PLANNING, DESIGN AND ACCESS STATEMENT

SWEETBRIAR SOLAR FARM

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1 INTRODUCTION

1.1 Background

This Planning, Design and Access Statement ('the Statement') has been prepared to accompany the planning application submitted to North Lincolnshire Council ('the Council') by Lightrock Power Ltd ('the Applicant') for installation of a solar photovoltaic ('PV') array/solar farm and associated infrastructure and landscaping ('the Development') on land approximately 6 km north west of Immingham, North East Lincolnshire ('the Site').

The Site, known as 'Sweetbriar Solar Farm', has a total area of approximately 44.58 hectares ('ha'), as shown on the Site Location Plan (Planning Drawing 1a).

1.2 The Planning Application Submission

The following plans and drawings are submitted alongside the planning application:

- Planning Drawing 1a – Site Location Plan
- Planning Drawing 1b – Land Under the Applicant's Control
- Planning Drawing 2 – Indicative Site Layout
- Planning Drawing 3 – Landscape Mitigation Plan
- Planning Drawing 4 – Typical PV Panel Section
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The following environmental and technical reports are appended to this Planning Statement:

- Appendix 1 – Landscape and Visual Appraisal
- Appendix 2 – Outline Landscape and Biodiversity Management Plan
- Appendix 3 – Glint and Glare Study
- Appendix 4 – Ecological Impact Assessment (EcIA)
- Appendix 5 – Biodiversity Metric Assessment
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1.3 The Applicant

Lightrock Power develops solar farms across the UK and the team has delivered a number of successful operational projects that are providing clean energy to the grid. They focus on schemes that can be sensitively designed into the landscape, helping meet national and local authority renewable energy targets.

1.4 Site Selection

The purpose of the Development is to harness solar power to generate electricity. The design of a solar development must also take potential environmental effects into account.

The Development must therefore strike a balance between energy yield and minimising environmental effects.

Not every site will be suitable for accommodating solar, and therefore the Applicant has been through a thorough feasibility exercise to assess the suitability of the Site. The Site is located in an area of relatively high solar irradiance (power received from the sun) in the UK[1] and the Development is intended to make efficient use of this resource. The potential for installing a solar farm at the Site has been assessed through feasibility work, which assessed technical and environmental issues to derive the most appropriate proposed scale, location and infrastructure layout.

The key criteria which have led to the Site being selected for solar development include:

- Solar irradiance levels;
- Proximity to an available grid connection;
- Separation from residential areas;
- Separation from heritage assets and right of way;
- Existing screening provided by trees and hedges;
- Topography;
- Field size;
- Access to the site for construction;
- Agricultural land classification;
- Landscape character;
- Flood Risk; and
- Ecological sensitivity.

Following consideration of the above factors, the Site was selected as having very good potential for development with minimal environmental impacts. The solar farm would be connected to the substation on site via buried cables (as shown on Planning Drawings 2 and 3). The Site benefits from being on generally flat agricultural land with established hedgerows and boundary vegetation which will form pre-existing screening for the Development while the proposed landscape and enhancement measures establish in the early years of the Site's operation.

A Sequential Test Analysis (Appendix 12) was also undertaken to assess the development potential of nearby land parcels. The analysis identified that none of the Potentially Developable Areas (PDAs) were more suitable, firstly because neither comprise land that is of a lower agricultural quality than the Site (the Development Site comprises predominantly Grade 2 and 3 agricultural land and neither PDA comprised Grade 3b, 4 or 5, or non-agricultural/ brownfield land). Secondly, similar to the Development Site, both PDAs are situated on flat land with potentially sensitive receptors nearby, however the PDAs offer minimal existing screening in comparison to the Development site in order to reduce the Development's visual extent. Finally, the opportunities for agricultural activity offered on the PDAs do not supersede that provided on the Development Site (continued free-range chicken rearing and sheep grazing are both proposed on Site).

1.5 Rationale for the Development

This section sets out the rationale for the Development, which is underpinned by national and international commitments on climate change, policy objectives, electricity market reform and industry drivers.

The UK is one of 195 signatories to the Paris Agreement under the United Nations Framework Convention on Climate Change (2016)[2], which commits to limiting the global

[1] Met Office (2006) *MIDAS: Global Radiation Observations. NCAS British Atmospheric Data Centre* [online] https://catalogue.ceda.ac.uk/uuid/b4c028814a666a651f52f2b37a97c7c7 (Accessed 28/09/2021).

[2] United Nations Framework Convention on Climate Change (2016) *The Paris Agreement* [Online] Available from: https://unfccc.int/process-and-meetings/the-paris-agreement/the-paris-agreement (Accessed 28/09/2021).

average temperatures to under 2 °C above pre-industrial levels with an aim of reducing this figure to 1.5 °C. Considerable reductions in greenhouse gas emissions are required to meet this goal.

Following the Paris Agreement, the UK has committed to meeting a legally binding target to cut greenhouse gas emissions by at least 100% from the 1990 baseline by 2050, which would result in net zero greenhouse gas emissions. This target, which is set out in the Climate Change Act 2008 (2050 Target Amendment) Order 2019[3], is more ambitious than the 80% reduction set out in the 2011 National Policy Statement for Energy (EN-1)[4]. The 2008 Climate Change Act[5] also introduced legally binding carbon budgets which restrict maximum greenhouse emissions for five-year periods ahead of the 2050 Net Zero Target. The sixth carbon budget[6] requires a 68% reduction in annual UK greenhouse gas emissions between by 2030 relative to 1990 levels and a 78% reduction by 2035, which is the world's most ambitious climate change target.

An integral part of UK energy strategy is to reduce the dependency on fossil fuels. Paragraph 2.2.16 of National Policy Statement EN-1 identifies that a significant proportion of the UK's generating capacity is due to close and that new low-carbon generation is required to make up for the reduction in energy generated by fossil fuels. The 2021 Net Zero Strategy[7] includes an ambitious commitment for all electricity in the UK to be produced from low carbon sources by 2035.

To address these objectives and meet the emissions reduction targets, the electricity being consumed will need to be almost exclusively from low carbon sources, in contrast with the third quarter of 2019, when around 39% of our electricity was supplied by burning gas, oil and coal. In addition, the decarbonisation of transport, manufacturing and domestic heating depends on a significant increase in the supply of renewable energy. Therefore, a new low carbon energy mix is required which is reliable, secure and affordable.

If consented, the Development would contribute to the delivery of these policy objectives, diversify the energy mix and facilitate the transition to low carbon energy, whilst decreasing the dependency on fossil fuels. Due to rapid advances in technology, solar PV is one of the most cost-effective sources of energy, leading to more affordable and secure energy supply to consumers.

1.6 Benefits of Solar Energy

One of the most sustainable forms of energy production worldwide is the production of solar electricity through the use of solar PV arrays. Solar energy generation does not require fossil fuel use during generation, and although there is variability in the amount and timing of sunlight over the day, season and year, a properly sized and configured system can be designed to be highly reliable. In the case of the Development, the proposed 39 Megawatt ('MW') array would generate approximately 35,000 megawatt hours per year ('MWh/yr')

[3] HM Government (2019) *The Climate Change Act 2008* (2050 Target Amendment) Order 2019 [Online] Available from: http://www.legislation.gov.uk/uksi/2019/1056/made (Accessed 28/09/2021)

[4] Department of Energy & Climate Change (2011) *Overarching National Policy Statement for Energy (EN-1)* [Online] Available from: https://www.gov.uk/government/publications/national-policy-statements-for-energy-infrastructure (Accessed 28/09/2021)

[5] HM Government (2008) *The Climate Change Act 2008* [Online] Available from: https://www.legislation.gov.uk/ukpga/2008/27/contents (Accessed 28/09/2021)

[6] HM Government (2021) *UK enshrines new target in law to slash emissions by 78% by 2035* [Online] Available from: https://www.gov.uk/government/news/uk-enshrines-new-target-in-law-to-slash-emissions-by-78-by-2035 (Accessed 28/09/2021)

[7] UK Government (2021) *Net Zero Strategy – Build Back Greener* [Online] Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1026655/net-zero-strategy.pdf (Accessed 19/10/2021)

which would offset the annual electricity usage of approximately 10,115 homes in North Lincolnshire[8].

Solar power production also generates electricity with a limited impact on the environment. As it is temporary and reversible, there is no need for extensive ground-disturbing foundations, there are no tall vertical structures or moving parts involved and there is no significant noise associated with solar PV arrays during operation. There are opportunities for continued agricultural activities on the site in the form of sheep grazing whilst other areas within the Site can help deliver very significant biodiversity net gains, a requirement for all new Development under the Environment Act.

1.7 Pre-Application Consultations

1.7.1 Consultation with North Lincolnshire Council

The Applicant has sought to front-load the planning process by engaging with North Lincolnshire Council through a pre-application enquiry ('the Enquiry'). The purpose of the Enquiry was to determine the scope of the Application and the supporting technical reports, agree on the approach to addressing the main issues and seek the Council's views on the principle of the Development.

A meeting between the Applicant, Arcus and North Lincolnshire Council was held to discuss the proposed Development on the 30th June 2021. During the meeting, general agreement was reached on how each technical issue can be resolved within the planning process, which has informed the reports appended to this Statement and the assessment of impacts within this Statement.

A written response to the Enquiry was issued on 13th July 2021. The response indicates that the Council supports the Development in principle, providing that consideration is given to the technical issues highlighted by the case officer as follows:

- Potential impact on the character and appearance of the rural landscape – this is addressed in Appendix 1. The Viewpoints that form a key part of the assessment we also agreed in advance with the Council;
- Loss of high-grade agricultural land – this is addressed in Appendix 10 and Appendix 12;
- The potential impact on residential amenity – this is addressed within the assessment of impacts of this Statement as well as Appendix 1;
- The routing of traffic to and from the site – this is addressed in Appendix 9.

A range of consultees – including the Historical Environment Record (HER), the Council's Neighbourhood Services and Highway Development Services (HDS) departments – were consulted as part of the Enquiry. The consultees advised on the information required as part of the planning application and HER identified a potential that the proposed solar farm site contains archaeological remains that could be disturbed and destroyed during construction. It was therefore stipulated how an application would need to incorporate a Heritage Statement. The latter two consultees did not raise any objections to the principle of development however HDS informed that a Transport Statement and Construction Traffic Management Plan will be needed to support any planning application submission. It was agreed in pre-app discussions that the latter could be secured by an appropriately worded planning condition.

[8] Department for Business Energy and Industrial Strategy (2019) *Sub-national electricity consumption statistics 2018* [online] Available from: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/853756/Sub-national_electricity_consumption_statistics_2018.csv/preview (Accessed 13/12/2021).

The extensive engagement with the Council prior to submission of this application has informed the design development and the scope of the technical documents submitted with this application.

1.7.2 Key Political Stakeholders and Parish Council Consultation

As part of the project's consultation process, the Applicant is committed to ongoing engagement with key political stakeholders and local Parish Councils.

Key political stakeholders and Local Parish Councils were sent an email containing basic information about the project, a copy of the resident information leaflet, and Lightrock Power's contact details on 24th September 2021. The Applicant offered meetings at this point in order to equip the stakeholders with any information that they may require and, where phone numbers were available, emails were followed up with a courtesy phone call on 29th September 2021.

The following Key political stakeholders were contacted:

- MP for Cleethorpes, Rt Hon Martin Vickers; and,
- Ward Councillors for Ferry, Cllr David Wells, Cllr Peter Clark, Cllr Richard Hannigan & Cllr David Rose.

Following initial contact and follow up phone calls, the only contact Lightrock Power had with Martin Vickers was a Microsoft Teams meeting on 7th October 2021 and no further communication was received from the above Councillors.

The following six Parish Councils were identified as having potential to be affected by the project and were contacted:

- Ulceby;
- North Killingholme;
- South Killingholme;
- East Halton;
- Thornton Curtis; and
- Wootton Parish Council.

Following initial contact and follow up phone calls, the only Parish Council to make any further contact was South Killingholme Parish Council who, on 7th October 2021, stated they had no objections to the Development. Lightrock Power were not invited to any Parish Meetings.

1.7.3 Consultation with Residents

A Statement of Community Involvement is included at Appendix 11. This details how the applicant has engaged with residents. This section of the Statement provides an overview. The Applicant engaged in consultation with local residents for a period of 1 month from 8th October to 8th November 2021. The format of the consultation was designed to be as accessible as possible to all residents while also preventing the spread of COVID-19. It included:

- A press release to Lincolnshire Echo, Grimsby Telegraph and Scunthorpe Telegraph on 11th October 2021;
- Information leaflets sent to 1,129 households on 8th October (to all households within 2 km+ of the Development and households along the local transport route);
- A total of five phone calls with three close neighbours;
- The Applicant's monitoring of local public groups on social media to identify any discussion of Sweetbriar Solar Farm. No such discussions were discovered;
- A dedicated online virtual consultation website (www.sweetbriarsolarfarm.com) which was launched on 8th October 2021 and included an overview of the project, an interactive map, contact details, a survey link, and a link to the online exhibition

pages. The website received a total of 101 unique visitors and the total page views was 274; and,
- A face-to-face public information event was not held as part of this consultation due to Covid-19 restrictions and the lack of desire for one by the local community. Instead, a virtual exhibition was held through the project website which covered the suitability of the Site, community benefits, ecology, transport and access, and the timeline.

