **positive impacts** would accrue.

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

7.1 Key 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
- (Sturton by Stow, and Stow) Policy 5: Delivering Good Design.

7.2 EN-1 states that the ExA needs to consider the design of a scheme carefully. They should have regard to siting, operational and other relevant constraints the aim should be to minimise harm to the landscape, providing reasonable mitigation where possible and appropriate.

7.3 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'.

7.4 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'.

7.5 Paragraph 5.10.6 then states that projects need to be designed carefully, taking account of the potential impact on the landscape, and that they should have regard to 'siting, operational and other relevant constraints the aim should be to minimise harm to the landscape, providing reasonable mitigation where possible and appropriate'.

7.6 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'.

7.7 CLLP policy S14 'Renewable Energy' supports proposals for renewable energy schemes subject to the direct, indirect, individual and cumulative impacts of development on, amongst other things, landscape character and visual amenity being acceptable or capable of being made acceptable.

7.8 Policy S53 'Design and Amenity' states all development must achieve high quality sustainable design which contributes positively to the local character and landscape. Development should, amongst other things, be based on a sound understanding of the context, integrating into the surrounding, relate well to the site, protect any important local views into, out of or through the site, reflect the identity of area and contribute to the sense of place and maintain landscape quality and minimise adverse visual impacts through high quality building and landscape design.

7.9 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 1 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.

7.10 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 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.

7.11 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.

7.12 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.

7.13 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.

7.14 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.

7.15 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.

7.16 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, Cottam 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.

7.17 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.

7.18 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 the Council would expect any detailed landscape proposals consist of the area and extent shown on these plans as a minimum.

7.19 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.

7.20 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, Cottam and Tillbridge.

8. Highways and Transportation

8.1 Key Policy

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

8.2 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.

8.3 With regards to mitigation, EN-1 states that the SoS may attach requirements to a consent where there is likely to be substantial HGV traffic that control numbers of HGV movements to and from the site in a specified period during its construction and possibly on the routing of such movements, make sufficient provision for HGV parking including to avoid prolonged queuing on approach roads and ensuring satisfactory arrangements for reasonably foreseeable abnormal disruption (paragraph 5.13.11).

8.4 CLLP Policy S47 (Accessibility and Transport) states that development proposals are required to contribute towards an efficient and safe transport network. All developments should demonstrate, where appropriate, that they have regard to the need to minimise additional travel demand 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.

8.5 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.

8.6 The Highway Authority has concerns regarding the access route proposed for West Burton 1. This is proposed to use around 1.2km of the unclassified road south of the A1500 (Figure 6.1 of Transport Assessment(TA)). The number of daily vehicles using this, associated with the development, would be five HGVs and 23 Cars. This is in addition to the surveyed flows of around 200 existing daily vehicles on this route.

8.7 This road is a single track road around 3m in width, passing cars need to use the verge and for cars passing HGVs it is problematic. The road is also not straight with several sharp bends over this short length. Section 7 of the TA proposes this same route for abnormal loads, with vehicles of 100 tonnes and 36m in length using this route.

8.8 The TA suggest in Para 8.6 that temporary pass-by bays will be created on narrower sections of the highway and the DCO would allow powers to make adjustments in the highway verge.

8.9 It is recommended that for construction traffic, the applicant needs to identify where passing bays will be located on this route, there should be at least one bay on each straight section of the route, making around three bays over the 1.2km section. The proposed access points (Access 1 and 2) are to be at existing field accesses which are located on the bends. Layouts of the access junctions need

preparing with swept paths for HGVs to show that two way movements can occur and the extent of the junction improvements necessary.

8.10 It is not considered that this highway is suitable for abnormal loads of 100 tonnes and 36m in length. The road is a rural lane which is not constructed for these loads and the width and alignment would prohibit such a large vehicle using this route. The Wynn Report included in the Appendix to the TA shows the route in Appendix 1 and drawing number 22-1062.SPA04 shows road widening necessary on first bend - this involves land outside the highway boundary and the widening required on the next bend (about 450m to the west) has not been shown although the abnormal load would need to go further west to reach the first access into the site. There is no evidence provided that the road construction is capable of taking this abnormal load.

8.11 There is also 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 would be **negative.**

9. Public Rights of Way (PRoWs)

9.1 Key Policy

- Policy S48: Walking and Cycling Infrastructure
- Policy S54: Health and Wellbeing
- Policy S59: Green and Blue Infrastructure Network.

9.2 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.

9.3 The theme of the CLLP policies relates to the protection, maintenance, and availability of public rights of way, specifically on the grounds that they provide public access to green/natural spaces as well as provide places for exercise, health, and wellbeing.

9.4 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.

9.5 In respect of dDCO Section 11: there is a need for further clarity and agreement as to how the temporary stopping up will work and how the advance notices will work. Advance notice to the Council, the District Council and Parish Councils is required as well as advance notices on site. There needs to be a clear procedure for temporarily closing or diverting rights of way, with clear details about the reinstatement of any paths and the surfaces of any diverted routes. There needs to be a description about what trigger points any powers would be used and how the closures would work.

9.6 Outline PROW Management Plan (OPMP): There also needs to be some clarification about the surface of any diversion route and the reinstatement of the paths once construction has been completed. The Council welcome the statement at 3.7 of the OPMP that any damage to the surface of the footpath will be repaired *as soon as practical* it would be useful to understand what this means and to include the Council in any discussions regarding reinstatement.

9.7 Also welcome the approach to undertaking works overnight as detailed in 3.8 of the OPMP, and will remaining open and managed during the day, as this will minimise the impact to the public.

9.8 There are no details of the path surface specification within the OPMP, it would be helpful to have this detailed for clarity.

9.9 Much of the processes and procedures could form part of the rights of way management plan under Section 18 of the dDCO; for the temporary closures, there does not appear to be any notice periods or time frames for diversions and closures included in Article 11 or the OPMP. It is noted a lot of use of the word "reasonable", which gives uncertainty as it is undefined and ripe for argument. It would be best to avoid any potential for disagreement in the future. "Reasonable time" for closure is not defined and it would be good to have better clarity here. It is also not clear what the trigger points for temporary diversions/closures would be as the wording is that the undertaker "may" close/divert the paths rather than "will". The Council suggests that the Road Traffic Regulation Act 1984 is used instead which provides a solid notice period and controlled process for closure, a defined limit (6 months), with options to go to the Secretary of State. Alternatively, a similar process should be written into the DCO if the developer does not wish to separately apply for a temporary closure etc.

9.10 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.

9.11 Broxholm PF196 crosses the blue land and should be retained/reserved upon completion of the construction. Agree the proposed diversion in Schedule 6 of the dDCO as a mitigation measure instead of a closure, however the area marked as a potential diversion area is very large. It would be good to get some agreement here over what the diversion will be, or at least to agree that the diversion needs to be the shortest route practicable and conforms the general desire line. More detail on this is set out in Appendix C.

9.12 There is potential for Codder Lane Belt to be an historic highway. It was originally listed as an unclassified road 1920's hand-over map, but this has since been omitted from later incarnations of the list of streets. There is potential that this lane may be subject to a claim for future public rights. The lane itself offers strategic potential to the network, offering a link between existing recognised highways. There is potential for this to be dedicated as a highway as part of the scheme as a potential enhancement.

9.13 Morton PF68 crosses pink land, and it is considered that there is an opportunity to improve the right of way as part of this development by a permanent diversion to the north.

9.14 Tillbridge Lane/Stow Park Road is not inviting for onward pedestrian journeys and the termination point of PF68 ends on a busy and fast A road with no ongoing right of way to the north. A permanent diversion of the path alongside the field edge would reposition the termination point of the path to the 30mph speed restricted part of the road and create a short circular route for residents in Marton and make the path much more attractive and useful. This would also avoid the need for temporary diversion or closure of the path. Some consideration as to the surface of the diverted section of the path would be required, however, this would be less substantial than anything needed for a temporary diversion.

9.15 Regarding the temporary diversion itself, similar to what was stated above, agree with the proposed diversion in Schedule 6 of the dDCO as a mitigation measure for the route instead of a closure, however, would recommend that the diversion area is to the north rather than to the south of the route. The area marked as a potential diversion area is also similarly very large. It would be good to get some agreement here over what the diversion will be, or at least to agree that the diversion needs to be the shortest route practicable and conforms to the general desire line.

9.16 Brampton PF66/Morton PF66 crosses blue land and should be retained/reserved upon completion of the construction. Level of usage is unknown without census data, but the existence of a footway on the A156 Gainsborough Road back to the village makes this a credibly valued daily circular walk. The existence of a car parking option at Gainsborough Road would see drive to dog walk use being foreseeable.

9.17 Have concerns about this route being proposed to be temporarily stopped up under the dDCO without a corresponding alternative diverted route as it is likely to be a popular route. Suggest that the temporary stopping up is reconsidered, or an alternative diverted route be planned as part of the construction works.

Possible Future Claimed Paths

9.18 There are no current applications to add a path to the definitive map over the land identified for the proposed development, however, there is potential for future applications to be made, which may impact the development in the future. At this stage the Council are not able to assess any merits of any potential future application or any strategic benefits and accordingly the Council cannot currently advise the best and most acceptable approach towards these.

9.19 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 Policy

- 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. The surface water drainage strategy is appropriate for the development and can be subject of a requirement for the details. The dDCO includes appropriate requirements requiring detailed design approval of access, parking, construction traffic management, drainage to be approved by the relevant planning authority prior to commencement.

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 the documents.

10.18 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

11.1 Key Policy

- Policy M2: Providing for an adequate supply of sand and gravel
- Policy M11: Safeguarding of Mineral resources.

11.2 Proposals for development within a mineral safeguarding area must be accompanied by a Minerals Assessment and will only be granted where it can be demonstrated that it would not sterilise a mineral resource. Where this is not the case then proposals will need to demonstrate compliance with a range of criteria.

11.3 Chapter 12 (Minerals) of the submitted ES and other relevant documents have been reviewed for the PV sites, only a very small part of just one of the sites affects safeguarded mineral resources, and due to the nature of the proposals the Council remain satisfied that sterilisation would be negligible. As before, there are no existing/allocated mineral sites in proximity to any of the PV sites so again, no safeguarding implications.

11.4 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 our previous discussions with the developer. 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.

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

11.6 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.

11.7 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.

11.12 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'.

11.13 In respect of Policy W1 of the Lincolnshire Minerals and Waste Local Plan this requires the Council to make provision for sites to meet predicted future capacity gaps for 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 twelve 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

12.1 Key Policy

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

12.2 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.

12.3 CLLP Policy S57 (The Historic Environment) states that development proposals are required to protect, conserve, and seek opportunities to enhance the historic environment of Central Lincolnshire. Proposals will be supported where they protect the significance of heritage assets (including where relevant their setting) and 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.

12.4 This policy also states that where development proposals would result in less than substantial harm to a designated heritage asset, permission will only be granted where the public benefits, including, where appropriate, securing its optimum viable use, outweigh the harm. In addition to this, development affecting archaeological remains, whether known or potential, designated or undesignated, should take every practical and reasonable step to protect and, where possible, enhance their significance.

12.5 Development affecting archaeological remains, whether known or potential, designated or undesignated, should take every practical and reasonable step to protect and, where possible, enhance their significance.

12.6 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.

12.7 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.

12.8 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.

12.9 Any work undertaken as part of the planning process must be appropriately archived in a way agreed with the local planning authority.

12.10 The Council has serious concerns about the approach 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.

12.11 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.

12.12 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.

12.13 The issue of insufficient trenching evaluation has also been highlighted in discussions with the archaeological consultants 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.

12.14 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 we can only agree proposed mitigation in areas where sufficient evaluation trial trenching has been undertaken.

12.15 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. The applicant's consultant consistently agreed to provide this information, but failed to do so. 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.

12.16 Despite this, the submitted documents present the Cultural Heritage as completely assessed and evaluated with a full and complete understanding of the archaeological resource across the site. This is not the case.

12.17 Inadequate field evaluation has been undertaken with 342 trenches across 886ha, less than 0.34% of the Order Limits boundary. With 2% trenching this means that informed appropriate mitigation measures therefore cannot exist for nearly 80% of the site. The submitted documents are therefore not fit for purpose nor are they in accordance with professional standards.

12.18 As well as completely inadequate evaluation, the proposed mitigation shows little attempt at reasonable measures which adequately deal with development impact. The *'Preservation in situ'* section 7.2 of Appendix 13.7: Written Scheme of Investigation for Archaeological Mitigation (APP-122) 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 awareness, without investigation, and without recording. On this scheme, previously unexpected human remains were found in the first few days of trenching, there was no indication from desk based evaluation work or geophysical survey results. It is a type of archaeology that

can only be found by trial trenching and the Saxon individuals were found at a depth of 20cm below the ground surface which would be crushed and destroyed by the ground anchors and the associated groundworks.

12.19 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) (APP-310). There is no mention of archaeology in the Outline Decommissioning Statement including Table 3.1 Decommissioning Mitigation and Management Measures.

12.20 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.

12.21 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.

12.22 In summary it is the Council's 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)***."**

12.23 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

13.1 Key Policy

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

13.2 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'.

13.3 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'.

13.4 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'.

13.5 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)'.

13.6 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'.

13.7 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'.

13.8 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.

13.9 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'.

13.10 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.

13.11 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.

13.12 The Council commissioned Landscope to produce a report 'Review of Soils and Agricultural Land Classification(ALC) for West Burton attached at Appendix 2 which provides a detailed review of the impact of the proposal on the agricultural land affected by the proposal. This report notes that previous ALC surveys locally on these soil types and similar have indicated a mixture of mainly 3a and 3b land, with some Grade 2. It is likely that the shallower and heavier soils are Grade 3b, whilst deeper soils will be Grade 3a or occasionally Grade 2.

In this case it appears that Natural England have accepted the methodology on the basis that the expected level of BMV is mostly low to moderate. The findings of the applicant's ALC report essentially identify around 75% of the site as Grade 3b. The majority of any BMV land is shown in the table below to be Grade 3a, with smaller quantities of Grades 1 and 2.

ALC Grade	Area (ha)*	%
1	17.6	2.3
2	9.5	1.3
3a	172.4	22.8
3b	557.0	73.5
Non Agricultural	1.3	0.2
Total	**757.8**	**100**

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. The impact will be significant for each unit in different ways, with some leading to dramatic changes in the farming systems and overall operations.

The loss of otherwise productive farmland is not particularly covered in the report on the basis that the majority is not BMV. However is does represent a significant area of land particularly when considering the wider cumulative impact on farmland across Lincolnshire and the larger Gate Burton scheme locally.