The online exhibition was viewed 27 times. The survey results are detailed within the SCI. Importantly, the results showed that 64% (7 people) are supportive of Sweetbriar Solar Farm specifically.

Residents provided comments and requested further information regarding the following topics:

- Visual Impacts;
- The Construction Process (including increased traffic and noise impacts);
- Wildlife and Biodiversity; and,
- Health Impacts (particularly the potential for Electromagnetic waves).

The Applicant provided responses to all queries received.

1.8 The Development and the EIA Regulations (2017)

The Town and Country Planning (Environmental Impact Assessment) Regulations 2017, (EIA Regulations) define EIA development as either:

- Schedule 1 development; or
- Schedule 2 development likely to have significant effects on the environment by virtue of factors such as its nature, size or location.

Solar PV development is not listed in Schedule 1 of the regulations but under Schedule 2 of the EIA Regulations a development area threshold of 0.5 ha is applied to category 3 (a) industrial installations for the production of electricity. The Development exceeds the Schedule 2 area threshold of 0.5 ha and, as such, whether the Development is EIA development or not depends on an assessment against the screening selection criteria, as set out in Schedule 3 of the EIA Regulations, which comprise:

- Characteristics of the development;
- Location of the development; and
- Characteristics of the potential impact.

An EIA screening request for solar development was submitted to the Council in October 2021. The Council's Screening Opinion, which was issued on 24th November 2021, states that the Development would not constitute EIA development and an Environmental Statement is not required.

2 SITE AND SURROUNDINGS

2.1 Location

The Site is located on land approximately 6 km north west of Immingham, North East Lincolnshire and 950 m north of Ulceby, North Lincolnshire. The Site sits adjacent to Carr Lane (east) and is located 2 km north of the A1077 (Station Road). The East Midlands Railway (Barton Line) mainline runs approximately 40 m to the east of the Site at the closest point (National Grid Reference (NGR) 511160, 417189).

The Site is wholly located within the jurisdiction of North Lincolnshire.

There are no designated archaeological or cultural heritage assets within the Site or its immediate vicinity. There are no World Heritage Sites or Registered Historic Battlefields within a 5 km radius of the Site. The Site itself does not lie within a Conservation Area, and

the nearest is the Barrow upon Humber Conservation Area, located approximately 4.8 km north west of the Site.

There are no ecological designations identified within the 2 km search area. Two areas of Ancient Woodland are located over 2 km south of the Site and, at this distance, would not be affected by the Development. The closest statutory European ecological designation to the Site is the Humber Estuary SPA, SAC and Ramsar Site, located 6 km east of the Site. It is not anticipated that these designations will be affected by the Development (discussed further in the EcIA, Appendix 4 and the OIA, Appendix 6).

There are no statutory or non-statutory landscape designations within the Site. The closest landscape designation is the Lincolnshire Wolds Area of Outstanding Natural Beauty, located 15 km south of the Site. At such a distance no effects are anticipated.

The Site is located within Flood Zone 1 (lowest probability of flooding)[9].

2.2 Site Description

The Site has a total area of approximately 44.58 ha.

The majority of the site comprises ALC Grade 3 (a mix of 3a and 3b) Agricultural land with some areas of Grade 2 and currently comprises a mixture of arable fields and free-range chicken farming. The Site is relatively self-contained within the wider landscape – it benefits from some well-established hedgerow and in-hedgerow trees along parts of its boundaries which provide screening. This vegetation would help limit views from existing properties and settlements. The Site is generally flat and south facing, with only negligible areas of northern-facing slopes, making it suitable for a Solar PV development.

There are public footpaths in the vicinity, but none that pass through the Site. The only public right of way within 1 km of the Site is a public footpath (NI|THOR|130) adjacent to the north eastern site boundary which heads north to Thornton Abbey Station. There would therefore be no direct impacts on right of way users and any indirect effects are assessed as part of the Landscape and Visual Appraisal (LVA) (Appendix 1).

A 33kV Transmission Line traverses the main portion of the Site (from the north west to the south east corners), while a 275/400kV Transmission line crosses the southern portion of the Site. There are some high voltage electrical pylons present on site and in the surrounding environment as a result.

The Site is located approximately 2 km north of the A1077. Carr Lane runs adjacent to the Site's eastern boundary, which provides opportunities for points of access to the Site as well as access to the A1077 and A160 (and in the wider area the A180 and the A15). This access route avoids any settlements (specifically it ensures no movement of bulkier traffic through Ulceby) and only passes a small number of isolated properties, thereby minimising any potential traffic effects. The Transport Statement details the traffic and transport effects of the Development (Appendix 9). The proposed substation for the grid connection for the Development sits within the redline boundary and is located in the north east corner, adjacent to the main Site access road. Cables would connect the panels to the substation, allowing the development to connect to the grid.

There are no buildings situated within the site and there are no ponds or other areas of standing water across the Site. There are a small number of ponds and agricultural drains and ditches in close proximity to the Site.

A further detailed description of the Site in relation to specific topics can be found in the accompanying technical reports in the associated Appendices.

[9] Government UK (2021). Flood Risk [Online]. Available at: https://flood-warning-information.service.gov.uk/long-term-flood-risk/map?easting=428485&northing=521843&map=RiversOrSea (Accessed 09/12/2021).

2.3 Surrounding Land Use

The Site lies within open, medium-scale agricultural and countryside landscape (comprising a mix of Grade 1, 2 and 3 Agricultural land) with mixed arable farmland. The village of Ulceby, North Lincolnshire is located approximately 2.1 km south west of the site and the village of Ulceby Skitter is approximately 1.7 km south of the Site. The town of Immingham, North East Lincolnshire is 6 km south east.

There are various farmhouses in the immediate locality and Killingholme industrial estate is located approximately 2 km east of the Site at the nearest point. The nearest residential properties within 500 m of the potential solar areas are as follows:

- The Gatehouse, located approximately 20 m to the east, along Carr Lane;
- Sweetbriar Farm, located approximately 50 m to the west;
- Aurora, located approximately 100 m to the east, along Carr Lane;
- Hillcrest, located approximately 140 m to the east, along Carr Lane;
- Southlands, located approximately 80 m to the east, along Carr Lane;
- Zulu Farm, located approximately 220 m to the west;
- Northfield Farm, located approximately 150 m to the west;
- Ivanhoe, located approximately 230 m south east;
- Meadow Croft Farm, located approximately 360 m to the south east;
- Holmland, located approximately 370 m south east;
- Ashville Farm, located approximately 570 m south east;
- Becklea Farm, located approximately 460 m south east; and
- Garola House, located approximately 470 m to the south east.

2.4 Planning History of the Site

According to available public records, there are no notable planning applications identified which fell within the current redline boundary of the Site. The following applications were identified within the 5 km study area and are summarised as follows:

Year of decision	Reference Number	Description	Outcome
n/a (application Validated 2021)	PA/2021/610	Outline planning permission for a development of 38 dwellings, one small-scale retail unit, public open space incorporating new green infrastructure, SUD's features, outdoor classroom, and biodiversity enhancements with details of means of access and layout submitted for consideration	Not yet determined
n/a (application Validated 2021)	PA/2021/1278	Planning permission to vary condition 2 of approved application PA/2019/2115 dated 24/02/2020 (amend house design)	Not yet determined
2021	PA/2019/2115	Planning permission to erect a single-storey farm dwelling	Granted with Conditions
n/a (application Validated 2019)	PA/2019/893	Planning permission to retain change of use of land from agricultural to storage and distribution (Use Class B8) with associated hard-standing	Not yet determined
2015	PA/2015/0723	Planning permission for 170kWp solar PV installation.	Granted with Conditions

Year of decision	Reference Number	Description	Outcome
2010	PA/2010/0160	Planning permission to erect a hotel with ancillary facilities for a temporary period of five Years.	Granted with Conditions

2.5 Cumulative Solar Developments

There were no applications for solar developments found within close proximity to the Site. The following applications for solar developments were found within the Council area:

- Installation of renewable led energy scheme comprising ground mounted photovoltaic solar arrays and battery-based electricity storage containers together with substations, etc. at Conesby House Farm, Normanby Road, Scunthorpe (Ref. PA/2018/2140) – Approved with Conditions;
- Application for the installation of ground-mounted PV (solar) panels; 249.9 kWp, 980 PV panels at land at Newlands Farm (Ref. PA/2015/0930) – Refused;
- Installation of standalone solar photovoltaic modules and associated infrastructure at Storage Land, Raventhorpe Lodge, Holme (Ref. PA/2015/0114) – Approved;
- Application for solar PV development at Winterton landfill site, Winterton (PA/2021/441) – Pending consideration.

Any cumulative effects have been considered within technical assessments submitted alongside the planning application.

3 THE DEVELOPMENT

3.1 Overview

A planning application is made for the installation of a solar farm comprising an array of ground-mounted solar PV panels with associated infrastructure including inverters and a substation compound, as well as fencing, security cameras, cabling and landscaping. The export capacity of the Development will be approximately 39 MW.

The Development will be accessed via Carr Lane which runs adjacent to the Site's eastern boundary. The Development would utilise the existing field access point off Carr Lane that accesses Sweetbriar Farm and access across the wider Site would by via existing field access tracks that will be extended as needed to reach further areas of panels. The layout of the Development is shown on the Site Layout Plan 2 and 3.

The construction phase of the Development is expected have a duration of approximately 6 months and planning permission is sought for an operational period of 40 years. The Site would be fully decommissioned and restored at the end of the temporary planning permission period.

3.2 Development Infrastructure

3.2.1 Solar PV Array

Solar panels, known as strings, are mounted on metal frames driven into the ground in parallel rows tilted 10 to 25 degrees from the horizontal to face south towards the sun. There is a distance of 2 – 6 meters between strings of panels in order to avoid inter-panel shading, but this distance is influenced by slope and aspect. Each string of panels would be mounted on a rack comprising metal poles anchored to the ground set a maximum of 2.5 m to 3.0 m above ground level and the bottom edge at a height of 0.8 m from the ground (each panel approximately 1.1 m x 2.25 m). Given the nature of the installation, ground excavation is not required for panel installation and the metal frames are likely to be screwed or piled to a depth of between 1-2 m below the ground depending on conditions. There are gaps between the rows of panels and around the perimeter of the panels up to existing field boundaries, and therefore the area of land directly impacted by the Development is smaller than the site area.

Typical elevations of the solar panels are shown in Planning Drawing 5. Due to the rapid advancement of solar PV technologies it possible that the design of the solar panels may differ slightly from those shown on the plan. Any design changes are unlikely to alter the key parameters of the Development such as the footprint of the Development and the height of the panels.

3.2.2 Associated Infrastructure

The associated infrastructure would comprise the following components:

- Up to 16 inverters/transformers located around the Site and each located within a Glass Reinforced Plastic (GRP) or container enclosure/kiosk measuring approximately measuring approximately 7 m x 2.5 m x 3 m high;
- A substation compound (26 m x 10 m), includes housing for DNO and Client substation;
- 2.5 m high perimeter post and wire fence/ deer fence;
- CCTV cameras located on 3 m high poles within the security fence at intervals;
- A number of proposed access tracks circa 4 m wide located within the Site, with two junctions to the public road, Carr Lane. The tracks would be constructed from

locally sourced crushed stone on top of a geotextile membrane with the junctions being a suitably bound surface; and
- Buried cables linking the solar panels to the inverters/ transformers.

Elevations of these components are shown on Planning Drawings accompanying the application.

3.2.3 Landscaping

The landscape proposals for the Site have been designed to preserve and enhance the existing landscape features, to screen views of the solar panels from outside the Site and to enhance the biodiversity and habitat value of the Site.

The Development includes extensive planting proposals and enhancements which are detailed in the Landscape and Visual Appraisal at Appendix 1 and the Landscape Mitigation Plan, Planning Drawing 4.

The landscape scheme will include the following elements:

- Retaining all existing hedgerows and tree belts to the perimeter of the Site and internally and incorporating them within the scheme to maintain landscape character as well as to filter and screen views of the Development;
- Gapping up / reinforcing existing hedgerows to the eastern and northern boundaries using locally indigenous hedgerow species to improve screening of the Development;
- Reinstating hedgerows and woodland to the western boundary where presently missing to help restore landscape features lost to intensive farming practices, enhance habitat connectivity and further improve screening of the Development over time. New hedgerows would be planted as a double staggered row using locally indigenous hedgerow species supplied as forestry transplants (40/60 cm high);
- Reinstating hedgerows to the southern field boundary between the Site and the open field to the south where presently missing to help restore landscape features lost to intensive farming practices, enhance habitat connectivity and further improve screening of the Development over time;
- Incorporating specimen trees within existing / new hedgerows where not conflicting with overhead power lines. The choice of trees would be based on locally indigenous species supplied as selected standards (minimum 300 cm high);
- Replacing existing arable uses on the Site with species-rich / wildflower grassland to further enhance local landscape character as well as improve the biodiversity value of the Development; and,
- Improving the management of existing hedgerows and tree belts generally on the Site - this would include hedgerows along the northern boundary which support high levels of tree cover and in need of particular management to ensure the balance of tree cover and understorey species can be effectively maintained.