This part of Lincolnshire is a mainly arable farming area with only limited sheep grazing operations. Whilst it is perfectly possible to graze the areas under and between the panels, it is unlikely to be very cost effective for a grazier. The difficulties of rounding up sheep and handling them, together with finding sick or wounded animals makes the grazier's workload harder and more complex.

As such the economics of moving sheep to and from the site will be marginal. However, most examples quoted do not charge much or anything for the grazing and this may make it sufficiently attractive for a local farmer or shepherd with a 'flying flock'.

It is clear that whilst sheep grazing notionally maintains a low level of agricultural use of the site, it is more for the convenience of maintenance than for agricultural production.

In the context of 60 year lifetime it does result in lost food production not just for 60 years but the additional time the land is out of use for construction, decommissioning and restoration of the land to arable farming.

The agricultural use of the land under panels is restricted to essentially one type of farming – grazing sheep. An outbreak of foot and mouth, or blue tongue disease could render the site unusable for grazing. It is not practicable to take hay crops or graze cattle and so the type of agriculture is highly restricted. Possible sheep grazing is no substitute for wheat production.

The Applicant does not consider that the Scheme would result in food security impacts either alone or cumulatively.

The UK Food Security Report 2021 provides a useful reference for UK food security and is an important document providing context and crucial information for those proposing projects that take significant productive land from production.

In respect of the cable routes which have not yet been fully surveyed from the maps available it seems likely that 20-60% of the cable route will be BMV, where any loss is likely to be significant. However, irrespective of the land quality issues, there will be matters of concern to farmers and landowners including:-

- Land drainage
- Weed burden
- Biosecurity for plant diseases
- Timeliness of soil stripping, storage and handling
- Compaction of subsoil
- Re-instatement to previous quality/standard

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

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

In conclusion for a project of this scale where the project will tie up the land for up to 60 years, there will be some impact. The area is large locally and if the quantities of BMV are as stated then the impact will still be important, even allowing for the proportion of the site that is not classed as BMV

14. Health and Fire Safety

14.1 Key Policy

- Policy 10 Supporting a Circular Economy
- Policy S21: Flood Risk and Water Resources
- Policy 53 :Design and Amenity
- Policy S54: Health and Wellbeing.

14.2 Paragraph 1(8) of Schedule 4 to the EIA Regulations requires consideration to be given to the risks of major accidents and disasters, but does not include a definition of these terms. 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.

14.3 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.

14.4 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.

14.5 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.

14.6 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.

14.7 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.

14.8 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.

14.9 However, without further specific details, e.g. detailed plans etc., the response is based very much on the details within the application documents and note that a requirement is proposed for details of a fire safety plan to be submitted and approved by the Relevant Planning Authority. The Fire Service wish to continue to be engaged and views sought during the examination and reserve the right to comment on specific details of the fire strategy including drafting of suitably worded requirements to ensure the correct level of information is available and assessed before any development commences. In addition to ensure battery energy storage system (BESS) risk of fire is minimised to reduce the risk to a level that makes the development acceptable in respect of safety and associated risk of pollution should a thermal outbreak take place. To achieve this it would be necessary for the applicant to enter into a Protective Provisions arrangement with Lincolnshire Fire and Rescue within the DCO to ensure the Fire Service has adequate resources to regularly inspect the BESS to ensure all the appropriate mitigation measures are in place and effective for the duration of the development.

14.10 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.

14.11 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 agreed.

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

16.2 The West Burton 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. 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 around 25% of the energy park site by area comprises land in Grades 1,2 or 3a and a full survey of the cable route gas yet to be assessed but is predicted to be around 50-60% BMV 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 significant permanent and negative impact as a consequence of the loss of agricultural land is identified, 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.

- At this stage a highways objection is raised to the use of the highway to gain access to the construction access point for West Burton 1. It is not considered that this highway is suitable for abnormal loads of 100 tonnes and 36m in length. The road is a rural lane which is not constructed for these loads and the width and alignment would prohibit such a large vehicle using this route. For this reason there is significant issues with highway safety and therefore contrary to Local Plan Policy S47.

- 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.

- In terms of provision of facilities to process and recycle solar panels and associated equipment once they reach the end of their useful life there is currently insufficient waste facilities to process this waste. 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 twelve months this will present an issue that will need additional facilities to ensure these products are sustainably disposed of and until a satisfy mechanism is in place to address this issue an objection is raised as contrary to Minerals and Waste Local Plan policy W1

Appendix

Appendix 1	Landscape and Visual Review of the Development Consent Order (DCO) Application for West Burton Solar project
Appendix 2	Soils and Agricultural Land Classification for West Burton Solar Project
Appendix 3	Email from Lincolnshire County Council Pubic Rights of Way and Access Manager dated 20th October 2023

Appendix 1

AAH consultants

LANDSCAPE AND VISUAL REVIEW

OF THE DEVELOPMENT CONSENT ORDER (DCO) APPLICATION

FOR THE WEST BURTON SOLAR PROJECT

FOR

LINCOLNSHIRE COUNTY COUNCIL

November 2023

Landscape and Visual Review

Quality Assurance – Approval Status

Version	Date	Prepared by	Checked by	Approved by	Version Details
1	19/10/2023	Oliver Brown	Tom Ferraby	Oliver Brown	Initial Draft for Comment
2	23/11/23	Oliver Brown	Tome Ferraby	Oliver Brown	Final version for issue

Landscape and Visual Review

Contents

Appendices:

Appendix A: Previous AAH Consultation documents:

- AAH TM01 Landscape Meeting on 07-03-22
- AAH TM02 Viewpoint Comments 28-03-22
- 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 West Burton 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 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 at 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://national-infrastructure-consenting.planninginspectorate.gov.uk/projects/EN010132/documents

- Environmental Statement Chapter 8: Landscape and Visual Impact Assessment January 2023;
- Chapter 8 Appendices:
  - Appendix 8.1 LVIA Methodology
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- Concept Design Parameters and Principles
- Outline Operational Environmental Management Plan
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- Layout plans and ES figures:
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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, in order to provide 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 252 pages with limited summary or narrative of effects to communicate the main findings, relying in places multiple statements cross-referencing large appendices or supporting documents. This makes the document in places difficult to follow, at odds with the recommendations offered within the Landscape Institute's *Guidelines for Landscape and Visual Impact Assessment, 3rd Edition* (**GLVIA3**), which is the acknowledged primary guidance document on landscape and visual assessment. The LVIA does not currently clearly express the author's 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, needs to be clearly laid out in "*plain, easy to understand language*". The LVIA chapter would benefit from being reduced in size and a clear and concise written summary of the findings added so that the understanding of the key findings is not reliant on 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: Non-Technical Summary (WB6.5)* (**NTS**) would in particular benefit from simplification so that it is made clearer to understand. 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 the key issues and how they contribute to the judgements made, which makes it difficult to understand the findings and difficult to respond to.

2.3 Notwithstanding the above, the complexity of this project is acknowledged: the fragmented nature of the development with a large and complex layout and cable routes are spread over a wide area.

2.4 However, while the LVIA, carried out by a team of Chartered Landscape Architects, is detailed and overall thorough and supported by detailed associated appendices, it is in parts difficult to understand which part of the site or development is being referred to or what is actually being communicated and why – this is predominantly due to the volume of information presented.

2.5 The LVIA does draw a clear 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 (Glossary of Terms)* 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.".*

2.6 Fundamentally, the LVIA does not make it clear or explicit in regards to what constitutes the development on which the assessment is based, 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 – these do not necessarily need to be re-written or duplicated in the LVIA, but a clear list of what documents and figures, at the outset, constitute the development being assessed would assist. 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",* re-references itself (*Section 8.6*), *Chapter 5*: *Alternatives and Design Evolution*, the *Design and Access Statement [EN010132/APP/WB7.6]*, the *DCO*, *Works Plans [EN010132/APP/ WB2.3]*, the *Concept Design Parameters and Principles [*EN010132*/APP/WB7.13]*, and the Outline LEMP [EN010132/APP/WB7.3].

- *Table 8.49 Primary and Secondary Mitigation: Landscape Design Parameters* in Paragraph 8.6.3 of the LVIA, 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 8.49".* 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 8.49, under existing vegetation, for both Primary and Secondary Mitigation, the LVIA clearly states the intention is to retain and enhance trees and hedgerows, which we would encourage. However, in the *Draft DCO,* permission is being sought for the removal of all hedgerows within the redline, as well as 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, and so this needs to be made much clearer.

- Paragraph 8.6.17 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 document [EN010132/APP/WB7.13].".*

2.7 However, despite this information, it is not explicit in regards to what constitutes the development that the LVIA has assessed against which may be fundamental to its integrity.

2.8 The following specific points all need 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 having been 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. This is not currently the case and so there is uncertainty about whether this could 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 illustrative layouts (*Figure 4.1 to 4.3 Illustrative Site Layout Plans*, *Figure 4.4 West Burton Energy Storage, Illustrative Layout Plan* and *Figures 8.18.1 to 8.18.3 Landscape and Ecology Mitigation & Enhancement Measures*) and information provided within *the Concept Design Parameters* document. It is assumed the works plans will "fix" the layout and location of these elements, however this needs clarifying. If proposed mitigation areas and extents or locations of built elements are changed in any later, detailed design stages, the findings of the LVIA are likely to also change and so reference to this needs to be added to confirm.

- Landscape mitigation and tree and hedgerow retention and protection needs to be made clearer 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 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.

2.10 The LVIA considers the Development in isolation, but also **cumulatively** with similar type and scale schemes in the local area (notably the nearby solar developments at Gate Burton, Cottam and Tillbridge).

LVIA Appendices

2.11 The Appendices produced as part of the LVIA provide very detailed supporting information relating to the assessment. The appendices are listed within section 8.1.4 of the LVIA, and are referenced throughout the report to support the findings.

LVIA Figures

2.12 The Figures produced as part of the LVIA are appropriate in the level of detail provided and clarity of information presented and 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 [EN010132/APP/WB6.3.8.1]*. 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 of the Methodology to GVLIA3 and LI technical guidance notes 06/19 and 02/21, which are correct, and it is assumed other relevant LI guidance notes and clarification notes have been used throughout.

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 1.1.47 and 1.1.66 to 1.1.77 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 do 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 *Appendix 8.1.4 ZTV Methodology [EN010132/APP/WB6.3.8.1.1]*. However, it is not explicit in the methodology or LVIA Chapter as to what parameters the proposals have been modelled to generate the ZTV. It is assumed that this height is 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 it should be clarified whether or not these locations are indicative or are fixed by way of parameter or works plans.

3.9 Paragraph 8.4.41 of the LVIA 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 also 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 it should also be clarified 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 this could 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 of the LVIA confirm that the site comprises four main development parcels of West Burton 1, 2, 3a and 3b, for *"solar arrays, substations, energy storage, inverters/transformers, security features such as CCTV and fencing",* and cable route corridors, quantified as follows:

- *West Burton 1 covers an area of 90 ha.*
- *West Burton 2 covers an area of 328 ha.*
- *West Burton 3 covers an area of 370 ha.*
- *Cable Route Corridors which are approximately 21.3 km long:*
    - *from the West Burton 1 substation to the West Burton substation at West Burton Power Station.*
    - *from West Burton 1 to West Burton 2*
    - *from West Burton 2 to West Burton 3*
    - *from West Burton 3 to the West Burton substation at West Burton Power Station*

4.2 The baseline follows the LVIA methodology and begins with identifying and describing published character assessments, which is considered in detail from paragraph 8.5.10 to 8.5.57, 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 series of scales (large-scale, more detailed, or fine grain), additional assessments have been carried out as part of the LVIA, with an overview provided within paragraphs 8.5.105 to 8.5.113 of the LVIA. This 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*
- *Rights of Way and Access*
- *Nationally and Locally Designated Landscape*
- *Cultural Heritage*
- *Ancient Woodland and Natural Designations*

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

- Four Regional Character Areas (from the *East Midlands Regional Landscape Character Assessment* and the *Bassetlaw District Council, Landscape Character Assessment*);
- Nine 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
- Eight 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 main 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 from it the overall character of this landscape or how it varies across the site and study area as this section covers 36 pages (from paragraphs 8.5.9 to 8.5.168). We would suggest a simple summary table of receptors would help with this and a brief, succinct overview text on the landscape character, and how it varies across the study area and site as this would greatly assist in the understanding of the landscape baseline.

4.5 Further detail of the landscape baseline is provided within *Appendix: 8.2 Potential Landscape Effects [Reference: WB6.3.8.2].* This 647 page appendix sets every landscape receptor against every applicable development 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.

Landscape Assessment

4.6 The Landscape Assessment is detailed within *Appendix: 8.2 Potential Landscape Effects [Reference: WB6.3.8.2],* which 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 8.7.14 to 8.7.188 providing detail on each identified receptor applicable to each individual parcel and cable route section. Again, this is a long section of the LVIA chapter totalling 25 pages, and would have benefitted from being more succinct and providing an overview or summary to identify the key landscape effects, which are currently difficult to ascertain as a result of the volume of information.

4.7 As agreed at the pre-application stage, the national character areas have not been assessed and are 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 identified as being of high sensitivity (the majority medium or low sensitivity), however Regional Scale Landscape Character – 4b: Wooded Vales, Regional Scale Landscape

Character – 6a: Limestone Scarps and Dipslopes, and Local Scale Landscape Character 4: The Cliff have been assessed as being of a medium-high sensitivity. However PROW, as individual contributors to landscape character, have been assessed as being high sensitivity and National and Locally Designated Landscapes, and Scheduled Monuments, Listed Buildings, Conservation Areas and Registered Parks and Gardens as medium to high sensitivity.

4.9 The LVIA identifies significant landscape effects at the four phases of **construction, operation (year 1), operation (year 15),** and **decommissioning** at paragraphs 8.7.5 to 8.7.188 and Appendix 8.2. The following significant effects are identified in the LVIA:

- At **Operation (Year 15)** the following receptors were assessed as having significant effects:
    - **West Burton 1, & 2:**
        - Regional Character Area: 4a Unwooded Vales: **Moderate Beneficial** Significant (with mitigation)
        - Local Character Area: LCA 3 The Till Vale: **Moderate Beneficial** Significant (with mitigation)
    - **West Burton 3:**
        - Regional Character Area: 4a Unwooded Vales: **Moderate Beneficial** Significant
        - Local Character Area: LCA 2 Trent Valley: **Moderate Beneficial** Significant
        - Local Character Area: LCA 3 The Till Vale: **Moderate Beneficial** Significant

4.10 These identified 'significant' effects represent effects only on character areas, with no 'significant' effects identified on individual contributors to landscape character. No significant adverse landscape effects have been identified at any of the four phases of the development, only significant beneficial effects. 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 landscape character areas by the construction and operation of a large solar development. There are also some minor beneficial effects (not significant) identified, predominantly at the Operation (Year 1) phase of the development, within Appendix 8.2 that also lack justification.

4.11 While we acknowledge that establishment of new areas of planting will introduce positive elements to the landscape and strengthen aspects of landscape character, the development will bring about an extensive change on land use (which is defined in table 8.1.15 (Glossary of terms) 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' with industrial elements including fencing and CCTV cameras on poles, as opposed to rural or agricultural one at present, resulting in what is a complete change of character. New mitigation planting will clearly offset some of the adverse elements of the scheme, however we disagree that that the judged beneficial landscape changes would result.

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

4.13 At the Operation (Year 1) phase, some landscape receptors have been assessed as having beneficial effects based on the mitigation planting, such as Land Use at West Burton 1 (at pg. 74 of Appendix 8.2). At that early stage, the planting will not be established, and would have little effect in reducing the adverse landscape impacts of a solar farm of this scale, and while positive management of existing vegetation will have some benefits, we disagree with the judgement that any beneficial landscape effects would be achievable at the stage through the development of a large-scale solar farm.

4.14 The residual effects at Operation (Year 15), which we would typically expect to reduce through the established mitigation planting, still have an over reliance on mitigation and in some instances 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 Owing to 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, dramatically affecting the current open agricultural landscape that is identified as the key defining characteristic of the area. As well as the panels and associated equipment, the presence of extensive fencing and CCTV would be out of character with the wider rural area.

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

4.17 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) and 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, identify what key elements within the baseline are affected, and how development change would affect them.

4.18 There is an over reliance within the LVIA upon planting to mitigate the landscape effects resulting from 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. However, the offsets proposed in the *Concept Design Parameters and Principles* and illustrated on the *Strategic Landscape Sections* (*Figure 8.19*) are noted, and with careful design, these will go some way to address this.

4.19 In addition, the extent of vegetation removal currently proposed within the Draft DCO has the potential to completely remove extensive areas of hedgerows and trees, and is both completely unacceptable and unnecessary, nor is it identified or assessed within the LVIA. Any vegetation removal should be limited to that necessary to facilitate the development. Existing vegetation should subsequently be retained throughout the full period of construction and the development layout should take into account the appropriate offsets.

4.20 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, urbanising features and the effects on visual amenity of any required improvements. As a result, the construction landscape effects may be underestimated within the LVIA through the omission of the assessment of the existing vegetation potentially affected, both its existing contribution and changes resulting from its loss. We strongly recommend limiting the loss of existing vegetation 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 increasing 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 Visual Baseline is considered in Section 8.5 of the LVIA. The baseline follows the LVIA methodology and begins with clarifying in section 8.5.169 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 8.5.170 to 8.5.245, which covers 55 pages of the LVIA chapter. While very detailed, this section lacks a clear summary narrative to illustrate the overall visual amenity of the site and study area. We would recommend that this section be reduced in size with the addition of a succinct overview text on the visual amenity of the site and study area, and how it varies across the study area and site, as this would greatly assist in setting the scene for the more detailed analysis.

5.2 Viewpoint receptors are identified and viewpoints were subsequently selected to represent these receptors. The selection of viewpoints formed part of the pre-application consultation and includes locations recommended as part of this process. Paragraphs 8.5.178 and 8.5.181 clarify the process in identifying the viewpoints, however no reference is made to the ZTV plans (Figures 8.11 to 8.12, 8.14, 8.16 and 8.17), beyond defining the study area, and how

these have been utilised to clarify receptors and viewpoints, and also what they illustrate in regards to the overall visibility of the site.

5.3 The LVIA clearly lays out the identified receptor groups (for example, residents) and *Appendix 8.3 Potential Visual Effects [Reference: WB6.3.8.3]* and subsequently identifies the associated representative viewpoints as *"Nearest Viewpoint/s"*. Due to the fragmented nature of the Site and geographical extent, 72 viewpoints have been agreed at the pre-application stage to be taken forward into the assessment, as listed in Tables 8.16 and 8.17 of the LVIA Chapter. 6 Viewpoints have been scoped out of the assessment.

5.4 Paragraphs 8.5.200 to 8.5.245, which reflect the information provided within Appendix 8.3, go on to identify associated groups of receptors. The LVIA main chapter does not identify the value of view or susceptibility to change of receptors, however this judgement is provided within *Appendix 8.3.* The resulting sensitivity of each receptor and each representative viewpoint is also detailed within Appendix 8.3. The majority of visual receptors have been judged to be of either medium, medium-high or 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 the identification of 72 viewpoints to represent the views of the visual receptors. *Figures 8.13.1 to 8.13.72* 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*, 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 8.11.84 to 8.11.97.

5.9 The LVIA identifies significant 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 8.74 to 8.78, 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 to the understanding of how the significant effects have been assessed:

- **West Burton 1:**
    - VP8: Broxholme Ln and Brox/197/1: **Moderate Beneficial** Significant (Note: Appendix 8.3.1.4, pg 192 identifies **Moderate - Major Adverse** at Operation 15 years)
    - PRoW Receptors: PR007: Public Footpath Brox/197/1: **Moderate Beneficial** Significant (Note: Appendix 8.3.1.4, pg 204 identifies **Moderate - Major Adverse** at Operation 15 years)
- **West Burton 2:**
    - VP18: Sturton Road: **Moderate Beneficial** Significant (Note: Appendix 8.3.4.4, pg 911 identifies **Moderate Adverse** at Operation 15 years)
    - VP24: Sykes Lane and other route with public access: **Moderate Beneficial** Significant (Note: Appendix 8.3.1.4, pg 216 identifies **Moderate Adverse** at Operation 15 years)
    - VP26: Sturton Road: **Moderate Beneficial** Significant (Note: Appendix 8.3.1.4, pg 224 identifies **Moderate Adverse** at Operation 15 years)
    - VP27: Sturton Road: **Moderate Beneficial** Significant (Note: Appendix 8.3.1.4, pg 228 identifies **Moderate Adverse** at Operation 15 years)
    - VP28: Sturton Road: **Moderate Beneficial** Significant (Note: Appendix 8.3.1.4, pg 232 identifies **Moderate Adverse** at Operation 15 years)

- Transport Receptors: T009: B1241 Sturton Road: **Moderate Beneficial** Significant (Note: Appendix 8.3.3.4, pg 720 identifies **Moderate Adverse** at Operation 15 years)

- Transport Receptors: T010: Track off Sykes Lane: **Moderate Beneficial** Significant (Note: Appendix 8.3.3.4, pg 723 identifies **Moderate Adverse** at Operation 15 years)

- **West Burton 3:**

  - PRoW Receptors: PR038: Mton/68/1 **Moderate Beneficial** Significant (Note: Appendix 8.3.4.4, pg 918 identifies **Moderate Adverse** at Operation 15 years)

5.10 The views and visual receptors with identified significant effects are close-range views of the development. However, all the residual significant effects in the LVIA chapter were judged to have significant beneficial effects, however within Appendix 8.3 these are subsequently judged to be adverse – this needs clarifying in a simple table to allow for clear identification of the significant visual effects of the development. We disagree with the summary 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.

5.11 It is recommended that the viewpoints with significant effects (presented on viewpoint photographs on *Figures 8.13*) are 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.

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 [WB6.3.8.1.3]*, 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 1.1.21 of the Cumulative Methodology. This identifies that Cumulative West Burton sites are to be assessed (West Burton 1, 2 and 3a/3b and cable routes) and also Cumulative Developments (Cottam, Gate Burton, Tillbridge, and West Burton). This approach is helpful to the understanding of how the local area might potentially change through the development of these combined solar farms over an extensive area of the county.

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 at any phases of the development for the national, regional or local landscape character areas identified in the baseline;

- No significant effects were identified at any phases of the development for the Detailed Landscape Receptors or Individual Contributors to Landscape Character (from desktop and fieldwork as part of the LVIA). However, minor (not significant) beneficial effects were judged for Land Use at year 1 and year 15 of operation.

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 the scale of the change in land use, creating what may be perceived as an 'energy landscape' as opposed to the rural or agricultural one which exists at present.

6.6 Regarding **Cumulative Visual Effects**:

- No Significant cumulative effects with other developments were identified at any phases of the development for visual receptors (refer paragraph 8.10.85 of the LVIA).

6.7 It is likely that there would be significant visual effects from the development of multiple NSIP scale solar farms in this agricultural landscape. This is likely to be exacerbated when travelling through the area either along PROW or local roads, where the sequential effects of multiple large-scale solar sites, which are spread over a quite extensive area, though often fragmented, would give the perception of being surrounded by solar development. Views do not have to be extensive and open to create this perception, and regular sequential glimpsed

views would create a change to the experience of visual receptors and also 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. 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."*

6.10 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 the RVAA process 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, as described in the LVIA, reference a series of documents within the submission. 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 how the level of care to ensure the design of mitigation enhances the physical landscape, or views from receptors, and seems to be focussed only on screening the development.

7.2 The design has however evolved and appears to have responded to the consultation process, as evidenced by the different stages of the masterplan (as presented on Figures 4.1 to 4.4).

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.*

Mitigation Measures

7.4 The *Outline Ecological Protection and Mitigation Strategy* provides information regarding the establishment and maintenance of the planting associated with the development (as shown on Figures 8.18.1 to 8.18.3 *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 the protection of existing 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 since the reduction in landscape and visual effects presented in the LVIA (which currently include beneficial effects) 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 LVIA can be 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 planting. The regular updating of the management plan will go some way to ensuring that it 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.

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 forthcoming 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 form a large body 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 in places 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, with a clear reasoning. 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, 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 by the construction and operation of a large solar development. There are also 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 several inconsistencies identified in **paragraph 5.9** of this review where visual effects are presented within the LVIA chapter as being beneficial, however are assessed as adverse within the detailed assessment within Appendix 8.3. These need to be clarified as they relate to the identification of significant effects. We disagree with the summary 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: however, it is unclear as to whether the effects have been assessed as adverse or beneficial at this stage. This must be clarified to allow for appropriate responses and comments to be made. The justification for the

potential 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 would also bring about significant adverse effects, particularly when assessed alongside the proposed Gate Burton, Cottam 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 altered, particularly when experienced sequentially while travelling through the landscape.

8.8 Notwithstanding the 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 suitably protected throughout the full duration of the construction period. This would likely include areas within the order limits but away from construction activity as storage of materials and movement of heavy vehicles would be highly likely to cause damage to tree root protection areas.

8.9 While the submission includes landscape proposals (Figures 8.18.1 to 8.18.3), these are of a high level and is expected that if the project proceeds much more detailed plans be submitted and subsequently agreed with the appropriate authority (in this case the local planning authority) prior to the commencement of any works. This should 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 to be based on 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, West Burton 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 West Burton Scoping Report, and subsequently attended site over the week commencing 14th March. We walked the West Burton Solar site and visited all the viewpoints proposed by Lanpro. The proposed viewpoints were identified on the Augmented ZTV figures (Figures 7.12 to 7.15) from the LVIA Scoping documents.

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

1. With the site being split over four 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;

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. 7.12 to 7.15) have been developed using panels at a 4.5m height;

3. Paragraph 4.2.5 of the scoping report identifies an offsite 400kv sub-station at West Burton 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 West Burton 1, 2, 3 and 4, 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 para. 17.1.4 identifies the potential for an overhead cable – if there are any sections of overhead cable, 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 8.5km to the south east of West Burton 1 and West Burton 2, 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 subsequently 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 7.12 West Burton 1 Augmented ZTV</u>

A. **Additional viewpoints should be included from along B1398 Middle Street south of Tilbridge Lane.** There are sequential panoramic views north west from this section of road and the adjacent PROW (along elevated sections of the ridgeline) west of the B1398. The intersection of PROW SCar/190/2 and Access to South Cliff Caravan Site with B1398 Middle Street provides a clear viewpoint across the landscape picking up primarily West Burton 1 and 2, but also likely West Burton 3 and Cottam 1 with the potential to include some sections of Gate Burton. Could it also be clarified if any additional views are possible further south along this road looking north east towards the site from an elevated position. Photography should provide the most advantageous view of the site and proposed development;

B. **Additional viewpoints should be included from along PROW TLFe/31/1 north of the Site at Thorpe le Fallows looking south.** While the flat landform limits views, the absence of field boundary vegetation leads to potential views of the proposed development within West Burton 1 and West Burton 2. Photography should provide the most advantageous view of the site and proposed development;

C. **Additional viewpoint should be included from Boxholme Lane and PROW Brox/196/1 looking south east.** There is a clear gap in boundary vegetation at the junction with Boxholme Lane and PROW Brox/196/1 allowing clear views to West Burton 1 from this location and further north along PROW Brox/196/1 looking south and south east. Photography should provide the most advantageous views of the site and proposed development;

As shown on mark up Figure 7.13 West Burton 2 Augmented ZTV

D. **Additional viewpoint should be included from new Lovell housing development (currently under construction) looking north.** A clear view of the site is possible from the northern extent of Read Robinson Avenue (where housing is now complete). Photography should provide the most advantageous views of the site and proposed development;

E. **Additional viewpoint should be included from within the Ingleby Clay nature site looking east.** The paths within the nature site are in a slightly elevated position in the northern section, allowing potential views to the site and proposed development. Photography should provide the most advantageous views of the site and proposed development;

F. Could a statement be provided as to potential views from around Manor Farm (Hardwick) from the lane south off Sykes Lane to Orchard Farm 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 from this location as they may be screened by the raised railway line and associated vegetation – if there are potential views of the site and/or proposed development, a viewpoint should be obtained from this location;

G. **Additional viewpoint should be included from PROW Stur/75/2 looking south/south east.** While VP32 provides a similar view, it would be beneficial to include a viewpoint from the PROW network in this area. Photography should provide the most advantageous views of the site and proposed development;

H. **VP34 and VP44**: these views have potential views of both West Burton 2 and West Burton 3. The additional detail as identified within bullet 1 above should assist in this clarification, however if this is what was intended the photography should cover views to each of these parcels;

I. Could a statement be provided as to potential views from Thorpe Lane looking south. While intermittent vegetation layered in the view due to the flat topography will likely screen views of the site, it would aid transparency to understand the potential views being reviewed and subsequently scoped out – 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 7.14 West Burton 3 Augmented ZTV

J. Could a clear statement provided as to potential views from Littleborough and them being reviewed and subsequently scoped out. There are several heritage assets as well as PROW in this location and it is not clear if this location has been fully reviewed in regards to views of the West Burton 3 and proposed development – if there are potential views of the site and/or proposed development, a viewpoint should be obtained from this location;

K. Could a statement be provided as to the extent of views from the Trent Valley Way looking east. While VP49 picks up a view from this route, it would aid transparency to understand the potential of sequential views along this footpath – if there are additional potential views of the site and/or proposed development, a viewpoint should be obtained from locations further north along the route;

L. **Additional viewpoint should be included from PROW Bram/66/1 looking east.** While VP50 and VP52 provide views from this PROW, this is an elevated view from the flood defences across West Burton 3, and the view may include other parcels or developments. Photography should provide the most advantageous views of the site and proposed development;

M. **Additional viewpoint should be included from access lane to Stow Park looking east.** While VP54 and VP55 provide views in this area, users of the access lane and stables at West View Farm and Home Farm would have closer views, particularly to the eastern section of West Burton 3. Photography should provide the most advantageous views of the site and proposed development;

N. **Additional viewpoint should be included from Torksey Viaduct looking north east.** While existing intermittent vegetation will likely screen views from this heritage asset, due to the elevated nature of this feature, receptors may have views of West Burton 3 looking to the north east. Photography should provide the most advantageous views of the site and proposed development; and

O. **Additional viewpoints should be included from along Cowdale Lane along the southern boundary of West Burton 3 looking north.** While VP44 and VP45 are in close proximity, there are two locations than offer clear open views across West Burton 3: at the Stow Park farm access; and close to the railway line as the road rises in elevation which offers more elevated views. These views may also include taller proposed elements of the Gate Burton solar development, subject to the final design proposals. Photography should provide the most advantageous views of the site and proposed development.