In addition, various ecological enhancements could be undertaken to further improve the biodiversity value of the Development, as set out in the EcIA. In brief, these could include sowing meadow grass in selected locations using locally sourced seed and providing bird and bat nesting boxes.

3.3 Access

The main access route to Site will be via Carr Lane, which runs adjacent to the Site's eastern boundary, and provides access to the A1077, A160, and A180 which links to the A15 in the wider area. Exiting the Site South onto Carr Lane and taking the A0177 west to the A160 provides access via the A180 and A15 without the need to route traffic through Ulceby.

Access to the Development would utilise the existing farm access point for Sweetbriar Farm off Carr Lane. Access across the wider Site from here would by via existing field access tracks that will then be extended as needed to reach areas of panels further within the Site; this is to minimise the requirement for new field entrances and reduce traffic on the roads around the Site during the construction period. Where new access tracks are required, they will be constructed approximately 4 m wide.

A Transport Statement (Appendix 9) details access arrangements as well as all traffic and transport effects and outline Construction Traffic Management measures.

3.4 Construction

3.4.1 Construction Activities

The construction and installation of the Development will take approximately six months.

The construction process would consist of the following principal activities:

- Construct tracks, Temporary Construction Compound and general site preparation;
- Delivery of materials;
- Construction of the solar PV arrays, inverter/transformers, substation compound, underground cables etc.;
- Testing and commissioning; and
- Restoration of ground disturbed during construction and landscaping.

Most of these operations would be carried out concurrently in order to minimise the overall length of the construction programme. Site restoration would be programmed and carried out to allow restoration of any disturbed areas as early as possible.

3.4.2 Construction Compound

A Temporary Construction Compound (TCC) would be located at the existing field access point off Carr Lane that accesses Sweetbriar Farm which will serve the wider development. This would be in place for a period of up to 6 months. The temporary construction compound will comprise aggregate underlain by a permeable membrane. This area will be panelled over and the substation will be located in the north eastern corner once the main construction has been completed and the land restored to grassland under the solar panels.

3.5 Construction Control Mechanisms

3.5.1.1 Traffic Management

The Transport Statement in Appendix 9 details outline measures of traffic management which the Principal Contractor will implement during the construction phase which include ensuring construction vehicles follow approved routes and operating the entrances to the Site under set protocol. Details of the traffic movements expected and staff numbers are given in the Transport Statement.

3.5.1.2 Waste Management

Any topsoil not stockpiled for later reinstatement will be spread over adjacent land. The topsoil shall consist of friable surface soil reasonably free of grass, roots, weeds, sticks, rocks or other unsuitable materials.

Any non-hazardous waste produced is likely to be primarily packaging and cable off cuts. This waste will be stored in a covered skip and recycled or appropriately disposed of. Re-vegetation of working areas will occur as soon as naturally possible after construction.

3.6 Operational Phase Overview

The Development will have an operational period of 40 years during which time it will not be permanently staffed and will be monitored remotely. Maintenance would be overseen by suitably qualified contractors who would visit the Site as required but typically it is anticipated that such visits will occur up to once per week on average and be via van or other similar sized vehicles. Activities would be restricted principally to vegetation management, equipment/infrastructure maintenance and servicing including replacement of any components that fail, and monitoring to ensure the continued effective operation of the Development.

3.7 Decommissioning Overview

When the operational phase ends, the Development will require decommissioning. All solar PV array infrastructure including modules, mounting structures, cabling, inverters and transformers would be removed from the Site and recycled or disposed of in accordance with good practice and market conditions at that time.

Decommissioning would be expected to take approximately 6 months. The effects of decommissioning are similar to, or often of a lesser magnitude than construction effects and have been considered where possible in the relevant technical assessments. This will allow for the recovery of major components including glass, aluminium and copper, with likely cumulative yields greater than 85% of total panel mass. In the long term, dedicated panel recycling plants can be expected to increase treatment capacities and the ability to recover a greater fraction of embodied materials.[10]

As engineering approaches and technologies are likely to change over the operational life of the Development, planning for decommissioning will be undertaken towards the end of the operational life of the Development. Notice will be given to the Council in advance of commencement of the decommissioning works, with all necessary licenses or permits being acquired. Decommissioning will be timed to minimise its environmental impact.

The Applicant will develop a decommissioning plan, and the works will be undertaken in accordance with a statement of operations, covering safety and environmental issues during decommissioning.

4 DESIGN CONSIDERATIONS

4.1 Design Rationale

The layout and design process of the Development was iterative, informed by consideration of a variety of environmental and technical assessments, professional advice from consultants, and feedback from North Lincolnshire Council (pre-application advice and EIA Screening response).

Indicative layouts were developed on the basis of initial site visits, desk-based information and assumptions based on known constraining factors. More detailed site assessment and investigation was then undertaken by obtaining baseline information relating to environmental effects including landscape, ecology, and flood risk amongst others.

Following the collation of this baseline information, key determining factors included ensuring that residential amenity and ecological assets would be protected through the minimisation of adverse impacts. The layout and location of the solar PV array and other infrastructure was influenced by technical and environmental constraints.

The final design of the Development is therefore a careful balance between addressing site constraints, minimising environmental impact and addressing feedback from consultees

[10] IEA International Energy Agency (IRENA) *Photovoltaic Power Systems Programme* (2016) [Online] Available at: https://www.irena.org/publications/2016/Jun/End-of-life-management-Solar-Photovoltaic-Panels (Accessed 23/03/21)

including the local community. This approach to design helps minimise unnecessary environmental impacts at an early stage. Where this is not feasible, such effects can be reduced through identification of mitigation measures that can be integrated early on in the development process.

The outline Landscape and Biodiversity Mitigation Plan (LBMP) (Appendix 2) has been designed to ensure the Development is as visually unobtrusive as possible and to avoid incursions into more environmentally sensitive areas of the Site. The LBMP provides visual screening and general landscape improvements using native species which will integrate the Development with the wider landscape, enhance the existing landscape character and provide a substantial biodiversity net gain.

4.2 Specific Design Evolution

The Development has been subject to an iterative design process with several amendments made to the scheme to avoid or mitigate potential ecological or landscape impacts. The main amendments which have been made to the scheme are summarised as follows:

- At the early stages of the design process, a slightly larger Site was considered which included land to the west and south of Sweetbriar Farm and to the south of PDA 13. Through detailed Site surveys particularly in relation to Agricultural Land Classification (ALC), the Site area was reduced to avoid using Grade 1 agricultural land and minimise the use of Grade 2 agricultural land;
- In order to reduce visual effects and the effect of setting of Sweetbriar Farm, the development has been set back from the property and an area of native species woodland incorporated into the Site layout in the south west corner of PDA 1;
- Solar panels were removed from the corner of PDA 13 in order to reduce effects on Southlands residential property with hedgerow and in hedgerow tree planting proposed to strengthen the properties exiting boundary vegetation. The setback area has then been used as an opportunity to provide an area of Bird Cover Crop to benefit seed eating birds particularly over the winter periods but also year round;
- Inverters / transformers have been located away from sensitive receptors including residential properties, ecological features and Carr Lane to minimise visual and ecological impact;
- As part of the ecological surveys undertaken, a Great Crested Newt (GCN) population survey of Pond P2 was completed that confirmed the presence of a 'medium' population of GCN, which would have necessitated the requirement for completing the construction of the Development under a European Protected Species (EPS) mitigation licence from Natural England. However, in view of these findings, and following a review of the Site boundary, the Development extent was revised to encompass a smaller Site area, which meant Pond P2 is now located at a distance of 250 m from the Site boundary. Furthermore, the Development has been designed to be located predominantly within terrestrial habitats of very low or negligible value to GCN (e.g., arable fields);
- Views into PDA 12 would be screened from road users and Hillcrest Camping Site over time as the proposed hedge and woodland mix next to the old field entrance grows limiting visual impacts along with the existing boundary vegetation;
- Existing vegetation to the boundaries of the Site would be retained and managed to allow the trees and hedgerows to mature to a minimum of 3 m and screen views into the Site;
- The substation building has been incorporated into the development Site and located adjacent to established hedgerow to ensure a high level of existing screening. The substation will also be located on the former TCC to minimise ground disturbance. It was considered that the location off the main farm access mirrors the type of buildings in the surrounding area and would help assimilate the building into the landscape.

4.3 National Design Guide (2019)

The National Design Guide[11] (the NDG) forms part of the Government's planning practice guidance and supports National Planning Policy Framework (NPPF)[12] which requires developments to take opportunities for improving the character and quality of an area and the way it functions.

Whilst some aspects of the NDG are particularly relevant to residential and commercial proposals, many of the ten characteristics of well-designed places are also applicable to renewable energy development, especially context, movement, nature and resources.

The Development incorporates these relevant characteristics as follows:

- Context – The Development has been designed using comprehensive baseline studies to inform the location of infrastructure and landscape proposals;
- Movement – protecting access to footpath NI|THOR|130;
- Nature – The Development has been designed to maximise connectivity, provide habitat enhancements, avoid impacts on protected species and deliver a significant net biodiversity gain; and
- Resources – The purpose of the Development is to provide an alternative to the use of non-renewable energy resources and to contribute to the UK Government's target of net zero by 2050.

5 PLANNING POLICY CONTEXT

5.1 Introduction

This section of the Statement reviews the key national and local planning policies which relate specifically to the Development. The aim of this section is to establish the land use implications of the Development, consider its compliance with the Development Plan, and identify other material considerations to be taken into account during the determination process.

5.2 Legislative Background

The Town and Country Planning Act 1990 Section 70(2) states that:

"In dealing with such an application the authority shall have regard to the provisions of the Development Plan, so far as material to the application, and to any other material considerations."

The Planning and Compulsory Purchase Act 2004 forms an amendment to the Town and Country Planning Act 1990. Section 38(6) of the Planning and Compulsory Purchase Act 2004 states that:

"If regard is to be had to the Development Plan for the purpose of any determination to be made under the Planning Acts the determination must be made in accordance with the plan unless material considerations indicate otherwise."

The process for determining a planning application can be defined as:

- Identification and consideration of the key provisions within the Development Plan;
- Clarification of whether the Development is in accordance with the Development Plan;
- Identification and consideration of relevant material considerations; and

[11] Ministry of Housing, Communities & Local Government (2021) *National Design Guide: Planning practice guidance for beautiful, enduring and successful places* [Online] Available at: https://www.gov.uk/government/publications/national-design-guide (Accessed 28/09/2021).
[12] MHCLG (2021) *NPPF* [Online] Available at: https://www.gov.uk/government/publications/national-planning-policy-framework--2 (Accessed 28/09/2021)

- Conclusions on whether planning permission is justified.

5.3 National Planning Policy Framework (NPPF) (July 2021)

The NPPF sets out Central Government's planning policies for England and how these are to be applied. The NPPF reiterates that applications for planning permission must be determined in accordance with the Development Plan, unless material considerations indicate otherwise. The NPPF also identifies that national planning policy is a material consideration when making decisions on planning applications. The most relevant aspects of national planning policy contained within the NPPF are as follows:

5.3.1 Presumption in Favour of Sustainable Development

The NPPF sets out the economic, environmental and social planning policies for England. Central to these main themes is a presumption in favour of sustainable development, and that development should be planned positively. The objective of sustainable development is summarised at Paragraph 7 as *'meeting the needs of the present without compromising the ability of future generations to meet their own needs'*. The NPPF refers to the United Nations 17 Global Goals for Sustainable Development[13] in the period to 2030, which the UK has agreed to pursue. The Sustainable Development Goals include ensuring access to affordable, reliable, sustainable and modern energy for all and taking urgent action to combat climate change and its impacts.

In achieving sustainable development, three overarching objectives are identified for the planning system; economic, social and environmental (Paragraph 8). The environmental objective includes *'mitigating and adapting to climate change, including moving to a low carbon economy'.*

5.3.2 Renewable Energy

The NPPF is clear that planning has a key role in supporting renewable energy and associated infrastructure. Paragraph 152 proposes that the planning system should `*support the transition to a low carbon future in a changing climate*' and `*support renewable and low carbon energy and associated infrastructure*'.

In order to increase the supply of renewable and low carbon energy and heat, Paragraph 155 states that plans should provide a positive strategy for renewable and low carbon energy development.

The NPPF is also clear that Local Planning Authorities (LPAs) should not require applicants *'to demonstrate the overall need for renewable or low carbon energy and recognise that even small-scale projects provide a valuable contribution to cutting greenhouse gas emissions'* (Paragraph 158). Applications for renewable and low carbon development should be approved if the impacts are (or can be made) acceptable.