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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28 March 2022

Technical Memorandum 3 (AAH TM03)

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

Introduction

AAH Consultants have reviewed the West Burton 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.westburtonsolar.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):
  - West Burton 1;
  - West Burton 2;
  - West Burton 3;
  - West Burton 4; and
  - Substation.

The review takes into account previous AAH comments (Refer to West Burton 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: *West Burton 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: 02nd 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 sub stations, 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 sub stations (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. 4.3.15 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 extents 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. We would encourage existing agricultural access points are be utilised for access, however it is likely even 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 Cottam Solar developments. 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/from 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. Thirteen potential landscape receptors at varying scales are identified for consideration in the LVIA within section 8.7 (paras. 8.7.103 to 8.7.113). 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. Appendix 8.1.3 covers Cumulative Effects. However, Section 1.9 of Appendix 8.1 also provides a Cumulative Effects methodology which is different to that included within Appendix 8.1.3. Suggest just one Cumulative Effects methodology is included and that the methodology reflects the site and study area

2. Para. 1.1.9 , 1.1.10 and 1.1.15 reference consultation with SDC – should this be West Lindsey, Bassetlaw, Nottinghamshire County and Lincolnshire County?

3. Para. 1.1.10 references the incorrect site and suggests a study area has been agreed. It is assumed this is a typo, and would subsequently be agreed with relevant stakeholders.

4. 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 sub stations.".*

Review 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 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.

Review 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" , "BH", and "VL" prefix representing viewpoints identified by Lincolnshire County Council, Heritage Officers and Nottinghamshire County Council.
2. Several viewpoints are missing from this list and we would assume all would be included within the LVIA Chapter;
3. Comments on Viewpoint photography/images are made below under: **Appendix 8.5: Landscape Figures**.

Review of 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/LCC 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 sub stations. 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 of Appendix 8.5: Landscape Figures:

1. Generally: Figures are well presented and read well.
2. Figure 8.6: West Burton 1, 2, 3 & 4: Landscape Receptors; and Figure 8.7: West Burton 1, 2, 3 & 4: Visual Receptors: 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 8.16: 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, sub station 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.
   - VP02: We assume this image will be extended (additional sheet?) to the left (west) to include view of WB2?
   - VP03: Please clarify if this view is just of WB1, and no views available of WB2 (which would be further to the left of the view (west)).
   - VP09: Image shows view looking south, rather than South East as labelled. This viewpoint may also benefit from being extended to the right (west) to include WB2, which is likely to be visible in this view.
   - VP12: Location of VP along Thorpe Lane not shown on Figure 8.12.
   - VP15: While a long distance view, this viewpoint provides a panoramic view of West Burton from a recognised viewing area (Tillbridge Lane Viewpoint) and the view likely includes Cottam 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;
   - VP016: Would this view include WB2? If so, the image should be extended/rotated to the left (west).
   - VP017: Viewpoint would include potential views of WB1 and WB2 and assume this will be extended (additional sheet) to the left (west) to include view of WB2?
   - VP20: Image shows view orientated North West. View would include views of development rotated around to the south east – We assume this will be extended (additional sheet?) to the left (south/south-east) to include view of southern extent of WB2?
   - VP22: Image shows view orientated North west.
   - VP27: We assume this will be extended (additional sheet) to the right (east) to include view of WB2 east of B1241?
   - VP28: We assume this will be extended (additional sheets) to the left (east) to include view of WB2 east of B1241? This view is surrounded by development and would benefit from portraying this.
   - VP30: Assume view of WB3 is focus of this viewpoint, however are views south to WB2 also possible from this location?
   - VP32: Assume view of WB2 is focus of this viewpoint (looking south east), however are views west to WB3 also possible from this location?
   - VP34: Assume view of WB2 is focus of this viewpoint (looking south east), however are views west to WB3 also possible from this location?
   - VP42: Image shows view orientated west.
   - VP52: View may benefit from being rotated to the left (north) to include more of WB3.

- 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 8.17: 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 Council who are better placed to provide more detailed information.

6. Figure 8.18: 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 8.17 are set out in Paragraph 8.8.21 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. Detailed Comments on Site Layouts (Comments made in regards to landscape and visual matters):

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 sub stations. Sub Stations are shown on the *Preliminary Layouts* plans for all four plots (1, 2, 3, & 4) and Substation Area and Energy Storage Area is shown on the *Substation and Energy Storage Area v2* plan. If these locations are 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, particularly in relation to sensitive receptors.

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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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Document history
Edited for publication by Simon Odell CMLI 10 Jan 2020

Appendix 2

Soils and ALC West Burton Solar Project

Lincolnshire County Council

November 2023

LANDSCOPE
LAND & PROPERTY

Contents

Review of ALC and Soils West Burton Solar Project

1. Instructions to Landscope

Landscope is instructed by Lincolnshire County Council to review and report on the agricultural aspects of Island Green's application for a Development Consent Order for an extensive ground mounted solar array and associated infrastructure. The proposed development occupies a total area of 758ha plus connectors and the cable routes.

A review of the grading of soils for agricultural land classification compares differences between expected grades and those found in the soils baseline. It is noted that an ALC survey has been undertaken by Amet and this report seeks to clarify the findings and set them in context.

The proposed development is likely to have a cumulative or defined negative impact that will result in the loss of agricultural production in the development area generally and/or the permanent loss of production from mostly medium quality agricultural land.

2. The Site and Proposal

The Proposed Development comprises the installation of solar photovoltaic (PV) generating modules, battery storage facilities, and grid connection infrastructure.

The site area covers approximately 758 hectares of predominately agricultural land, spread over 3 areas West Burton 1, 2 and 3 in the District of West Lindsey, with a small area in Bassetlaw District. West Burton 4 is outside of Lincolnshire. The Site boundary and land parcels are presented in **Appendix 1**. It also shows the search corridors for the underground cabling proposed.

3. Geology, Soils, parent material and soil types

Geology
The geology of the area is shown on a British Geological Map reproduced in part (**Appendix 2**) for reference. The principle underlying geology at the site is a Lower Lias Clay, Shale and Rare Limestone. The land is primarily shown as the Scunthorpe Mudstone Formation, a heavy clay-based mudstone and various smaller areas of drift, glaciofluvial deposits and diamicton.

Soils
According to available published data, local knowledge and the national soil map indicates that the area predominates with two main soil types (**Appendix 2**). In the majority is Wickham 2 (711f) with a smaller area of Dunnington Heath (572g)

These two soils are significantly different; with Wickham 2 described as slowly permeable seasonally waterlogged fine loam over clayey soils, or fine silty over clayey soils. Dunnington Heath is described as reddish coarse and fine loamy soils over clays, but also with slowly permeable subsoils and slight seasonal waterlogging. **Appendix 3** sets out a description of Wickham soil associations from Cranfield University. **711f Wickham**, is described as slowly permeable seasonally waterlogged fine loamy over clayey, fine silty over clayey and clayey soils.

Previous ALC surveys locally on these soil typess and similar have indicated a mixture of mainly 3a and 3b land, with some Grade 2. It is likely that the shallower and heavier soils are Grade 3b, whilst deeper soils will be Grade 3a or occasionally Grade 2.

4. Agricultural Land Classification and Soils

The Agriculture and Soils chapter covers three issues of relevance to Agricultural Land:-

- The effects of the Scheme upon agricultural land as a resource, taking account of the land quality and versatility
- The effects of the Scheme upon the soil resource are considered.
- The effects of the Scheme upon farm businesses currently in operation upon the Site, and any effects the Scheme may have on the management of surrounding agricultural land.

The majority of the site is shown as Grade 3 on the provisional ALC maps of the area. **Appendix 2** shows the approximate location of the 3 main areas in relation to land grades.

Appendix 4 also shows the likelihood of best and most versatile land (BMV) in the general area. Large parts of the site fall within the low to medium categories, where 20-40% of the land is likely to be BMV.

The table below shows the distribution of ALC grades according to the survey undertaken by AMET, on behalf of Island Green - the applicants.

Table 1 : ALC Grade Distribution

ALC Grade	Area (ha)*	%
1	17.6	2.3
2	9.5	1.3
3a	172.4	22.8
3b	557.0	73.5
Non Agricultural	1.3	0.2
Total	**757.8**	**100**

The ALC identifies where BMV land is, and the scheme should seek to protect and minimise damage to higher grade land wherever possible in line with national planning policy. There is undoubtedly a lot of BMV land in this vicinity and only a full ALC will identify where it is and what the Grade and quality is. Laboratory analysis of representative samples has been used to determine textures of representative samples.

The ALC survey is stated as undertaken in line with the MAFF 1988 guidelines and TIN049. These documents set out the precise methodology by which the ALC survey should be undertaken, with auger bore sampling at 1-hectare intervals and a suitable number of soil pits dug to determine the precise nature of the soil(s).

In this case it appears that Natural England have accepted the methodology on the basis that the expected level of BMV is mostly low to moderate. The findings of the ALC report essentially identify around 75% of the site as Grade 3b. The majority of any BMV land is shown to be Grade 3a, with smaller quantities of Grades 1 and 2.

5. Farming Impact, Food Security and Sheep Farming

The report should address viability, infrastructure and long term consequences on the individual holding. The important considerations for economic and social effects for agriculture include:

- land use changes;
- the proportion of a holding affected by land-take;
- the effect on land management; access to land severed (particularly by linear infrastructure development); and
- the loss of farm buildings and infrastructure.

Farming and Food Production

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. The impact will be significant for each unit in different ways, with some leading to dramatic changes in the farming systems and overall operations.

The loss of otherwise productive farmland is not particularly covered in the report on the basis that the majority is not BMV. However is does represent a significant area of land particularly when considering the wider cumulative impact on farmland across Lincolnshire and the larger Gate Burton scheme locally.

In considering the impact on the overall farming enterprises both locally and across the District or County, it may be necessary to seek additional information on the impact on the individual farms along the cable route.

In considering the impact on the overall farming enterprises both locally and across the District or County, it may be necessary to seek additional information on the impact on the individual farms themselves. This might include the loss of agri-environmental schemes, crop and livestock production, as well as the more normal range of mainly arable crops and income.

The report indicates that:

Sufficient light passes through and between the panels to maintain a grass sward. It is desirable to maintain a green cover to promote rainfall infiltration and protect the soil surface from erosion. The length of the sward will be controlled by periods of sheep grazing and/or mowing. This will also prevent the establishment of shrubs and trees.

Sheep Farming

This part of Lincolnshire is a mainly arable farming area with only limited sheep grazing operations. Whilst it is perfectly possible to graze the areas under and between the panels, it is unlikely to be very cost effective for a grazier. The difficulties of rounding up sheep and handling them, together with finding sick or wounded animals makes the grazier's workload harder and more complex.

As such the economics of moving sheep to and from the site will be marginal. However, most examples quoted do not charge much or anything for the grazing and this may make it sufficiently attractive for a local farmer or shepherd with a 'flying flock'.

It is clear that whilst sheep grazing notionally maintains a low level of agricultural use of the site, it is more for the convenience of maintenance than for agricultural production.

In the context of 40+ year lifetime it does result in lost food production not just for 40+ years but the additional time the land is out of use for construction, decommissioning and restoration of the land to arable farming.

The agricultural use of the land under panels is restricted to essentially one type of farming – grazing sheep. An outbreak of foot and mouth, or blue tongue disease could render the site unusable for grazing. It is not practicable to take hay crops or graze cattle and so the type of agriculture is highly restricted. Possible sheep grazing is no substitute for wheat production.

Land in use for solar panels is generally ineligible for the normal agricultural subsidies, such as the Basic Payment Scheme (now being phased out) and the Environmental Land Management Scheme (ELMS). It does not prevent land from being managed in similar ways, but there will be no payments available to farmers (e.g. graziers) for compliance and this could make farming less financially attractive going forward.

The site will have to be (re)seeded to grass, or species rich grassland, but this will probably occur after the panels have been sited on the land. In my experience grass does not grow well under the panels themselves. There are often areas that are dry and barren or that only host weeds species, due to heavy shading.

Food Security

The Applicant does not consider that the Scheme would result in food security impacts either alone or cumulatively. The applicant states:-

The UK annual balance of domestically produced food is sensitive to non-planning factors including weather and markets. The relevant assessment for policy purposes (and therefore decision-making purposes under the Planning Act 2008) is one that is based on the grade of the agricultural land, rather than its current use and the intensity of that use.

The UK Food Security Report 2021 provides a useful reference for UK food security and is an important document providing context and crucial information for those proposing projects that take significant productive land from production.

The recent House of Lords Inquiry on Land Use in England (published 13 December 2022) also raised a concern regarding the development of solar farms on BMV which is also relevant. The key paragraph is in respect of Para 132, which sets out the conclusions of the committee regarding solar farms on BMV land:

"Although there are provisions within the NPPF to dissuade the development of solar farms on Best and Most Versatile land, from the evidence received we are concerned that too many exceptions are being made. We believe that a consistent policy toward encouraging the installation of solar panels on industrial, commercial and domestic buildings is needed and would negate the need for large-scale ground mounted solar farms. Alongside that, we would like to see stricter regulations put in place to prevent the development of solar farms on BMV land. We also believe onshore wind turbines still have a crucial role to play in achieving national energy self-sufficiency".

Policy Issues
Soil is a finite resource that fulfils many important functions and services (ecosystem services) for society, for example as a growing medium for food, timber and other crops, as a store for carbon and water, as a reservoir of biodiversity and as a buffer against pollution. Government policy is set out in Paragraph 174 of the National Planning Policy Framework (2023) which states that:

15. Conserving and enhancing the natural environment
174. Planning policies and decisions should contribute to and enhance the natural and local environment by:
a) protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan);
b) recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland;

NPS for Energy Infrastructure are published by the Department of Business, Energy and Industrial Strategy (now Department for Energy Security and Net Zero). Paragraph 5.10.8 of the adopted overarching NPS for Energy (EN-1) states:

"Applicants should seek to minimise impacts on the best and most versatile agricultural land (defined as land in grades 1, 2 and 3a of the Agricultural Land Classification) and preferably use land in areas of poorer quality (grades 3b, 4 and 5) except where this would be inconsistent with other sustainability considerations. Applicants should also identify any effects and seek to minimise impacts on soil quality taking into account any mitigation measures proposed. For developments on previously developed land, applicants should ensure that they have considered the risk posed by land contamination."

6. Cable Routes and fixed equipment

The proposed Cable Route Corridor connects the separate areas of the Sites together and to the electrical distribution grid. The cable would run below ground in a trench and sections of it may run through ducting within a shared grid connection route with other facilities. The report indicates that:-

19.3.7 The Cable Route Corridor has not yet been subject to soil survey or farming circumstances assessment. This is as the narrow cable trench will need a specific survey along its actual path to inform soil management planning of the trenching works. Detailed ALC survey of fields places sample points at 100m intervals, too widely spaced to monitor soil variation within the soil to be excavated for the trench.

19.3.8 Agricultural occupancy and land use information for the Cable Route Corridor will need to be collected ahead of trenching work to avoid, where possible, an active construction site at sensitive periods of time for land management, for instance anticipated harvest dates. Any such information collected preplanning will lose validity and need to be replaced once an approximate work start date is established post consent. Soils data gathered for ALC survey can inform soil management planning for solar development, and that soils data should also be obtained for soil management planning of the underground cabling and access routes and any permanent features such as BESS, transformers and substations.

However the ALC report has not surveyed the Cable Route(s) and only provisional ALC data and soil maps can be relied upon for guidance at this stage.

From viewing the maps included in the report it seems likely that 20-60% of the cable route will be BMV, where any loss is likely to be significant. However, irrespective of the land quality issues, there will be matters of concern to farmers and landowners including:-

- Land drainage
- Weed burden
- Biosecurity for plant diseases
- Timeliness of soil stripping, storage and handling
- Compaction of subsoil
- Re-instatement to previous quality/standard

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

The Scheme is stated to include :-

Substations and an Energy Storage System (sometimes referred to as 'BESS'), buried cabling within the sites, and other equipment and security fencing; and the buried Cable Route Corridor. The combined area of the substations and BESS will be approximately 4.27ha

7. Cumulative Impacts including District and County wide ALC

There are a number of small(er) and largescale Solar PV schemes in Lincolnshire and into Nottinghamshire, with others planned or proposed. There are five known solar project NSIP schemes; specifically in relation to impacts on agricultural land. The situation is a moving picture as new proposals come forward from time to time. Most of these sites are proposed on farmland. Lincolnshire, West Lindsey and N Kesteven in particular are agricultural areas with substantial areas of land within the Best and Most Versatile category. Much of the non BMV land will be Grades 3b and only some Grade 4 with very little Grade 5.

A county-level alternative assessment area should be applied which as a minimum should consider scope for connection into the National Grid at the locations proposed by the registered NSIP solar projects and with specific consideration of agricultural land impacts.

For a project of this scale where the project will tie up the land for up to 40 years, there will be some impact. The area is large locally and if the quantities of BMV are as stated then the impact will still be important, even allowing for less BMV.

Environmental Impact Assessments give guidance on the size and quality of Land Grade that is or can be affected by development proposals. The loss of such a large area of land would normally be considered as significant at District level, even though the use is 'temporary'. Any permanent loss of land due either to construction or through biodiversity designation may affect this assessment further.

8. Soil Damage during Construction Phase

The report indicates that:-

Assessment of Soil Resources
19.6.6 The Code of Practice for the Sustainable Use of Soils on Construction Sites recommends the use of the soil physical characteristics data, collected as part of an ALC survey, to identify topsoil and subsoil units for separate handling and beneficial reuse. This approach, used in this assessment, continues the practice that was used by the former MAFF ALC survey teams for minerals sites to advise on appropriate land restoration.

19.6.7 The ALC detailed survey data includes information on the depth, clay content and stoniness of topsoil and subsoil horizons, enabling the mapping of the extent of soil units appropriate for separate stripping, storage and beneficial reuse. Mapping of soil units would form part of a Soils Management Plan that would be secured by a Requirement of the DCO. An Outline Soil Management Plan for the site is given at Appendix 19.2 to this Chapter [EN010132/APP/WB6.3.19.2].

Soil Damage During Construction

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

During the construction phase many of the areas will affect soil and water issues.

A comprehensive Soil Management Plan that should be established as part of the Construction Phase, to minimise the impact on soil resources. **Appendix 5** sets out some key issues to be included in the Soil Management Plan.

Appendix 6 shows photographs of before during and after construction of a large solar farm in Hampshire where soil structural issues were a major problem post construction. Once the panels are in place usual agricultural practices such as ploughing and subsoiling become much more difficult.

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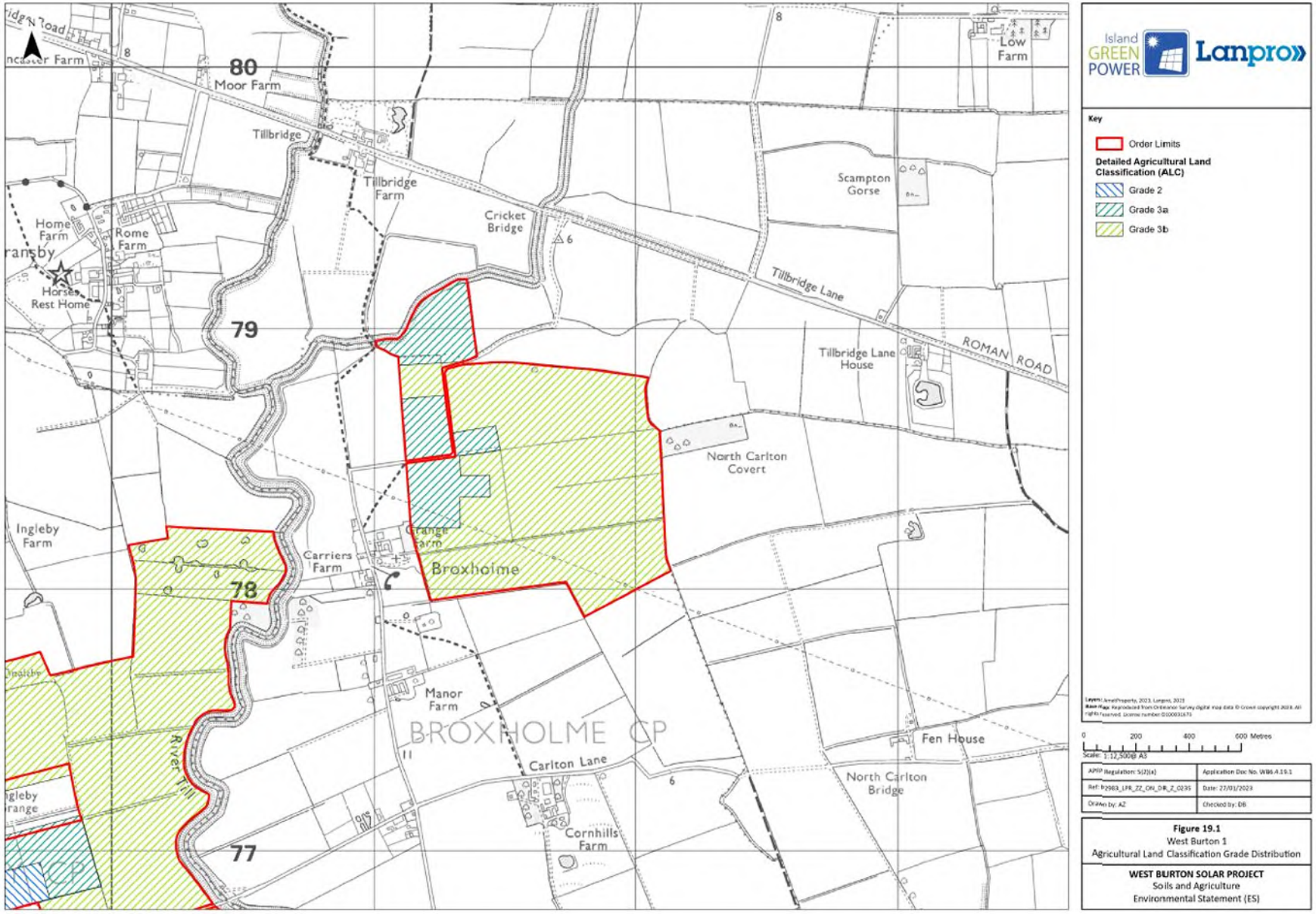
A **New Perspective on Land and Soil in Environmental Impact Assessment.** IEMA, February 2022.

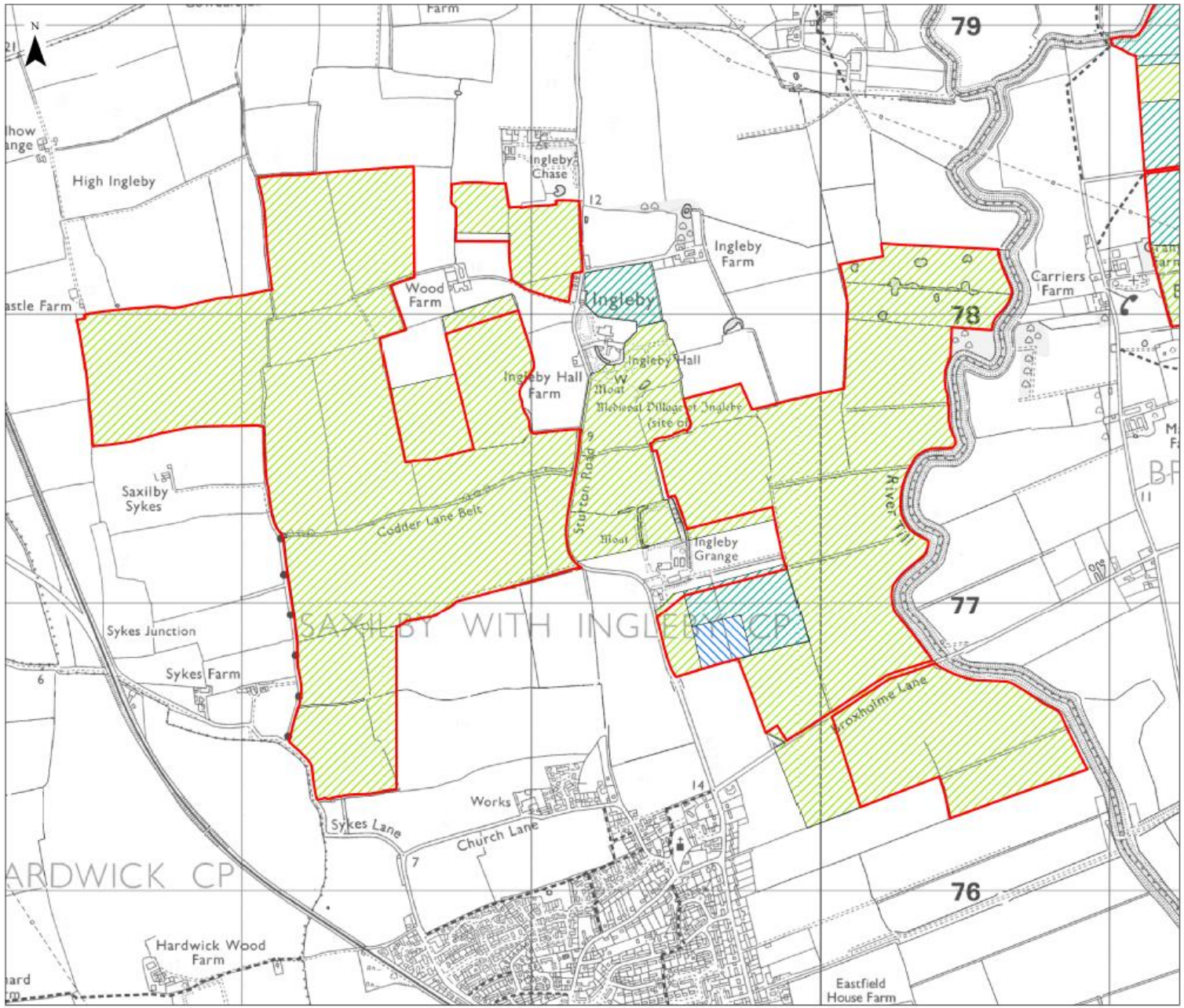
Biographical

Sam Franklin BSc (Hons) MSc MISoilSci PIEMA FBIAC
A Panel Member of the Agricultural and Land Drainage Tribunal

- Sam is a Member of the Institute of Professional Soil Scientists and a Life Member of the British Society of Soil Science. He undertakes soil survey and land management work for private clients, developers, local authorities and government agencies and has worked on soil restoration, flood risk, drainage and land improvement projects, as well as Agricultural Land Classification for roads, development sites, renewable energy projects and EIA. He has been a Professional Associate of the Institute of Environmental Assessment, since 2001.
- He has an MSc from Cranfield University, attending Cranfield advanced training in Soil Matters, Land Evaluation, Soil & Water: Principles and Management in Production Systems and soil science courses of IPSS and Lancaster University. He has given talks, demonstrations and on-farm advice on ALC, soil and water management, land drainage, rainwater harvesting and soil husbandry. Sam has worked overseas in dryland climates and is familiar with land drainage, irrigation scheduling and reservoir design.
- He is from a family farm and has a BSc (Hons) in Agriculture from Newcastle University and considerable practical, farm-based agricultural, horticultural and soils management experience gained on mixed, livestock, horticultural and arable units and international work. Sam is a Fellow of the British Institute of Agricultural Consultants (FBIAC) and holds the Royal Horticultural Society Certificate in Horticulture.
- As a qualified chartered surveyor (MRICS, FAAV) and agricultural consultant he has over 35 years of experience across a wide range of property matters including both commercial and housing planning projects, compulsory purchase, new roads, pipelines and rail projects, development land, farming, property management, renewable energy, minerals, land restoration, archaeological surveys, and EIA.
- Sam has been managing director of a surveying and rural planning business since 2001 (www.landscope.co.uk). Previous employment includes five years at the RSPB, work for other environmental and conservation organisations, regarding landscape restoration & management, habitat creation, minerals restoration and woodland management; all requiring detailed soils, water and environmental knowledge.
- He has undertaken soil and water management, soil husbandry and Catchment Sensitive Farming work for Natural England and since 2003 has given regular rural planning consultancy advice to Local Planning Authorities, mainly across southern, eastern and midland England; acting as agricultural, equestrian and rural resource expert, regularly attending planning committees, public inquiries, hearings, NSIP and examinations in public.