5.3.3 Guidance on Environmental Issues

The NPPF contains policies on a number of environmental issues in achieving sustainable development and is a material consideration in planning decisions. Meeting the challenge of climate change is at the core of the NPPF and it sets out how planning plays an intrinsic role in supporting the delivery of renewable and low carbon energy developments.

The approach to encouraging sustainable transport and managing impacts on transport networks is set out in Paragraphs 104 to 113. Paragraphs 174 to 208 emphasise the importance of preservation and enhancement of the built and natural environment. They set out detailed requirements for the assessment of the impact on the landscape value,

[13] UN (2015) *The 2030 Agenda for Sustainable Development* [Online] Available at: https://sdgs.un.org/goals (Accessed 28/09/2021)

agricultural land, ground conditions, biodiversity and habitats, and the historic environment. A requirement for development to provide measurable net gains for biodiversity is set out in Paragraphs 174 and 180.

Paragraphs 209-214 sets out the approach to facilitating the sustainable use of minerals. Long-term conservation of mineral resources is encouraged and planning authorities are to safeguard existing, planned and potential sites for minerals, both through policies and the determination of planning applications.

5.4 Local Development Framework

The North Lincolnshire Local Plan was adopted in May 2003 and has now since been replaced by the Local Development Framework. The North Lincolnshire Local Development Framework is a suite of Development Plan Documents (DPDs) which set out the planning policy for the area and include the Core Strategy and Supporting Documents. North Lincolnshire Council is preparing a new single Local Plan for North Lincolnshire. Once adopted, it will replace the current North Lincolnshire Local Plan, the Core Strategy and Housing and Employment Land Allocations Development Plan Documents (DPD), and the Lincolnshire Lakes Area Action Plan (AAP). It is anticipated that emerging North Lincolnshire Local Plan 2017-2036 will be adopted and brought into use in 2023.

5.4.1 North Lincolnshire Local Development Framework: Core Strategy (Adopted June 2011)

In June 2011 North Lincolnshire Council adopted the Core Strategy, which sets out the long-term spatial planning framework for the development of North Lincolnshire up to the year 2026 by providing strategic policies and guidance to help deliver the vision for the area, including the scale and distribution of development, the provision of infrastructure to support it and the protection of the natural and built environment, with a strong focus on the principles of sustainable development. Self-proclaiming to be at 'the heart of the growing low carbon and green economy - a renewable energy capital', the authority is devoted to developing and expanding their green energy generation capacity.

The following policies detailed in the Core Strategy (2011) are considered to be of relevance to the Development:

Policy CS1: Spatial strategy for North Lincolnshire – outlines the 5 key focuses which collectively create the North Lincolnshire spatial strategy. States how the spatial vision and future development requirements outlined will contribute towards ensuring sustainable development is achieved as far as it is possible.

Policy CS2: Delivering more sustainable development – outlines how proposals which will contribute to sustainable development will be supported and offers a set of sustainable development principles which developments should comply with. States how restrictions will be placed on any development that occurs in rural settlements in the countryside unless it is essential to the functioning of the countryside or requires a countryside location. Outlines a preference for developments which locate on low flood risk land.

Policy CS3: Development limits – states that development that occurs outside defined development boundaries in the countryside will be restricted (unless it is essential to the functioning of the countryside or the development requires a countryside location).

Policy CS5: Delivering quality design in North Lincolnshire – requires all new development in the area to be well-designed, contextually appropriate and to help contribute to creating a sense of place.

Policy CS6: Historic Environment – seeks to protect, conserve and enhance the historic environment, as well as the character and setting of areas of acknowledged importance including historic buildings, conservation areas, listed buildings (both statutory and locally listed), registered parks and gardens, scheduled ancient monuments and archaeological remains. Requires all developments situated in areas which have high heritage value to respect and enhance the local character and distinctiveness of that area. When deemed relevant, archaeological assessments are required.

Policy CS16: North Lincolnshire's landscape, greenspace and waterscape – seeks to create, protect, enhance and support a diverse and multi-functional network of landscape, greenspace and waterscape.

Policy CS17: Biodiversity – promotes the effective stewardship of the area's wildlife: outlining various methods through which biodiversity, habitats and species can be retained, protected or enhanced.

Policy CS18: Sustainable resource use and climate change – promotes developments which utilise natural resources as efficiently and sustainably as possible. Sets out various criteria which, if met, represent developments which can positively contribute to climate change.

Policy CS19: Flood Risk – indicates preference for developments located in lower flood risk areas. Requires developments' land uses to relate appropriately to the site's specific vulnerability to flooding. Requires that developments will incorporate Sustainable Urban Drainage Systems (SUDS) to manage surface water drainage wherever practicable and sets out how developments which contribute to reducing carbon dioxide emissions, in turn reducing flood risk, will be supported.

5.4.2 Planning for Renewable Energy Development SPD (November 2011)

The following policies detailed in the Planning for Renewable Energy Development SPD (2011) are considered to be of relevance to the Development:

Policy 1: Biodiversity – Requires consideration of the potential effects of renewable energy developments, singularly or cumulatively, on biodiversity sites, habitats and species and the identification of measures to avoid or mitigate harm to them and secure their conservation and enhancement.

Policy 2: Landscape – requires renewable energy developments to give consideration at the earliest stage in the design process to the character and quality of the landscape, the extent of the physical change involved, and the ability of the landscape to accommodate the proposed change. States a need to undertake vigorous assessment of proposals which are in areas of high landscape value or which affect their setting, and mitigation measures for the latter.

Policy 3: Visual Effects – states that renewable energy schemes must consider the size and appearance of the development at the earliest stage in the design process in order to minimise their negative impacts on the area's visual amenity.

Policy 4: Heritage Assets – seeks to protect heritage assets and the historical environment. Requires developers to demonstrate that the objectives of the area or individual assets' designations will not be compromised by the development, and that any significant adverse effects on the qualities for which the area has been designated are clearly outweighed by the scheme's environmental, social and economic benefits.

Policy 5: Soil and Hydrology – states that developers should consider the effects of their renewable energy proposal on – and should avoid harming – the soil, hydrology, groundwater and water quality in and around a site in order to protect habitats of principal importance and conserve biodiversity.

Policy 6: Flood Risk – requires any renewable energy development proposal (including proposals for ancillary development related to renewable energy developments) of 1 hectare or more in Flood Zone 1 and any proposal in Flood Zone 2 or 3 to provide a Flood Risk Assessment. Outlines that development's must be safe throughout their life time without increasing flood risk elsewhere and where possible will reduce flood risk overall.

Policy 8: Noise – seeks to ensure acceptable levels of any noise generated by turbines or throughout construction and decommissioning phases, considering the proximity of noise sensitive developments (such as residential properties or businesses) and existing background noise. Requires mitigation measures to be undertaken if noise is expected to be significantly impactful.

Policy 10: Cumulative Effects – requires consideration of the cumulative impacts (on visual and landscape character, hydrology, hydrogeology, ecology, traffic and transport, aviation and radar, noise, recreation and local amenity aspects) that the scheme could have on North Lincolnshire. Requires operational and approved developments, any extensions to operational or approved proposals, and other proposals being advanced through the planning system to be taken into account.

Policy 13: Highways and Rights of Way – states that developers must consider access to renewable energy development sites from the earliest stages in the proposal formation in order to ensure access routes meet the requirements of the Highway Authority (or to ensure necessary mitigation measures are identified if not). Requires consideration of their proximity to Public Rights of Way (PRoW) and the creation of new PRoW if any PRoW or landscape is adversely affected by the development.

Policy 14: Local Grid Connections and Ancillary Equipment – requires renewable energy proposal developers to ensure that grid connections and ancillary equipment are properly integrated into the layout of the development, the landscape and topography of the site and are screened to reduce visual clutter. States access to and around sites should use existing tracks where possible and that tracks should be of minimal length.

5.4.3 The Yorkshire and Humber Plan: Regional Strategy to 2026 (May 2008)

The following policies detailed in the Yorkshire and Humber Plan (2008) are considered to be of relevance to the Development:

Policy YH2: Climate Change and Resource Use – promotes developments which will contribute towards meeting the targets set to reduce regional greenhouse gas emissions. Gives support to developments which will contribute to the region's successful adaptation to the predicted impacts of climate change.

Policy ENV6: Forestry, trees and woodlands – seeks to protect, manage and enhance its existing tree and woodland resource by outlining various related principles for Plans, Strategies, Investment Decisions and Programmes to adhere to and targets to be met.

Policy ENV7: Agricultural Land – seeks to minimise the loss of agricultural land – particularly high-quality agricultural land – and requires any such development to be carried out on poorer quality agricultural land. Promotes the development or use of agricultural land in specific outlined locations which are deemed as appropriate.

Policy ENV8: Biodiversity – aims to protect and enhance biodiversity and geological heritage, and ensure that the natural environment functions as an integrated network of habitats. States that plans, strategies, investment decisions and programmes should aim to maintain and enhance, restore or add to distinctive elements of the natural environment.

Policy ENV9: Historic Environment – states that the region's historic environment must be safeguarded and enhanced and that site specific historical context should inform development and regeneration decisions. Outlines the regionally-distinctive historic environment elements which should be conserved, their distinctiveness' reinforced and their character's enhanced.

Policy ENV10: Landscape – seeks to protect and enhance landscapes which contribute to the distinctive character of the Yorkshire and the Humber region and outlines specific landscapes and related assets of importance which require specific consideration in development proposals.

5.4.4 Saved Policies of the North Lincolnshire Local Development Plan (2003)

Some of the policies of the adopted Core Strategy and Employment Land Allocations DPD have replaced the Local Plan, that was adopted in May 2003. The following policies of the Local Plan 2003 have been saved and are considered to be relevant to the proposed site:

Policy DS1: General Requirements – requires the demonstration of a high standard of design in all proposals, including countryside developments. Outlines the criteria against which proposals will be considered as Quality of Design, Amenity, Conservation, Resources, and Utilities and Services.

Policy ST1: Sustainable Development – states weight will be given to the principles of sustainable development in all planning policies. Promotes developments which ensure social progress and equality of opportunity; protect the natural and built environment and the prudent use of natural resources; and, support economic growth and employment.

Policy RD1: Development Involving High Quality Agricultural Land – seeks to protect high-quality agricultural land from development. Gives preference to poorer quality land development except where other sustainability considerations suggest otherwise and states development is only permitted on the best and most versatile land (Grades 1, 2 and 3a) if it can be demonstrated that the proposed cannot sufficiently be accommodated elsewhere.

Policy RD2: Development in the Open Countryside – seeks to minimise and control development in the open countryside, placing restrictions on the type of proposals which will be considered.

Policy T2: Access to Development – requires all developments to have sufficient levels of access to and from them, outlines more specific access necessities for larger development schemes.

Policy LC7: Landscape Protection – requires consideration and respect to be given to the scenic quality and distinctive local character of the landscape in which development sits, specifically in the open countryside and in rural locations.

Policy DS21: Renewable Energy – permits proposals for the generation of energy through renewable resources provided that the environmental benefits outweigh any

detrimental effect on other features of acknowledged importance (e.g., local character and amenity) and so long as proposals detail all associated developments (e.g., access roads and ancillary buildings) and their likely impact upon the environment.

5.4.5 Emerging North Lincolnshire Local Development Plan (Published for consultation October 2021)

Given that the emerging Local Plan is at an advanced stage of preparation and is currently under examination, it should be afforded a degree of weight in the decision-making process. As such, the following policies are considered to be relevant to the Development:

Policy SS1p: Presumption in Favour of Sustainable Development – sets out how developments which create and deliver growth that is not for its own sake, but which brings benefits for all sectors of the community, for both existing and new residents ('Sustainable Growth') will be promoted, providing material considerations don't indicate that this is unacceptable. Permits proposals for which there are no relevant policies, providing there are no other material considerations which suggest this is objectionable. States the council's commitment to work proactively with applicants to approve planning applications which accord with the North Lincolnshire Local Plan efficiently.

Policy SS3p: Development Principles – outlines the necessary key principles to which new development should adhere in order to make a positive contribution to North Lincolnshire and support the delivery of sustainable communities and places, where residents are safe, well, prosperous and connected.

Policy RD1p: Supporting Sustainable Development in Countryside – permits specific types of development on land located out with the development limits of settlements so long as they respect the intrinsic character of their surroundings. States that the poorer quality and least versatile areas of agricultural land should be used if significant development is required. Requires sustainable soil resource management, conservation and use throughout development.

Policy DQE1p: Protection of Landscape, Townscape and Views – requirement for proposals to respect and protect the distinctive character and quality of the landscape, important natural and manmade features and/or views in to, out of and within development areas. States particular priority will be given to the protection and enhancement of the landscape character, natural beauty and settings of areas of High Landscape Value or areas with other (non)statutory designations.

Policy DQE3: Biodiversity and Geodiversity – seeks to protect, manage and enhance natural capital, the network of habitats, landscape and natural features, species and sites of international, national and local importance (statutory and non-statutory), unless the reasons for the scheme clearly outweigh the nature conservation value of the site itself. Requires developments to minimise, mitigate and compensate against impacts on natural capital, ecosystem services, biodiversity and geodiversity where adverse effects are unavoidable. Requires developments on sites of designated important to undergo rigorous relevant assessments.