Appendix 1


Island GREEN POWER
Lanpro
Key
Order Limits
Detailed Agricultural Land Classification (ALC)
Grade 2
Grade 3a
Grade 3b
80
79
78
77
Moor Farm
Tillbridge
Tillbridge Farm
Cricket Bridge
Scampton Gorse
Low Farm
Home Farm
Rome Farm
Horses Rest Home
Tillbridge Lane
ROMAN ROAD
Tillbridge Lane House
North Carlton Covert
Ingleby Farm
Carriers Farm
Grange Farm
Broxholme
Manor Farm
BROXHOLME CP
Carlton Lane
Fen House
North Carlton Bridge
Cornhills Farm
River Till
0 200 400 600 Metres
Scale: 1:12,500@ A3
Figure 19.1
West Burton 1
Agricultural Land Classification Grade Distribution
WEST BURTON SOLAR PROJECT
Soils and Agriculture
Environmental Statement (ES)



Island GREEN POWER

Lanpro

Key

- Order Limits

Detailed Agricultural Land Classification (ALC)

- Grade 2
- Grade 3a
- Grade 3b

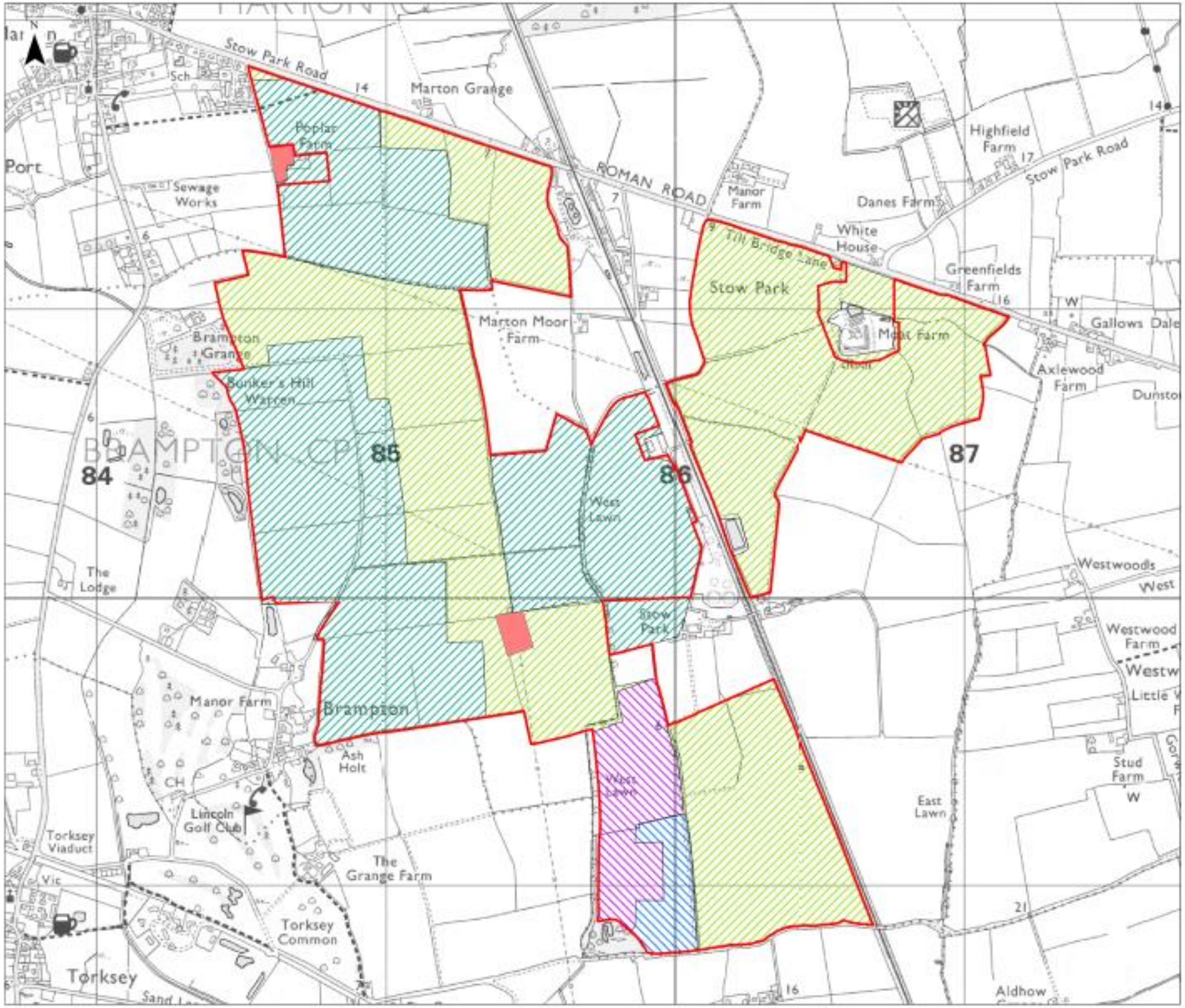
0 200 400 600 Metres

Scale: 1:12,500@ A3

APFP Regulation: 5(2)(a)	Application Doc No. WB6.4.19.2
Ref: P2963_LPR_ZZ_ON_DR_Z_0235	Date: 27/01/2023
Drawn by: AZ	Checked by: DB

Figure 19.2
West Burton 2
Agricultural Land Classification Grade Distribution

WEST BURTON SOLAR PROJECT
Soils and Agriculture
Environmental Statement (ES)



Island GREEN POWER | Lanpro

Key

Order Limits

Detailed Agricultural Land Classification (ALC)

- Grade 1
- Grade 2
- Grade 3a
- Grade 3b
- Non-agri

0 200 400 600 Metres

Scale: [illegible] A3

Figure 19.3

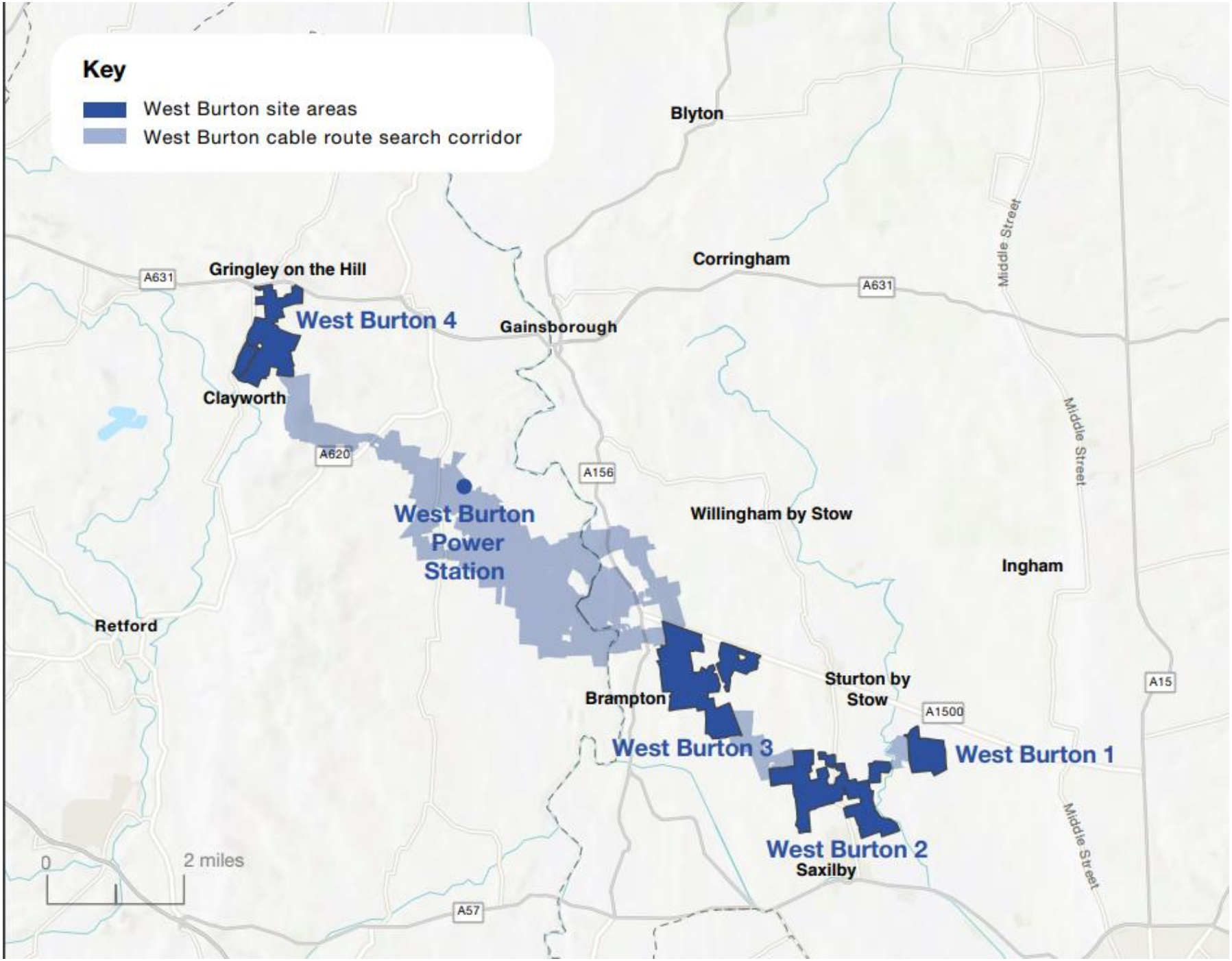
West Burton 3

Agricultural Land Classification Grade Distribution

WEST BURTON SOLAR PROJECT

Soils and Agriculture

Environmental Statement (ES)


Key
West Burton site areas
West Burton cable route search corridor
Blyton
Gringley on the Hill
A631
West Burton 4
Gainsborough
Corringham
A631
Middle Street
Clayworth
A620
A156
West Burton Power Station
Willingham by Stow
Ingham
Middle Street
Retford
Brampton
Sturton by Stow
A1500
A15
West Burton 3
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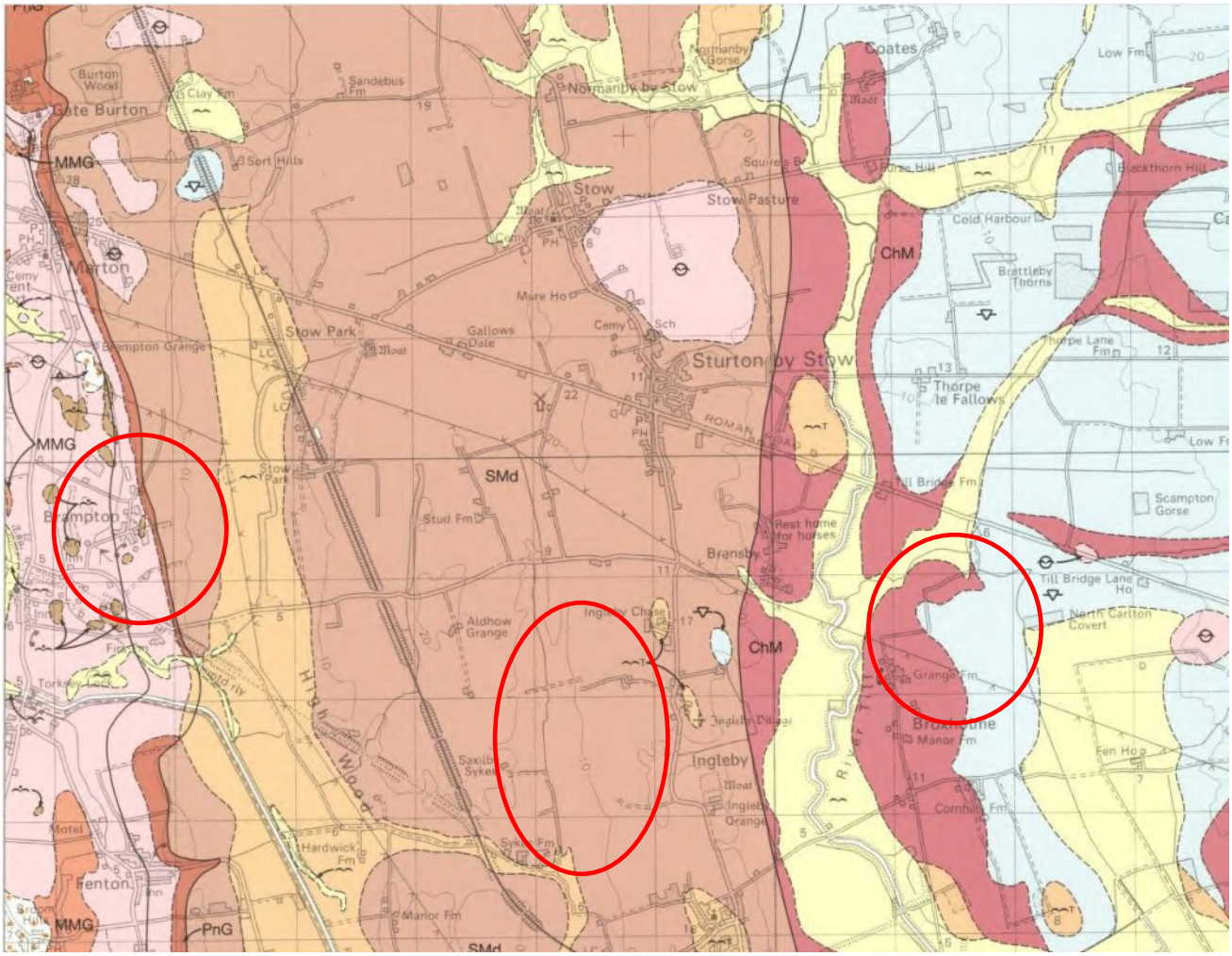
West Burton 2
Saxilby
Middle Street
0
2 miles
A57



Soil Survey of England Map of Area

0711f WICKHAM 2

Detailed Description

This association is extensive where thin loamy drift covers Jurassic and Cretaceous clay shales. It consists mainly of fine loamy over clayey typical stagnogley soils of the Wickham series but, where drift is absent, clayey soils of the Denchworth series are common. The better-drained stagnogleyic argillic brown earths of the Oxpasture series and calcareous clayey soils of the Evesham series, are sporadically distributed. There are many small inclusions of other soils; these are described below and are listed in the key.

The association covers approximately 320 km² mainly in valleys but also on plateaux of Middle and Upper Jurassic rocks in east Leicestershire where Wickham soils have a larger than average silt content. Narrow alluvial flats along many valleys carry clayey, wet Fladbury soils and in south Leicestershire there are calcareous St Lawrence series. Clayey Holdenby and Lawford soils are associated with patches of clayey drift. On the Rhaetic and Lower Lias sediments in east Worcestershire where the country rock is more calcareous than elsewhere, Evesham and Haselor soils and the former Wedmore series are important associates.

This association covers 545 km² in Eastern England mainly in Lincolnshire and Northamptonshire but also in west Norfolk. In Lincolnshire it is mainly in the Lias Clay vale between Lincoln and Newark where the Trent river terrace deposits are a source for the superficial loamy drift. Patches of sand and gravel give small inclusions of Quorndon soils, and some coarse loamy over clayey soils of the Kings Newton series occur on the edge of the river terraces. Oxpasture soils become increasingly common towards the limestone scarp of Lincoln Edge, and small patches of Beccles soils are included where the association abuts chalky till. Evesham soils are uncommon in the Lias vale and are found mainly in south-west Lincolnshire. However, Oxpasture and Evesham soils are more common on Upper Jurassic and Cretaceous rocks bordering the Fens. The association also occurs in the Ancholme valley north of Lincoln; north-east and east of Lincoln on slopes of narrow valleys cut into chalky till; on the western edge of the Wolds; and in the deeply dissected valleys of the southern Wolds. In Northamptonshire the association occurs both in narrow valleys cut into the clay shales and on the plateaux formed by Upper Jurassic rocks. Here in the valleys, Evesham soils are less frequent than elsewhere and in general the soils on the hilltops are siltier than those in the vales, and Oxpasture soils are common. Quorndon soils are a common inclusion in west Norfolk on flat or gently sloping land at the foot of the chalk scarp. Here Oxpasture soils are not found.

In the South West, the proportion of Wickham and Denchworth soils is greater than in the Midlands. Lawford profiles are common in places, but Evesham and Oxpasture soils are relatively rare. The association, which covers about 300 km², occurs mainly in the wide vales of Gloucestershire, Wiltshire, Somerset and Dorset on Jurassic and Gault Clays. It also occurs on the Oligocene clays of the Bovey and Petrockstow basins, where Wickham and clayey Teigngrace soils occupy two-thirds of the mapped area and the ancillary soils mainly belong to the Ipstones and Brickfield series. There is also some disturbed ground and waste heaps from ball clay working. Small patches of Oak and Hornbeam soils are included on the gravels that cap small knolls in Dorset and south Somerset, and in north Wiltshire where the gravels contain flint and sarsen stone derived from the chalk outcrop to the south.

In South East England the association occurs on low ground in Oxfordshire and Buckinghamshire, over Lower Lias, Oxford, Kimmeridge and Gault Clays. On the Lias, it is present on the lower slopes of valleys, particularly along the Cherwell, below ridges capped by Middle Lias ironstone or Great Oolite limestone. Elsewhere the association occurs below the Corallian scarp and at the margins of river terraces. Oxpasture soils feature only occasionally, and Evesham soils are restricted to river terrace bluffs and to ground near the Corallian scarp. Some Kings Newton soils have been recorded on the terrace drifts and near the Upper Greensand outcrop. Where the drift is clayey, Lawford soils occur. Rowsham soils have been recorded in the Tiddington area.

In Northern England the association covers 45 km², principally in the Howardian Hills of North Yorkshire. Here it occurs on plateau sites where thin drift from weathered sandstone and siltstones covers clay shale. In Humberside, small areas near Brigg, in valley drift, and near Kirton-in¬Lindsey, on Head below the Lincolnshire Limestone escarpment, have fewer clayey inclusions than elsewhere.

Soil Water Regime

Occurring mainly on level or gently sloping sites, these soils which have slowly permeable subsoils are seasonally waterlogged (Wetness Class III and IV). Wickham, Evesham and Oxpasture soils respond well to artificial drainage hut, because of their poor hydraulic conductivity, the Denchworth and Lawford series are more difficult to drain effectively. When the soils are waterlogged, excess water moves laterally mostly as surface run-off.

In the South West of England having slowly permeable subsoils and sited mainly on level or near-level ground the soils are waterlogged for prolonged periods during the growing season (Wetness Class V) where average annual rainfall exceeds 800 mm. In drier districts like north Gloucestershire, waterlogging is generally confined to winter (Wetness Class III).

Cropping and Land Use

Over much of this association the land is used for cereals and ley grassland. Oilseed rape has expanded recently and provides an alternative break crop to ley grassland. There is little opportunity for spring cultivation so almost all cereals are autumn-sown. Cereal yields may be reduced by slight droughtiness. Soil structure is easily damaged if the soils are cultivated when wet and careful timing of field operations is critical. Grass yields are restricted by drought and the grazing period is limited during spring and autumn because of a risk of poaching. Wickham and Denchworth soils are acid in reaction but, Evesham and Haselor soils are neutral or slightly alkaline. In wetter districts most of the soils are under long-term grassland with small areas of autumn sown cereals. The grass yields are potentially large, and most of the soils are only slightly droughty though the grazing season is shortened because of the risk of poaching. In the wettest places, the maximum safe grazing period is as little as 100 days. Where the average annual rainfall is below 750 mm ley-arable farming is more usual. Where cultivated, the soils suffer from compaction and structural damage by machinery and the timing of cultivations is critical. Phosphorus levels are naturally low, but potassium is adequate for most plant needs.

7.11 WICKHAM Definition

Major soil group:	07 surface-water gley soils	Seasonally waterlogged slowly permeable soils, formed above 3 m 0.D. and prominently mottled above 40 cm depth. They have no relatively permeable material starting within and extending below 1 m of the surface.
Soil Group:	1 stagnogley soils	With a distinct topsoil. They are found mainly in lowland Britain.
Soil Subgroup:	1 typical stagnogley soils	(with ordinary clay enriched subsoil)
Soil Series:		medium loamy or medium silty drift over clayey material passing to clay or soft mudstone

Brief Profile Description

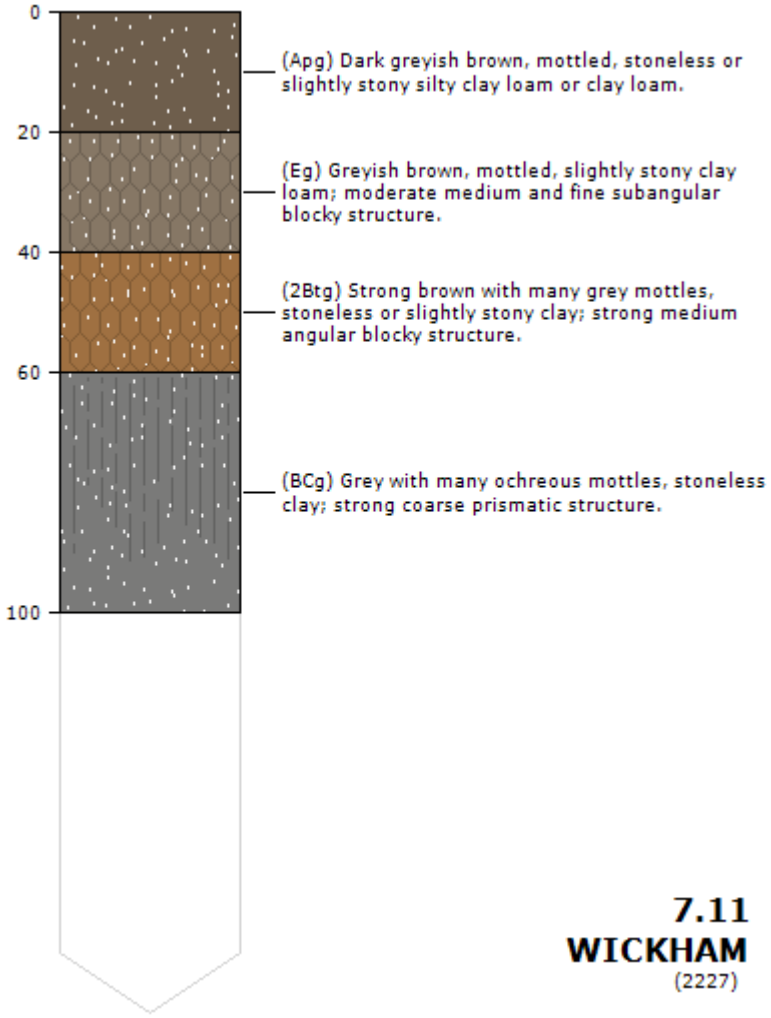
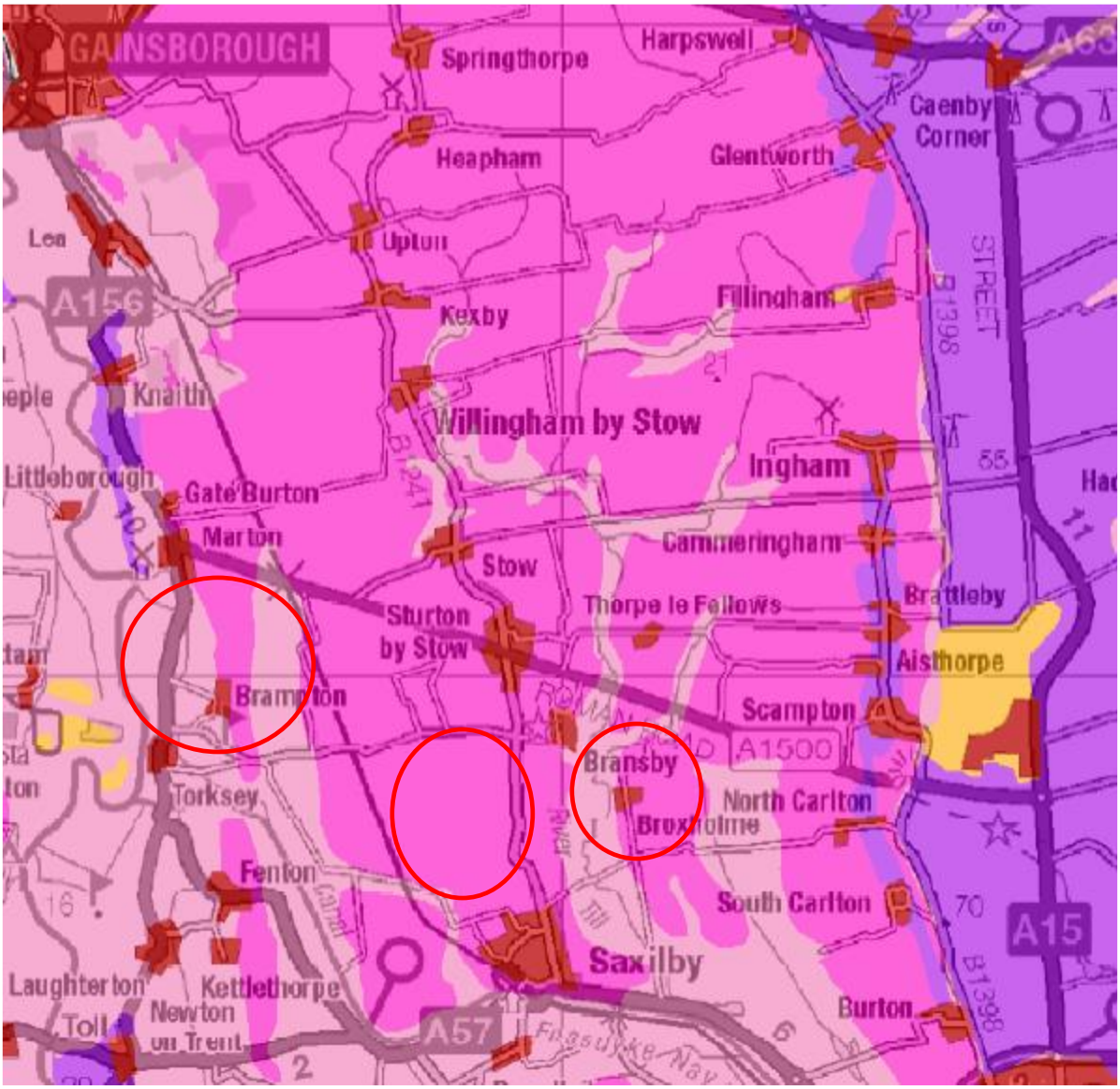


Figure 1 below is the DEFRA Predictive Best and Most Versatile Land Map.

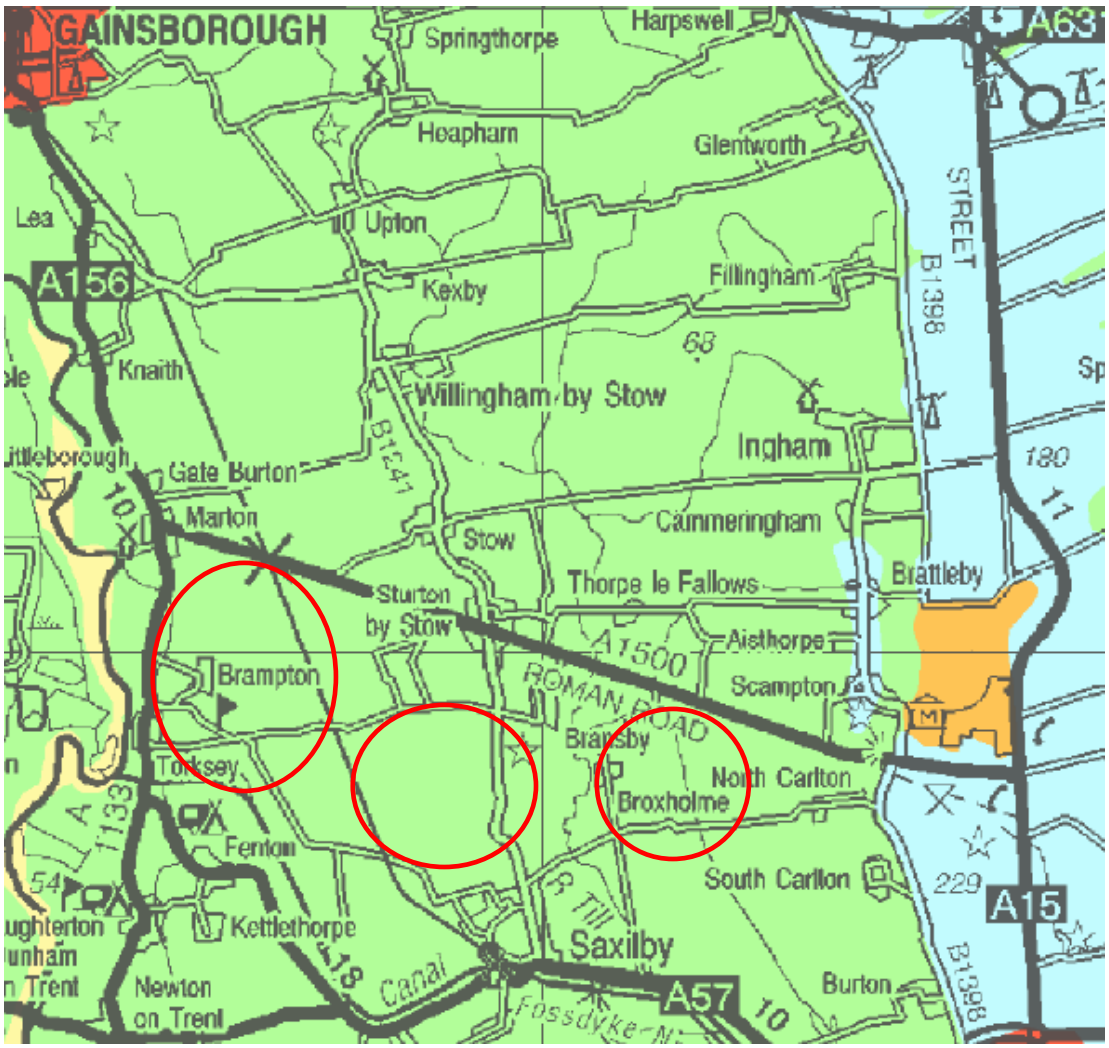
The map shows a Low to Moderate likelihood of best and most versatile land for this area



Predictive BMV Land Assesment © Defra

- High likelihood of BMV land (>60% area bmv)
- Moderate likelihood of BMV land (20 - 60% area bmv)
- Low likelihood of BMV land (<= 20% area bmv)
- Non-agricultural use
- Urban / Industrial

Figure 2 below is the 1:250 000 scale map (East Midlands) which shows the area as Grade 3 quality.