Policy DQE5p: Managing Flood Risk – seeks the minimisation of risk and impact of flooding by supporting developments which are situated within low flood risk zones. Requires any development proposal (including proposals for ancillary development related to renewable energy developments) of 1 hectare or more in Flood Zone 1 and any proposal in Flood Zone 2 or 3 to provide a Flood Risk Assessment. Outlines that developments must be safe throughout their life time without increasing flood risk itself nor elsewhere and where possible it will reduce flood risk overall.

Policy DQE7: Climate Change and Low Carbon Living – supports developments which are designed to mitigate the impacts of and be resilient to climate change. Requires all developments to minimise carbon emissions and promote low carbon living to meet the climate change challenge.

Policy DQE9: Renewable Energy Proposals – supports opportunities to maximise North Lincolnshire's renewable energy capacity so long as any significant adverse impacts of renewable developments and their associated infrastructure are satisfactorily minimised and the residual harm is outweighed by the public benefits of the proposal.

Policy HE1p: Conserving and Enhancing the Historic Environment – seeks to value, protect, conserve and enhance sites' historic environments and assets (whether designated or non-designated) and requires that site specific historical context and settings inform development decisions and development designs.

The Emerging North Lincolnshire Local Development Plan Policies Map indicates that Site lies within areas covered by proposed **Policy MIN2: Mineral Safeguarding**. The Site lies within a proposed Chalk 500 m buffer, sand gravel superficial 250 m buffer and in an area of Concealed Higher Purity Chalk.

6 ASSESSMENT OF THE DEVELOPMENT

6.1 The Principle of the Development

In summary, the Site is considered to be a suitable location for the Development, with reference to NPPF Paragraphs 11 as well as local level general development policy criteria.

The Development is located on Grade 3 (a mix of 3a and 3b) and Grade 2 agricultural land, approximately 2 km north east of the village of Ulceby. Following extensive environmental assessment, the Site has been found to have sufficient space to accommodate the sensitively designed Development.

There are no national or local landscape designations on the Site. The surrounding landscape comprises mainly open, medium-scale agricultural and countryside landscape with mixed arable farmland. Further discussion of impact on landscape can be found with the Landscape and Visual Appraisal at Appendix 1.

Once constructed, the Development will not generate a significant amount of additional traffic as operational traffic will be limited to maintenance site visits, typically less than one vehicle per week. Therefore, any impacts on traffic volumes will be short lived during the construction period. The traffic and transport implications are discussed further in Appendix 9.

The effects of the Development on the character, appearance or general amenity of the area have been assessed throughout the various environmental and technical assessments which accompany this planning application. The assessments undertaken have not identified any unacceptable adverse effects. The accompanying Planning Drawing 4: Landscape Mitigation Plan sets out the proposed mitigation planting scheme providing landscape benefits as well as net gain of 167.7 % in biodiversity habitat units on-site. The number of habitat units on-site has increased from 88.53 to 236.99. There is a 341.33% net gain in hedgerow units within the Site which have increased from 4.58 to 20.21. The calculations far exceed the generally recognised 10% net gain requirement. The detailed assessment is set out set out in Appendix 5 Biodiversity Metric Assessment and Appendix 4 Ecological Impact Assessment.

The Development is reversible and the site can be returned to agricultural land upon decommissioning. As a renewable energy scheme providing low carbon clean energy, the Development will help the Council make a valuable contribution towards the reduction of

carbon emissions and increase renewable energy capacity, directly addressing climate change issues highlighted by North Lincolnshire Council within the LDF.

Overall, there is strong policy support for the principle of development with regard to the location, purpose and benefits of the Development. Taking all of the above factors into account, the Development comprises sustainable development and the presumption in favour of sustainable development set out in the NPPF is engaged with reference to **NPPF Paragraphs 11 and 154;** Core Strategy Policies **CS1, CS2 and CS18;** The Yorkshire and Humber Plan Policy **YH2;** Saved Policies of the North Lincolnshire Local Development Plan **DS1, ST1 and DS21** and Emerging North Lincolnshire Local Development Plan Policies **SS1p, SS3p, DQE7 and DQE9.**

6.1.1 Landscape and Visual Appraisal

A Landscape and Visual Appraisal ('LVA') has been undertaken and is submitted with this application at Appendix 1. The LVA comprises a description of existing baseline conditions, an assessment of potential landscape and visual effects and recommendations for mitigation measures. The LVA incorporates the results of a desk study, a field study and further evaluations including a viewpoint appraisal, zone of theoretical visibility (ZTV) and view point photo sheets.

The Site is not covered by any statutory landscape-related designations. Within the wider study area, the closest designation is the Lincolnshire Wolds Area of Outstanding Natural Beauty, located 15 km south of the Site at its closest point. There are no World Heritage Sites or Registered Historic Battlefields within a 5 km radius of the Site.

The Site falls within the National Character Area of the Lincolnshire Coast and Marshes (NCA 42; NE521), characterised by a wide coastal plain which extends from Barton-upon Humber in the north, across to Grimsby at the mouth of the Humber and south to Skegness. The area is bounded by the North Sea to the east, and the Lincolnshire Wolds to the west. A dispersed settlement pattern is characteristic throughout much of the area with a concentration of larger settlements along the coast, and inland is a predominantly open, medium-scale agricultural landscape with mixed arable farmland.

In terms of predicted landscape effects, the LVA finds that the landscape can accommodate the Development as it is relatively low-lying and does not give rise to significant vertical elements in the landscape, other than the substation. Retention of existing boundary vegetation and new planting would also help soften the landscape effects.

The only other effects on landscape character would occur as a result of effects on views from areas of the landscape outside the Site. Over time, with additional planting to strengthen the existing boundary vegetation, any effects would be reduced and the Development would likely be integrated into the landscape to a greater extent and help limit views from properties and settlements in the vicinity of the Site.

Following mitigation, residual levels of effect on local landscape character are predicted to be:

- Open Undulating Farmlands: Between Negligible and Minor adverse (Years 1 & 15); and
- Wooded Farmlands: Between Negligible and Minor adverse (Years 1 & 15).

There will be no cumulative impacts, as no planning applications for other solar farms or other major developments have been identified in the area.

In terms of predicted visual effects, residual levels on views and visual amenity are predicted to be:

- Effects on people living in residential properties adjacent to the Site (on Carr Lane) who are of high sensitivity are predicted to be Moderate adverse at Year 1, reducing to Moderate-Minor adverse at Year 15 as new screen planting establishes;
- Effects on other people living in residential properties adjacent to the Site (Sweetbriar Farm, North Field Farm and Southlands) who are also of high sensitivity are predicted to be Moderate-Major adverse at Year 1, reducing to Minor-Moderate adverse at Year 15;
- Effects on people using public footpaths and bridleways that cross the landscape north of the Site towards College Road and east of the Site at Crook Mill Lane who are of high sensitivity are predicted to be between Minor adverse- Negligible and Negligible at Year 1, reducing to Negligible and No-Effect at Year 15;
- Effects on people using Carr Lane which adjoins the Site to the east who are of medium sensitivity are predicted to be Minor adverse at Year 1, reducing to Minor adverse - Negligible at Year 15 where existing boundary hedgerows are reinforced. Effects on people using Cross Road which passes adjacent to the Site to the south are predicted to be Moderate adverse at Year 1, reducing to Minor adverse at Year 15 where existing boundary hedgerows are reinforced / reinstated and other hedgerows between the Site and the local road are reinforced / reinstated; and
- Effects on people using other local roads adjacent to the Site (A1077 and minor roads between Ulceby Skitter and Thornton Abbey) who are of medium sensitivity are predicted to be Minor adverse at Year 1, reducing to Minor adverse - Negligible at Year 15.

The appraisal also considered the cumulative effects on views and visual amenity of the Development in conjunction with telegraph poles and pylons. The appraisal concluded that cumulative levels of effect on those visual receptors assessed as part of the standalone scheme (above) would be:

- Effects on people living in residential properties / communities are predicted to be between Minor and Moderate adverse at Year 1 and Minor and Moderate adverse at Year 15 since the cumulative situation would remain unchanged;
- Effects on people using public footpaths / bridleways are predicted to be Minor – Moderate adverse at Year 1 and Minor adverse at Year 15; and
- Effects on users of local roads are predicted to be Minor adverse at Year 1, reducing to between Negligible and Minor adverse at Year 15.

Overall, given the location of the Site, the topography within and around the Site and due to the fact that the Site is already partially screened within hedgerows and scattered trees (which can be extended alongside the Development to offer additional mitigation), and the potential to incorporate grassland mix within the Development, there is no reason why the likely landscape and visual effects arising from the Development should be regarded as unacceptable. Therefore, the Development meets the requirements of NPPF **Paragraphs 130, 131 and 174**. This is in addition to the Council's Core Strategy Policies **CS2, CS5,** and **CS16**; Planning for Renewable Energy Development Policy 3; The Yorkshire and Humber Plan policy **ENV10**; Saved Policies of the North Lincolnshire Local Development Plan **DS1**, **ST1** and **LC7**; and Emerging North Lincolnshire Local Development Plan policies **SS1p**, **RD1p** and **DQE9**.

6.1.2 Landscaping Proposals

In addition to the LVA, a separate outline Landscape and Biodiversity Management Plan (LBMP) has been prepared to accompany the application (Appendix 2). The LBMP incorporates mitigation and enhancement measures set out in the Ecological Impact Assessment (EcIA), Ornithological Impact Assessment (OIA) and the LVA undertaken in respect of the Development.

The LBMP notes that a number of construction and implementation management measures will be undertaken in relation to landscaping and building upon existing screening of the Site. Measures include the following related to landscaping (further details are set out in the LBMP):

- Hedgerow and in hedgerow tree planting as well as protection of existing vegetation;
- Protection of wildlife during construction with measures such as checking for animals before starting works each day and capping pipes overnight;
- Timing construction around breeding bird season;
- Ensuring Ecological Clerk of Works (ECoW) supervisory role is undertaken;
- Creation of grassland beneath panels;
- Creation of wildflower grassland strips;
- Creation of Bird Cover Crop Area (to help provide foraging);
- Creation of mixed native species woodland areas;
- Use of lighting during construction will be restricted (dawn to dusk only);
- Ten nest boxes will be provided on-site specifically for tree sparrow;
- Two Kestrel nest boxes to be located on Site;
- Four bat boxes will be installed on retained mature trees on-site; and
- Installation of mammal gates at strategic points in the perimeter fencing.

Such measures will provide a range of long-term benefits including improving the ecological connectivity between the Site and the habitats in the wider landscape, improving the biodiversity and floristic mix on Site, whilst also increasing the level of screening.

During the operational period of the Development, the outline LBMP sets out provisional monitoring requirements. The target habitat types that the Development is striving to achieve include the following:

- Grassland – Other Neutral Grassland;
- Seed rich grassland habitat;
- Woodland and Forest – Other Woodland: Broadleaf Woodland; and
- Hedgerows - Native Hedgerow and Native Hedgerow with Trees.

To ensure the successful establishment and success of the proposed target habitats and to improve biodiversity interest and ensure the success of the landscape mitigation requirements, the Site will be monitored by a suitably qualified ecologist. Monitoring will be based on the Condition Assessment criteria outlined in the LBMP.

A walkover survey will be undertaken on years 1, 2, 3, 5 and 10, then every 10 years thereafter up to the 40 years of the Development's operational period. A specific monitoring year for Woodland should be included in year 7 to ensure the habitat has met the condition assessment requirement.

The management and maintenance measures outlined in the LBMP will ensure that landscape and biodiversity is protected, enhanced and monitored throughout the lifetime of the Development. It should be noted that the LBMP is an outline live document and should be reviewed and revised before and during construction, as well as during the operational stage of the Development.

Overall, given the limited landscape impact and the proposed mitigation and enhancement measures, it is considered that the Development meets the requirements of NPPF **Paragraphs 130, 131 and 174**. This is in addition to the Council's Core Strategy Policies **CS2, CS5,** and **CS16**; Planning for Renewable Energy Development Policy 3; The Yorkshire and Humber Plan policy **ENV10**; Saved Policies of the North Lincolnshire Local Development Plan **DS1**, **ST1** and **LC7**; and Emerging North Lincolnshire Local Development Plan policies **SS1p**, **RD1p** and **DQE9**.

6.2 Ecology and Ornithology

To assess the effects on the designated and non-designated sites, as well as habitats and species on Site, a desk-based study and a number of ecological and ornithological surveys have been carried out, including Extended Phase 1 Habitat Survey, Great Crested Newt surveys, and ornithological breeding bird surveys during the appropriate survey windows in 2021. The detailed results of the surveys, together with the proposed mitigation measures, are set out in Appendix 4: Ecological Impact Assessment (EcIA) and Appendix 6: Ornithological Impact Assessment. The following sections provide a summary of findings of these reports.