Grade	Description
1	Excellent
2	Very Good
3	Good to Moderate
4	Poor
5	Very Poor

Non-Agricultural Land

- Other land primarily in non-agricultural use
- Land predominantly in urban use

Appendix 5

Soil Management Plan (Outline)

1. The soil stripping, handling, storage and replacement operations should be undertaken in a manner that is consistent with suitable specification and methodology set out in a Soil Management Plan.
2. All topsoil and subsoil material shall be stripped from areas affected by top soil storage bunds, subsoil storage bunds, general fill bunds, hard-standings and other constructions including temporary access roads and vehicle trafficking routes, and shall be stored separately in bunds from any imported material and shall be used for the restoration of the temporary soil storage site unless otherwise agreed in writing by the Local Planning Authority.
3. Soils should be stripped, stored and replaced in line with the MAFF Good Practice Guide for Handling Soils Sheets 1, 2, 3 and 4 - http://webarchive.nationalarchives.gov.uk/20090306103114/http:/www.defra.gov.uk/farm/environment/land-use/soilguid/index.htm .
4. Topsoil and subsoil storage bunds should be placed in approved locations and constructed to ensure secure storage without damage, loss or contamination.
5. Topsoil and subsoil should be stored in bunds not exceeding 3m in height above adjacent existing ground level and shall be constructed and shaped by excavator only (dump trucks should not traffic across the bunds at any time).
6. Imported general fill material should be stored in bunds not exceeding 4m in height above adjacent existing ground level.
7. Bunds should be seeded to grass at the earliest opportunity and shall not be allowed to over-winter without grass cover.
8. No topsoil or subsoil should be sold or otherwise removed from the site.
9. Within 3 months of their construction, the Developer should provide a detailed plan of soil storage bunds showing details of position, volume and soil type. The Developer shall be responsible for maintaining an up-to-date record of all soil storage and general fill bunds throughout the life of the site.
10. The stripping, movement and re-spreading of topsoil and subsoil material should only be undertaken when the topsoil and subsoil material is in a dry and friable condition and the ground is sufficiently dry to allow the passage of heavy machinery and vehicles over it without damage to the soils.
11. All injurious weeds, as defined by the Weeds Act 1959, growing within the working site should be eradicated or adequately controlled by approved method.
12. All vegetation growing on soil storage bunds and peripheral areas within the site should be kept in tidy condition by cutting at least once during the growing season.
13. The boundary of the development should be made stock proof for the duration of the temporary development.
14. All temporary plant, machinery, buildings, fixed equipment, roads and areas of hard standing including site compounds should be removed.
15. The natural subsoil base material should be comprehensively ripped to a minimum depth of 500mm to break up surface compaction before any soil material is spread. The developer should give the Planning Authority notice of an intention to carry out this operation. All large stones and boulders, wire rope and other foreign material arising should be removed. Special attention should be given to areas of excessive compaction such as haul roads where deeper ripping may be necessary.
16. The Developer should be responsible for providing all necessary training of operatives and site supervision by suitably qualified personnel to ensure that the soil replacement operation is carried out in the approved manner.
17. Prior to the commencement of spreading soil, all stones, boulders or foreign objects likely to impede normal agricultural cultivations should be removed from that area.
18. The soil material set aside for use in any agricultural restoration should be spread uniformly in the correct sequence (subsoil followed by topsoil) over the ripped base material, and should be rooted and

scarified to full depth without causing mixing between different soil layers. The reinstated agricultural soil profile should be total 450mm thickness overlying prepared and free draining natural stony base material, and should consist of 250mm topsoil and 200mm subsoil derived from the soil stripping operation. This soil profile should meet the technical requirements of the identified Agricultural Land Classification Grade on restoration.

19. All base material ripping, soil spreading and cultivation operations should be carried out in such a manner as to minimise compaction and achieve unimpeded drainage down through the soil profile.
20. Any part of the site restored for agricultural purposes which is affected by localised settlement that adversely affects the agricultural after use should be re-graded including the re-construction of the soil profile to approved specification.
21. Following restoration of the soil materials, the land will be cultivated, seeded and managed appropriately for a minimum of a year and until agreed with the Local Planning Authority that the land meets satisfactory requirements.

Conditions during construction

1

2

3

4

5

6

Conditions as construction proceeds

Commencement

Mid construction

Near completion

Appendix 3

From: Andrew Fletcher
Sent: 20 October 2023 16:56
To: Neil McBride
Cc: Chris Marsh
Subject: RE: West Burton Solar Energy Project

Hi Neil,

Please see below some notes/responses to the DCO proposals for West Burton:

Draft DCO and Outline Public Rights of Way Management Plan Comments
dDCO Section 11: We need further clarity and agreement as to how the temporary stopping up will work and how the advance notices will work. Advance notice to the Council, the District Council and Parish Councils be required as well as advance notices on site. There needs to be a clear procedure for temporarily closing or diverting rights of way, with clear details about the reinstatement of any paths and the surfaces of any diverted routes. There needs to be a description about what trigger points any powers would be used and how the closures would work.

Outline PROW Management Plan (OPMP): There also needs to be some clarification about the surface of any diversion route and the reinstatement of the paths once construction has been completed. We welcome the statement at 3.7 of the OPMP that any damage to the surface of the footpath will be repaired *as soon as practical* (my emphasis); it would be useful to understand what this means and to include the Council in any discussions regarding reinstatement.

We welcome the approach to undertaking works overnight as detailed in Para 3.8 f the OPMP, and will remaining open and managed during the day, as this will minimise the impact to the public.

There are no details of the path surface specification within the OPMP, it would be helpful to have this detailed for clarity.

Much of the processes and procedures could form part of the rights of way management plan under Section 18 of the dDCO; For the temporary closures, there does not appear to be any notice periods or time frames for diversions and closures included in Article 11 or the OPMP. I noted a lot of use of the word “reasonable”, which makes me a little nervous as it is undefined and ripe for argument. It would be best to avoid any potential for disagreement in the future. “Reasonable time” for closure is not defined and it would be good to have better clarity here. It is also not clear what the trigger points for temporary diversions/closures would be as the wording is that the undertaker “may” close/divert the paths rather than “will”. I would suggest that the Road Traffic Regulation Act 1984 is used instead which provides a solid notice period and controlled process for closure, a defined limit (6 months), with options to go to the Secretary of State. Alternatively, a similar process should be written into the DCO if they do not wish to separately apply for a temporary closure etc.

Sheet 1
Broxholm PF196 crosses the blue land and should be retained / reserved upon completion of the construction. We agree with the proposed diversion in Schedule 6 of the dDCO as a mitigation measure instead of a closure, however the area marked as a potential diversion area is very large. It would be good to get some agreement here over what the diversion will be, or at least to agree that the diversion needs to be the shortest route practicable and conforms the general desire line.

Sheet 2/3
There is potential for Codder Lane Belt to be an historic highway. It was originally listed as an unclassified road 1920’s hand-over map, but this has since been omitted from later incarnations of the list of streets. There is potential that this lane may be subject to a claim for future public rights. The lane itself offers strategic potential to

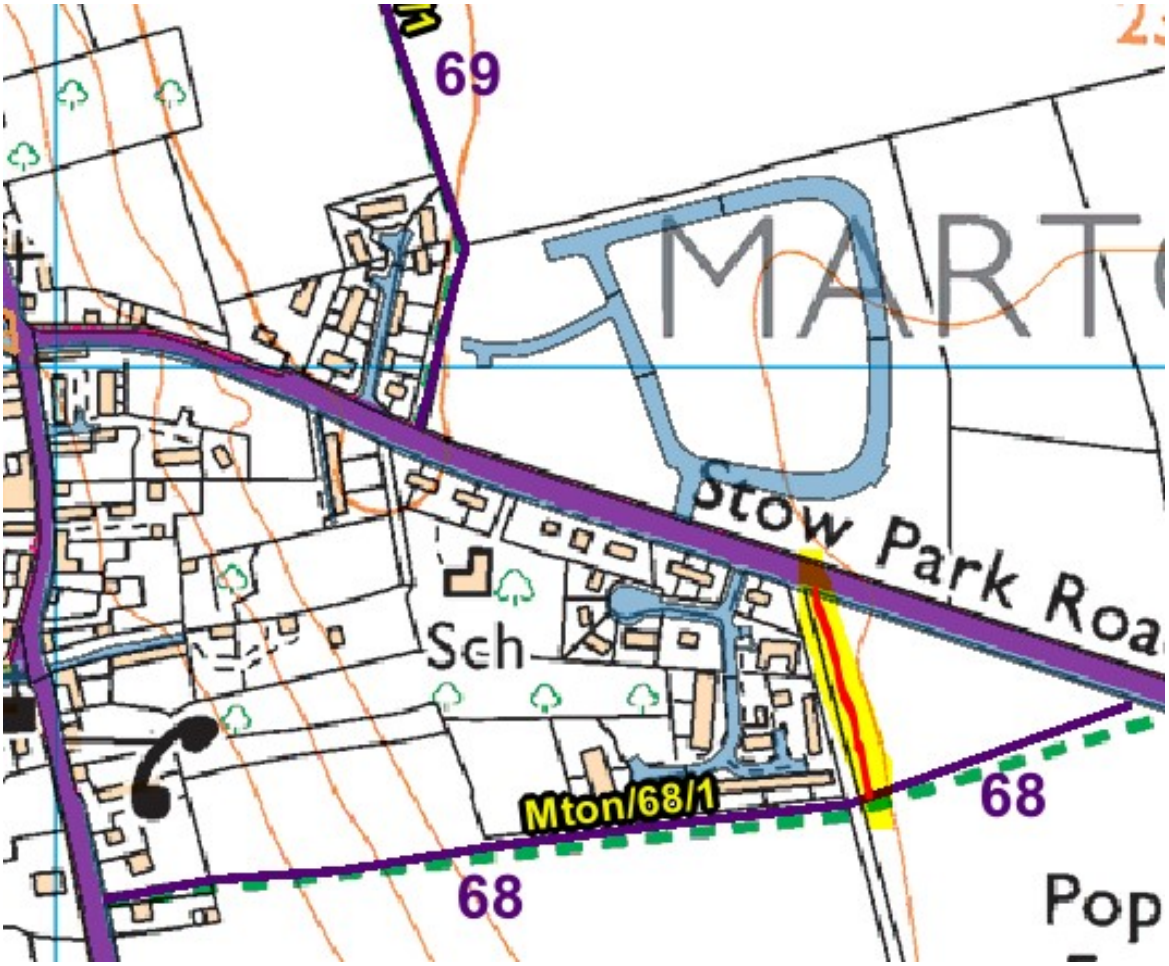
the network, offering a link between existing recognised highways. There is potential for this to be dedicated as highway as part of the scheme as a potential enhancement:

Sheet 4: No concerns / issues

Sheet 5: No concerns / issues

Sheet 6: No concerns / issues

Sheet 7:
Morton PF68 crosses pink land, and it is considered that there is an opportunity to improve the right of way as part of this development by a permanent diversion to the north, as shown below.



Tillbridge Lane / Stow Park Road is not inviting for onward pedestrian journeys and the termination point of PF68 ends on a busy and fast A road with no ongoing right of way to the north. A permanent diversion of the path alongside the field edge as shown above would reposition the termination point of the path to the 30mph speed restricted part of the road and create a short circular route for residents in Marton and make the path much more attractive and useful. This would also avoid the need for temporary diversion or closure of the path. Some consideration as to the surface of the diverted section of the path would be required however this would be less substantial than anything needed for a temporary diversion.

Regarding the temporary diversion itself, similar to what was stated above, we agree with the proposed diversion in Schedule 6 of the dDCO as a mitigation measure for the route instead of a closure, however would recommend that the diversion area is to the north rather than to the south of the route. The area marked as a potential diversion area is also similarly very large. It would be good to get some agreement here over what the diversion will be, or at least to agree that the diversion needs to be the shortest route practicable and conforms the general desire line.

Brampton PF66 / Morton PF66 crosses blue land and should be retained / reserved upon completion of the construction. Level of usage is unknown without census data, but the existence of a footway on the A156 Gainsborough Road back to the village makes this a credibly valued daily circular walk. The existence of car parking option at the Gainsborough Road would see drive to dog walk use being foreseeable.

We have concerns about this route being proposed to be temporarily stopped up under the dDCO without a corresponding alternative diverted route as it is likely to be a popular route. We recommend that the temporary stopping up is reconsidered, or an alternative diverted route be planned as part of the construction works.

Possible future claimed paths

There are no current applications to add a path to the definitive map over the land identified for the proposed development, however there is potential for future applications to be made, which may impact the development in the future. We are not able at this stage to assess any merits of any potential future application or any strategic

benefits and accordingly we cannot advise the best and most acceptable approach from our perspective towards these.

Thanks and Best Regards,

Andrew Fletcher **MIPROW MAPM**
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County Offices, Newland, Lincoln LN1 1YL

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Director – Institute of Public Rights of Way & Access Management