6.2.1 Habitats and Designations

There are no local or national statutory designated Sites within 2 km or National Site Network designations within 5 km of the Site.

There are two non-statutory sites within 2 km of the Site boundary; South Cloister Covert Local Wildlife Site (LWS) is located 1.8 km north north-east and Abbotts Lodge Grassland LWS located at 2 km north-east of the Site. Given the distance of these LWSs, no further mitigation or assessment was deemed appropriate.

No priority habitat was identified on-site. An area of grassland immediately adjacent to the Site boundary is listed under the NERC Act 2006 as a priority habitat for lowland meadow, with deciduous woodland priority habitat identified at 0.25 km to the east. A further 12 more areas of deciduous woodland habitat are found within 2 km of the Site. Other priority habitats that can be found within 2 km of the Site include a traditional orchard at 1.1 km to the south of the Site.

In order to increase the Development's biodiversity value, and to adhere to Government guidance set out in the National Planning Policy Framework 2021 (NPPF), a range of enhancement measures are provided within the EcIA and Landscape Mitigation Plan (LMP). Details of the habitat enhancement and creation within the Site is provided in the LMP to benefit wildflowers and wildlife. Specifically, the arable and improved grassland fields on which the panels will be sited will be planted with native species grass underneath and around the solar panels. Extensive areas of native species hedgerow and wildflower meadow mix will be created around the Site, outside of the fenced areas. These newly created and enhanced habitats may also provide supporting value to nearby features of conservation interest, by increasing the local populations of sensitive species, such as GCN, and providing additional areas into which these and other sensitive species can disperse, both of which will make the species and the designated areas more robust to future changes (e.g., climate change). The Development will have a long-term positive impact on habitats and wildflowers.

6.2.2 Protected Species

The following section summarises the potential effects on protected species:

- Bats – The Site has been classified as having a 'low' suitability for foraging and commuting bats. Trees within the Site are expected to be retained and the proposed Development will not have an impact upon existing trees. The long-term, operational effects of the Development on bats are likely to be positive, because habitat quality and availability will be increased and the panels will create sheltered areas in which bats can forage;
- Reptiles – The Site has the potential to support basking, foraging and sheltering reptiles, particularly along the field margins and where hedgerows are present. Areas where solar panels will be installed will avoid higher value reptile habitat (i.e., use of arable field habitat), so adverse impacts to reptiles during construction or at the operational phase are considered to be low to negligible. However, should

works impact habitats of higher value to reptile, then it is recommended that any clearance works on Site are carried out using Reasonable Avoidance Measures (RAMs) following the precautionary approached;

- Great Created Newts (GCN) - There are no waterbodies present within the Site boundary suitable for GCN. There are six waterbodies within 250 m of the Site boundary (3 ponds and 3 wet ditches). The desk study returned 46 records for GCN within 2 km of the Site. A Habitat suitability Index (HSI) was caried out on three ponds within 250 m of the Site boundary. Subsequent eDNA surveys undertaken on all three ponds confirmed GCN presence in Pond 2, with absence recorded in Ponds P1 and P3. Further GCN population surveys were carried out for Pond 2 between April to June recording a medium population. The Development has been designed to ensure Pond P2 is now located at a distance of 250 m from the Site boundary. Furthermore, the Development has been designed to be located predominantly within terrestrial habitats of very low or negligible value to GCN (e.g., arable fields). Precautionary mitigation for herptiles (including GCN) has been provided in the EcIA;
- Breeding birds – Breeding Bird Surveys (BBS) were carried out between April and June 2021 to quantify the breeding bird assemblage within the Site. A total of 44 species were recorded during the BBS. Of these, 19 were species of conservation concern, including 13 that showed evidence of breeding or holding territory within the BBS Areas. Overall, with successful implementation of the compensation and enhancement measures recommended in the Ornithology Report, and adherence to the safeguarding measures to protect nesting birds, adverse effects on farmland species of conservation concern at all stages of the Development are expected to be negligible and not significant;
- Non-breeding Birds – No surveys have been carried out during the non-breeding season and a habitat-based appraisal is considered sufficient to provide a basis to assess the potential effects of the Development on bird interests during this period;
- Invertebrates – It is considered unlikely that the Development will significantly encroach upon, nor impact the connectivity of, habitats of high value to invertebrates, and therefore no further surveys or specific mitigation is recommended in the EcIA. In the long term, the proposed Development is likely to have a positive impact on invertebrates if the grassland sward beneath the solar panels is left to flourish;
- Otter - Results from the desk study did not identify the presence of otter within 2 km of the Site boundary. No field signs of otters were detected during the Extended Phase 1 Habitat survey and the drains and ditches were not considered likely to support otters; and
- Water Vole – The desk study returned no records for water vole within 2 km of the Site. No evidence of water vole such as burrows or any other field signs (latrines, footprints, feeding remains) were identified on Site during the Extended Phase 1 Habitat survey.

6.2.3 Ecological Mitigation and Enhancements

As noted previously, a number of ecological mitigation and enhancement measures have been provided both within Appendix 4 – EcIA and Appendix 6 – OIA, as well as Appendix 2 - LBMP, which was in turn influenced by the results of the EcIA.

In an effort to be concise, not all mitigation measures for each individual species of habitat or animal have been provided within this section. These can be read within corresponding appendices detailed above. Overall, however, to reduce ecological effects and the likelihood of legal offences, species-specific and general mitigation have been recommended throughout both documents. The LMP (Planning Drawing 4) sets out a range of habitat

creation and enhancements that will provide significant benefits to the ecological features addressed in the EcIA which will constitute a net gain under the NPPF.

A biodiversity metric assessment has also been produced and accompanies this application (Appendix 5). The report uses the DEFRA Biodiversity Metric 3.0 User Guide – Beta Test and the Technical Supplement – to produce a quantifiable amount of biodiversity units produced post-construction and compare them to the baseline biodiversity unit's pre-construction, to determine if the Development will result in a net gain or net loss in biodiversity.

Full results of the calculation test are available within Appendix 5 which accompanies the report itself. Overall, the report concludes through habitat creation and enhancement, the Development will deliver an overall **net gain of 167.7%** in biodiversity habitat units on-site. The number of habitat units on-site has increased from 88.53 to 236.99. There is a 341.33% net gain in hedgerow units within the Site which have increased from 4.58 to 20.21.

The Development is therefore considered to be acceptable in terms of ecology and biodiversity and complies with **NPPF Paragraphs 179 and 180;** as well as Council's Core Strategy Policy CS17; Planning for Renewable Energy Development Policy 1; The Yorkshire and Humber Plan policy **ENV8**; Saved Policies of the North Lincolnshire Local Development Plan **DS1**; and Emerging North Lincolnshire Local Development Plan policy **DQE3**.

6.3 Soil and Agricultural Quality

A detailed agricultural land quality survey was undertaken in April 2021 (Appendix 10 Agricultural Land Classification Survey). The principle physical factors influencing agricultural production are climate, site and soil, and the interactions between them which together form the basis for classifying land into one of 5 Grades; Grade 1 being of excellent quality and Grade 5 being land of very poor quality. Grade 3 land, which constitutes approximately half of all agricultural land in the United Kingdom, is divided into 2 subgrades – 3a and 3b.

An ALC survey of the initial main solar Development Site was undertaken in April 2021 (Appendix 10) which confirmed that:

- 4.3% of the Site lies within Grade 2, described as "very good quality agricultural land";
- 70.5% of the Site lies within Grade 3a described as "good quality agricultural land"; and
- 23% of the Site within Grade 3b, described as "moderate quality agricultural land".

Through design evolution, the overall Site area was reduced from 69.65 ha to 44.58 ha, and the ALC classification distribution across the Site is now approximately:

- 0% of the Site lies within Grade 2;
- 86.1% of the Site lies within Grade 3a; and
- 13.9% of the Site lies within Grade 3b.

Solar development is fully reversible with no long-term effects on the land. In this case, permission is only sought for a temporary period of 40 years, after which the infrastructure will be fully removed. Temporarily removing the land from agricultural use would have benefits for soil quality as the land will not be intensively cultivated or treated intensively with fertilisers and other chemicals for the lifetime of the solar farm.

It is proposed that once operational, there will be sheep grazing amongst the solar panels, thereby retaining an agricultural use of the site. Sheep grazing is the ideal choice for solar farms, as sheep are small enough to pass beneath the rows of panels without damaging them. The sheep will be moved on a rotational basis within sections of the Site during March to September to give the sown species an opportunity to flower and set seed at

different times during the extent of the botanical growing season. The timings and stocking densities will need to be reviewed depending on prevailing conditions, with advice sought from a suitably qualified ecologist in consultation with a contractor. The grassland underneath and between the solar panels will be grazed year-round at a low density (3-5 sheep/ha) to manage the flush of annuals, but grazing will not commence until a sward is established. It may be necessary to increase stocking density at certain periods for pulse grazing (e.g., in late summer) to control vigorous flushes of annuals before they die back, set seed and collapse in order to reveal the developing wildflower mixture and give it the space it needs to develop.

Given that the Development would not affect the structure and/or quality of the soils and given the temporary nature of the Development, it is in clear accordance with **NPPF Paragraph 183-185,** Core Strategy Policy **CS2; SPD Policy 5;** Saved Policies of the North Lincolnshire Local Development Plan **DS1, ST1 and RD1** and Emerging North Lincolnshire Local Development Plan Policies **SS1p, SS3p and DQE3.**

6.4 Glint and Glare

A Glint and Glare Study has been undertaken to assess the potential impact of the Development on surrounding road users and dwellings, as well as aviation.

'Glint' is defined as a momentary flash of bright light, while 'Glare' is defined as a continuous source of bright light.

Previous studies have measured the intensity of reflections from solar panels with respect to other naturally occurring and manmade surfaces. The results show that the reflections produced are of intensity similar to or less than those produced from still water and significantly less than reflections from glass and steel.

Glint and glare effects can only occur when the weather is clear and sunny. When a solar reflection towards a road user or resident is possible, the individual will also be looking in the direction of the Sun. This means the Sun and solar reflection will be visible simultaneously. The Sun is a significantly brighter source of light than a reflection from a solar panel. Furthermore, at any one location, only a particular area of solar panels will produce a solar reflection towards it. In all cases, a clear view of the reflecting solar panels at the particular time of day when a solar reflection was geometrically possible would be required.

The results of the glint and glare study undertaken for the Development are summarised below under each key topic area:

- Road Receptors: The roads surrounding the proposed development are considered local roads where traffic densities and/or speeds are likely to be relatively low. Assessment is not recommended for local roads as any solar reflections from the proposed development that are experienced by a road user would be considered 'low' and, as such, the surrounding roads were not taken forward for technical assessment.
- Residential Properties: No impact is predicted nor mitigation is necessary for 6 out of the 14 assessed dwellings because despite solar reflections being geometrically possible, the maximum duration of effects are sufficiently low. For the remaining 8 of the 14 assessed dwellings, visibility of glare that is predicted by the modelling output to last for more than three months per year and less than 60 minutes per day will be removed by the existing and proposed screening. No impact is therefore predicted and further mitigation is not required.
- Aviation Receptors: Solar reflections are not geometrically possible towards the ATC tower nor the approaches for runways 02, 20, 08 and 26 at Humberside Airport. No impacts upon aircraft on these runway approaches nor the ATC tower are predicted and therefore no mitigation is required

- Railway Receptors: Although solar reflections are found to be geometrically possible towards all 12 of the assessed train driver receptors along a 1.1 km section of railway track, existing and proposed screening will remove this risk. Moreover, even if the screening were removed the impact would remain low due to the reflections occurring outside the train drivers' primary field of view (30 degrees either side of the direction of travel). Mitigation is therefore not required.

Given the design of the Development, the orientation of the panels the south, the existing and proposed landscape screening and the conclusions reached within the accompanying assessment, the Development will not give rise to significant impacts in terms of glint and glare that are not considered acceptable. Therefore, the Site is considered to be a suitable location for the Development, with reference to **NPPF** Paragraphs **11, 111** and **158**. This is in addition to the Council's Core Strategy Policy **CS5**; Planning for Renewable Energy Development Policy **P10**; Saved Policies of the North Lincolnshire Local Development Plan Policy **DS1** and **RD2**; and Emerging North Lincolnshire Local Development Plan policies **SS1p**, **SS3p RD1p DQE1p** and **DQE9**.

6.5 Noise and Vibration

Solar development does not typically generate a significant amount of noise or vibration outside of the construction period. The following section considers the potential for construction and operational noise associated with the Development.

6.5.1 Potential for Construction Noise

There are two main factors when considering construction noise: that associated with traffic to the site, and the installation of the solar photovoltaic (PV) panels themselves.

As detailed in Section 4 of the Transport Statement (Appendix 9), deliveries to Site will be phased, with a maximum of 487 HGV deliveries during the third month of the 6-month total construction period. Assuming 26 working days per month, this equates to approximately 19 HGV movements per day. In months 4 – 6, the HGV movements are substantially lower with the average being 5, 5 and 2 HGV movements per day. A Construction Traffic Management Plan would be prepared, detailing how traffic will be managed to ensure minimal disruption to residents. Liaison with nearby residents will be undertaken and maintained before and during construction.

The installation of the PV panels is relatively simple, utilising only light plant (panel mounting structures installed utilising plant similar to agricultural fencing machinery) and hand tools. Therefore, installation will progress quickly, and not take place in any one area for a prolonged period. Given this, along with the separation distance from the closest PV panel locations to the nearest residential properties (minimum 80 m to a property with no involvement with the project), and the limited construction period, it is considered that a specific assessment of construction noise effects is not necessary.

Notwithstanding this, a summary of best practice construction methods, along with a commitment to adhere to best practice means of controlling noise from construction activities, as advocated by BS 5228, is outlined below.

6.5.1.1 Construction Noise Mitigation

The good practice measures outlined below are considered to be sufficient to manage the effects of noise during construction operations, and would be required of all contractors during construction:

- Operations shall be limited to times agreed with the Council;
- Deliveries of plant and materials by HGVs to site shall only take place in accordance with the Construction Traffic Management Plan (which will be secured via a planning condition), and within times agreed with the Council;

- The site contractors shall be required to employ the best practicable means of reducing noise emissions from plant, machinery and construction activities, as advocated in BS 5228[14], the relevant guidance for construction noise;
- Where practicable, the work programme would be phased, which would help to reduce the combined effects arising from several noisy operations;
- Where practicable, noise from fixed plant and equipment would be contained within suitable acoustic enclosures or behind acoustic screens;
- All sub-contractors appointed by the main contractor would be formally and legally obliged, and required through contract, to comply with all environmental noise conditions;
- Noise levels due to any plant and equipment normally required for operation at night (23:00-07:00), e.g. dewatering pumps, shall be restricted to the BS 5228 night-time lower threshold of 45 dB, $L_{Aeq,night}$ at the nearest noise-sensitive receptors.

Application of the above measures to manage construction noise would ensure that potential effects are minimised as far as is reasonably practicable, and that the construction process is operated in compliance with relevant legislation. Construction-related noise for solar development is typically regulated through a Construction Environmental Management Plan covering working hours and best construction practices, which can be secured by planning condition.

6.5.2 Potential for Operational Noise

The Site is located approximately 35 m west of the East Midlands Mainline with Carr Lane bordering the eastern boundary of the Site. These features would contribute to an elevated background noise level at the Site and nearby residential properties.

The primary source of noise from the Development will be the inverter kiosks (16 No.) which are distributed throughout the solar PV array and specifically away from any residential properties. Whilst the PV panels make no noise themselves, they will likely act as noise barriers, reducing noise from the inverter kiosks. These inverter kiosks are then connected to a distribution substation, located to the north east corner of the Site which has been specifically located away from residential properties and will be housed in a brick building with substantial established planting to the perimeter of the building.

Potential noise impacts were a key consideration in the final layout design of the Development. All sound-emitting plant has been situated as far as is practicable from residential dwellings in order to minimise the level of noise impact.

The level of sound emitted by the Development will primarily be attributable to the inverter kiosks' cooling fans; the operation of these fans will be related to both the intensity of light incident upon the solar panels and the air temperature. During night-time periods, any sound emitted by the Development would therefore be limited to the substation transformers.

6.5.3 Operational Noise Mitigation

The noise mitigation inherent in the Development's design (i.e. maximising the separation distance from all sound-emitting equipment to residential dwellings and other sensitive receptors) has ensured that the Development is acceptable in terms of noise without the need for further noise mitigation measures.

[14] BS 5228:2009+A1:2014 Code of Practice for Noise and Vibration Control on Construction and Open Sites.

The potential for noise generation during the operational phase can be addressed through an appropriately worded condition restricting noise levels. The Applicant would accept a noise condition limiting noise levels from on site equipment in line with the requirements of BS4142:2014, which is considered to be best practice within the industry.

The proposal complies with **NPPF Paragraphs 174, 185** and **211** in terms of noise. This is in addition to the Council's Planning for Renewable Energy Development Policies **P8** and **P10**.

6.6 Historic Environment

A Heritage Impact Assessment (HIA) (Appendix 7) has been prepared to accompany the application. The HIA incorporates a Desk-Based Assessment (DBA). The purpose of the HIA is to establish the archaeological and heritage baseline, assess the potential for direct effects to the archaeological resource within the Site and assess nearby designated heritage assets for changes to setting that affect heritage significance as a result of the Development.

A 1 km Study Area (incorporating the Core Study Area (CSA) and adjacent land within its 1 km radius) was established and assessed for potential unknown subsurface archaeology. Furthermore, a wider study area of 3 km from the centre of the Site (encapsulating the 1 km study area) was established. This area underwent a check regarding the potential for the Development to impact the heritage settings of any present key designated heritage assets (as recorded by the National Heritage List for England (NHLE)) and non-designated heritage assets.

There are no World Heritage Sites or Registered Battlefields within the 3 km Study Area. There were 2 scheduled monuments identified within the 3 km study area (Goxhill Hall and Thornton Abbey Augustinian monastery). Within a 2.5 km radius from the centre of the Site, there are 6 Grade I Listed Buildings, 27 Grade II Listed Buildings and 2 Grade II* Listed Buildings. There were 3 non-designated assets recorded within the 1 km Study Area.

Overall, the HIA (including the findings of the Geophysical Survey) found that due to a paucity of known archaeological remains from the Site and Study Area, there is deemed to be a Low potential to encounter complex or significant archaeological remains on the Site.

The preferred mitigation strategy would be to mitigate by design via the use of concrete footing and cable trays which would lie on the ground surface, essentially capping any archaeological features and preventing further disturbance via ploughing. Where this would not be possible, avoidance or preservation by record may be required. The implementation of the appropriate mitigation, either via concrete footings/avoidance or preservation by record, would be implemented as part of the post-consent detailed design stage and could be secured by an appropriately worded planning condition. A programme of archaeological work would inform the locations for the mitigation strategy to be implemented. All Recommendations are subject to the approval of the Local Planning Authority.

In terms of Heritage, the HIA has found the Development to have no effect on designated heritage assets and only Minor / Negligible Effects on the Heritage Significance of on non-designated heritage asset, Sweetbriar Farm. Due to the very slight indirect impacts identified, no heritage mitigation is required or considered necessary above the measures already incorporated in the design of the Development, specifically the area of native species woodland incorporated into closest boundary to Sweetbriar Farm.

The proposal therefore complies with **NPPF Paragraphs 189, 190, 192, 194, 197,** and **199-202** with regard to Historic Environment. This is in addition to the Council's Core Strategy Policies **CS5** and **CS6**; Planning for Renewable Energy Development Policies **P4** and **P10**; The Yorkshire and Humber Plan policy **ENV9**; Saved Policies of the North Lincolnshire Local Development Plan Policy **DS1**; and Emerging North Lincolnshire Local Development Plan Policy **HE1p**.

6.7 Hydrology and Flood Risk

A detailed Flood Risk Assessment (FRA) (Appendix 8) has been produced to accompany the application.

The Site sits within Flood Zone 1, an area with low probability of flooding. The EA's Historic Flood Map illustrates that the Site is not located in areas which have previously experienced flooding.

Based on EA Risk of Flooding from Surface Water map, there is minimal risk of surface water flooding across the Site. The locations of sensitive infrastructure are outside of modelled areas and the implementation of the surface water management techniques detailed in the FRA will reduce the potential risk of pluvial flooding of the electrically sensitive aspects of the Development. As such, the residual pluvial flood risk at the Site is deemed Negligible.

Skitter Beck is a tidally influenced watercourse within the vicinity of the Site; however, as mentioned, the Site elevation is significantly higher than Skitter Beck elevation (11 m AOD and 3 m AOD respectively). The EA Flood Risk from Rivers or the Sea Map indicates the Site is not at risk of tidal flooding. As such, the onsite tidal flood risk is Negligible.

A British Geological Society (BGS) borehole record located west of the Site identified underlying strata as 2.7 m boulder clay, 1.2 m loose chalk and 33 m chalk. The Site is identified in the North Lincolnshire PFRA as having a greater than 25% but less than 50% susceptibility to groundwater flooding. The borehole reached a depth of approximately 38.1 m below ground level (bgl) and the rest level of water was 19.8m bgl. However, the presence of clay underneath the Site reduces the likelihood of groundwater flooding. Considering this, the risk of the Development flooding as a result of groundwater fluctuations is Negligible.

The PV arrays have the potential to concentrate rainfall under the drip line. To limit possible channelisation from surface water from PV arrays and promote interception and infiltration potential throughout the Solar Development, the grounds surrounding and between the PV arrays will be planted with native species rich grassland which will act as dripline planting.

Whilst the Site is unlikely to generate run-off rates beyond the current greenfield rates, gravel filled filter drains to c. 1 m in depth will be installed every 5th PV row along existing topography to intercept surface water and ensure run-off is managed through providing an additional layer of interception and storage.

As the Site sits within Flood Zone 1 a Sequential and Exception Test is not required. The FRA demonstrates that the residual risk of the Development flooding from all sources is Negligible.

The Development will be safe for its lifetime and will not increase flood risk elsewhere. The proposal complies therefore with **NPPF Paragraphs 158-161** and **163** in terms of Flood Risk. This is in addition to the Council's Core Strategy Policies **CS1, CS2, CS5, CS16, CS18** and **CS19**; Planning for Renewable Energy Development Policies **P5**, **P6**, **P10** and **P14**; The Yorkshire and Humber Plan policy **YH2**; Saved Policies of the North Lincolnshire Local Development Plan **DS1**, **ST1** and **DS21**; and Emerging North Lincolnshire Local Development Plan policies **SS1**, **SS3**, **DQE5** and **DQE7**.

6.8 Access, Transport and Traffic

A Transport Statement (TS) (Appendix 9) has been prepared to accompany the application. The TS provides an overview of the Development in relation to traffic and assesses the anticipated impact of the Development as a result of increased traffic and transportation movements within the local area.

One Site access junction location off Carr Lane has been proposed for the Development notably access to the solar farm, substation and the proposed Temporary Construction Compound (TCC) area via the existing Sweetbriar Farm agricultural access point.

Consultation was initiated in February 2021 with North Lincolnshire County Council (NLCC) to discuss the Development proposal, access arrangements and route to site. In summary, the Development proposal is acceptable in principle, however a Transport Statement and Construction Traffic Management Plan, detailing how the impact of construction traffic in Ulceby will be minimised, should be submitted. It was agreed that the Construction Traffic Management Plan could be secured by a planning condition.

Construction traffic is expected to arrive from the south via the A180 at the Brocklesby Interchange. The Transport Statement considers effects on routes between the Site entrance and the nearest major road, which in this case, is the A180.

It is expected that all construction vehicles will depart from the Site using the reverse of the route at which they arrived to the Site (exiting the A180(M) at the Brocklesby Interchange onto the A160). As this road is a major transport link, it is expected that any increase in traffic numbers due to construction of the Site will be negligible.

Development construction traffic will primarily be associated with the importation of construction materials including solar panels, support structures, electrical equipment and other construction materials. It is expected that the majority of these materials will be transported to the Site by HGVs.

Other vehicles associated with construction of the Development can be expected from construction workers and other Site personnel accessing the Site.

All construction vehicles approaching the Site will be directed to use the approved approach route to Site. All heavy vehicles and other construction traffic will approach the Site from the A1077 to the south via the A180.

The Development is expected to be constructed over a 6-month period. Approximately 7,680 two-way vehicle movements are expected to occur during this period for staff, and to deliver construction materials and components. Please refer to the TS for a more detailed breakdown of these numbers.

It is expected that during the peak month of construction (Month 3), 73 two-way vehicle movements per day will access the Site, which would consist of 54 car movements and 19 HGV movements on average.

Traffic management procedures have been proposed within the TS which would ensure the safe operation of the approach route to the Site during construction. Determination of the final details of these traffic management measures will occur once the Principal Contractor has been appointed and can be secured via an appropriately worded condition of consent.

Operational traffic is expected to be minimal and would be conducted by smaller vehicles, thus it is highly unlikely that the operation of the Development will have any significant impact on the road network. The effect of operational traffic on the wider highway network is therefore expected to be negligible.

Given the minor impact of the Development on the highways network and the traffic management measures to be implemented, the Development complies with **NPPF Paragraphs 104, 106**, **110** and **112** with regard to access, vehicle generation and highway safety. This is in addition to the Council's Core Strategy Policy **CS2**; Planning for Renewable Energy Development Policies **P10, P13** and **P14**; and, Saved Policies of the North Lincolnshire Local Development Plan **DS1, T2** and **DS21**.

7 OTHER RELEVANT MATERIAL CONSIDERATIONS

7.1 Planning Practice Guidance

The Government's Planning Practice Guidance ('PPG') provides advice across a variety of planning matters which is continuously updated. The web-based guidance should be read alongside the NPPF and is a material consideration in the consideration of planning applications.

The Renewable and Low Carbon Energy PPG[15] was most recently updated in June 2015 and incorporates the approach set out in the speech by the former Minister for Energy and Climate Change, The Rt Hon Gregory Barker MP, to the solar PV industry in 2013[16] and the Written Ministerial on Solar Energy: Protecting the Local and Global Environment (2015)[17]. The Guidance states that large scale ground-mounted solar PV development should be focussed on previously developed and non-agricultural land, unless the proposed use of agricultural land has been shown to be necessary and poorer quality land has been used in preference to higher quality land. In these cases, the development must encourage biodiversity improvements around arrays.

Further considerations for large-scale solar highlighted in the PPG include:

- The use of planning conditions to ensure that installations are removed when no longer in use and land is restored to its previous use;
- Visual impact and glint and glare;
- Security measures such as lights and fencing;
- Conservation of heritage assets;
- Mitigation of landscape and visual impacts; and
- Energy generating potential.

7.2 Overarching National Policy Statement for Energy (EN-1)

The overarching National Policy Statement for Energy (EN-1)[18] was adopted in July 2011 and sets out the overall national energy policy. EN-1 reflects the Government's commitment to carbon emission reduction, energy security and affordability. As such, EN-1 calls for reducing the dependency on high carbon fossil fuels, and transitioning to low carbon energy mix. Part 4 of EN-1 recognises the urgency of the need for renewable energy infrastructure and advises that there is a presumption in favour of granting consent, unless other policies indicate refusal.

The 2021 Draft NPS EN-1[19], which is currently in consultation, reiterates the need for large-scale energy infrastructure to support the aims of the Energy White Paper and achieve Net Zero by 2050. The draft NPS calls for sustained growth in the capacity of solar energy generation in the next decade.

[15] Ministry of Housing, Communities & Local Government (2015) *Planning Practice Guidance: Renewable and Low Carbon Energy* [Online] Available from: https://www.gov.uk/guidance/renewable-and-low-carbon-energy (Accessed 28/09/2021)

[16] Department of Energy & Climate Change and The Rt Hon Gregory Barker (2013) *Gregory Barker Speech to the Large Scale Solar Conference* [Online] Available from: https://www.gov.uk/government/speeches/gregory-barker-speech-to-the-large-scale-solar-conference (Accessed 28/09/2021)

[17] Ministry of Housing, Communities and Local Government and Mr Eric Pickles (2015) *Written Ministerial Statement: Planning Update* [Online] Available from: https://questions-statements.parliament.uk/written-statements/detail/2015-03-25/HCWS488 (Accessed 28/09/2021)

[18] Department for Business, Energy & Industrial Strategy (2011) *Overarching National Policy Statement for Energy (EN-1)* [online]. Available at: https://www.gov.uk/government/publications/national-policy-statements-for-energy-infrastructure (Accessed 20/10/2021).

[19] Department for Business, Energy & Industrial Strategy (2021) *Draft Overarching National Policy Statement for Energy (EN-1)* [Online] Available at: https://www.gov.uk/government/consultations/planning-for-new-energy-infrastructure-review-of-energy-national-policy-statements (Accessed 20/10/2021).

7.3 National Policy Statement for Renewable Energy Infrastructure (EN-3)

The National Policy Statement on Renewable Energy Infrastructure (EN-3)[20] was formally adopted in July 2011 and provides national planning policy in respect of renewable energy infrastructure.

Whilst EN-3 provides assessment and technology-specific information on certain renewable energy technologies it does not include solar PV development. Paragraph 1.8.2. explains the reasoning for this, i.e. at the time of drafting EN-3 which was published in 2011, the Government did not consider other forms of renewable energy generation to be viable over the relevant NSIP threshold, e.g. solar PV over 50 MW.

The Government published a revised Draft National Planning Statement for Renewable Energy Infrastructure (EN-3)[21] in September 2021. In contrast to the adopted 2011 NPS EN-3, the 2021 Draft NPS EN-3 contains technology-specific information for solar photovoltaic generation. The 2021 Draft NPS emphasises that solar farms are the cheapest form of energy generation worldwide and that solar is a key part of the government's strategy for low-cost decarbonisation of the energy sector.

The Draft NPS contains specific advice on environmental considerations for solar developments. Some of the key points of relevance to the determination of solar energy applications within the draft NPS are summarised as follows:

- ALC is relevant but should not be '*a predominating factor in determining the suitability of the site location'*. Solar development is *'not prohibited on agricultural land classified 1, 2 and 3a'*. (2.48.13 and 2.48.15);
- The draft NPS acknowledges that exact specifications are not likely to be known at the time of application. Accordingly, applicants should submit applications based on the worst-case scenario (2.49);
- It advises that Glint and Glare studies should focus on potential impacts on homes and motorists, rather than potential aviation impacts (2.52.5);
- With regard to archaeology, solar panels on concrete footings may in fact increase protection of below-ground archaeology as they would prevent regular ploughing. (2.53.2); and
- Micro-siting with specific tolerances is recommended as a way of mitigating archaeological impact during construction (2.53.6).

7.4 UK Renewable Energy Roadmap

The UK Renewable Energy Roadmap (2011)[22] ('the Roadmap') sets out the UK Government's commitment to increasing the use of renewable energy. The Roadmap outlines that the UK has the potential to meet its 2020 target of 15% of UK energy consumption from renewable resources, and deliver an operational capacity of 29 gigawatts ('GW') of renewable energy by that same year.

The Roadmap identifies the National Policy Statements ('NPS') as a potential means of improving the delivery of renewable energy development through their advice on need, mitigation and delivery in a sustainable manner.

[20] Department for Business, Energy & Industrial Strategy (2011) National Policy Statement for Renewable Energy Infrastructure (EN-3) [Online] Available at: https://www.gov.uk/government/publications/national-policy-statements-for-energy-infrastructure (Accessed 20/10/2021).

[21] Department for Business, Energy & Industrial Strategy (2021) *Draft National Policy Statement for Renewable Energy Infrastructure (EN-3)* [Online] Available at: https://www.gov.uk/government/consultations/planning-for-new-energy-infrastructure-review-of-energy-national-policy-statements (Accessed 20/10/2021).

[22] Department of Energy and Climate Change (2011) *The UK Renewable Energy Roadmap* [Online] Available at: https://www.gov.uk/government/publications/renewable-energy-roadmap (Accessed 28/09/2021)

The UK Renewable Energy Roadmap Update (2013)[23] ('the Roadmap Update') reports on the progress that has been made in the renewable energy sector since the publication of the Roadmap. The Roadmap Update re-iterates Central Government's commitment to renewable energy (paragraph 1):

"The Government strongly supports renewable energy as part of a diverse, low carbon and secure energy mix. Alongside gas, low-carbon transport fuels, nuclear power and carbon capture and storage, renewable energy offers the UK a wide range of benefits from economic growth, energy security and climate change perspective"

The Roadmap Update recognises that a number of barriers continue to present challenges, including pre-consent delays.

The Roadmap Update also identifies that solar PV has the potential to form a significant part of the renewable energy generation mix and that solar received the highest public approval rating of all renewable energy technologies, at 82% in 2012 and 85% in 2013.

7.5 UK Solar PV Strategy

7.5.1 UK Solar PV Strategy Part 1: Road Map to a Brighter Future

Part 1 of the UK Solar PV Strategy was published in October 2013[24] and sets out four guiding principles which form the basis of the Government's strategy for solar PV. These principles are:

- Support for solar PV should allow cost-effective projects to progress and to make a cost-effective contribution to UK carbon emission objectives in the context of overall energy goals;
- Support for solar PV should ensure proposals are appropriately sited, give proper weight to environmental considerations such as landscape and visual impact, heritage and local amenity, and provide opportunities for local communities to influence decisions that affect them; and
- Support for solar PV should assess and respond to the impacts of deployment on: grid systems balancing; grid connectivity; and financial incentives.

Part 1 establishes the principles for solar PV deployment in the UK and states that solar PV can be deployed in a variety of locations, including on the ground on greenfield sites.

7.5.2 UK Solar PV Strategy Part 2: Delivering a Brighter Future (2014)

Part 2 of the UK Solar PV Strategy was published in April 2014[25] and focuses on the Government's ambition for the key market segments, how they will be realised through innovation and partnership and the benefits that this will bring for jobs and investment in the UK, in addition to vitally important emissions reduction.

Part 2 of the Strategy recognises, in respect of ground mounted solar PV installations, the opportunities for greater clean energy generation and how solar farms can be beneficial for wildlife. Part 2 of the UK Solar PV Strategy also recognises there is a need for ground mounted solar schemes to be well planned and screened and to avoid harm to biodiversity. It emphasises that innovation and clean energy are at the centre of the Government's economic plan. One of the key topics is the delivery of commercial and industrial onsite generation. With the falling costs due to technology innovation, there is an ambition for continuous growth in the solar PV capacity in line with the 2020 target for renewables.

[23] Department for Energy and Climate Change (2013) *UK Renewable Energy Roadmap Update 2013* [Online] Available at: https://www.gov.uk/government/publications/uk-renewable-energy-roadmap-second-update (Accessed 28/09/2021)
[24] UK Government (2013) *UK Solar PV Strategy Part 1: Roadmap to a Brighter Future* [Online] Available at: https://www.gov.uk/government/publications/uk-solar-pv-strategy-part-1-roadmap-to-a-brighter-future (Accessed 28/09/2021)
[25] UK Government (2014) *UK Solar PV Strategy Part 2: Delivering a Brighter Future* [Online] Available at: https://www.gov.uk/government/publications/uk-solar-pv-strategy-part-1-roadmap-to-a-brighter-future (Accessed 28/09/2021)

7.6 Net Zero – The UK's Contribution to Stopping Global Warming

In May 2019, the Committee on Climate Change ('the CCC') published Net Zero – The UK's Contribution to Stopping Global Warming. This report responds to a request from the Governments of the UK, Wales and Scotland, asking the Committee to reassess the UK's long-term emissions targets. The report recommends a new target for the UK of net zero emissions by 2050. The Report highlights the falling cost of key renewable technologies including solar PV, which is now generally comparable or low cost than power from fossil fuels, while bringing significant co-benefits such as reduced air pollution.

On 27 June 2019, the Climate Change Act 2008 was amended to introduce a target for at least a 100% reduction in greenhouse gas emissions (compared to 1990 levels) in the UK[26] by 2050. This 'net zero' target is likely to affect and increase future Government renewable and low carbon energy targets and create a more positive policy environment for solar energy.

7.7 Net Zero Strategy – Build Back Greener

The Government's Net Zero Strategy[27] ('the Strategy'), published in advance of COP26, is the Government's long-term plan for the transition to a low carbon economy. The Strategy highlights the significant progress made since 1990 in reducing greenhouse gas emissions from the power sector and introduces an ambitious commitment to ensure that all electricity comes from low carbon sources by 2035, subject to security of supply.

The Strategy calls for the accelerated deployment of low-cost renewable generation and states that a low-cost net zero electricity system is likely to be composed predominantly of wind and solar generation. The Strategy emphasises that the planning system will play an important role in supporting the deployment of renewable energy.

7.8 2021 Committee on Climate Change Progress Report to Parliament

The 2021 Committee on Climate Change (CCC) Progress Report to Parliament[28] was published in June 2021 and provides a review of Government efforts over the previous 12 months with regards to Climate Change and presents recommendations for reducing emissions and adapting to climate change. While UK emissions fell by 13% in 2020, much of this decline was likely a result of the Covid-19 pandemic and as such, lasting changes are far from certain. Furthermore, it sets a target to phase out gas-fired electricity generation in the UK by 2035, subject to ensuring security of supply.

The CCC Report notes that solar generation sources are now producing the cheapest electricity in history and that the International Energy Agency Net Zero Energy 2050 pathway calls for the rapid build-out of renewables, particularly solar and wind.

There has been significant progress in the transition to renewables, with emissions from electricity having decreased by 65% from 2009 to 2019. However, the CCC report notes potential barriers to low-carbon generation at scale, including in the planning and consenting regime, should be addressed urgently to enable the low carbon transition.

7.9 UK Sixth Carbon Budget

On 20 April 2021 the Department for Business, Energy and Industrial Strategy and Prime Minister's Office jointly announced that the Sixth Carbon Budget will limit further the volume

[26] UK Government (2019) *The Climate Change Act 2008* (2050 Target Amendment) Order 2019 (2019 No. 1056) [Online] Available at: http://www.legislation.gov.uk/uksi/2019/1056/made (Accessed 28/09/2021)
[27] UK Government (2021) *Net Zero Strategy – Build Back Greener* [Online] Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1026655/net-zero-strategy.pdf (Accessed 19/10/2021)
[28] Committee on Climate Change (2021) *2021 Progress Report to Parliament* [Online] Available at: https://www.theccc.org.uk/publication/2021-progress-report-to-parliament/ (Accessed 28/09/2021)

of greenhouse gasses emitted over the 5-year period from 2033 to 2037[29]. The UK Government is already working towards a reduction of 68% by 2030, and states that the goal of achieving 78% by 2035 compared with 1990 levels constitutes the world's most ambitious climate change target.

For the first time, the Carbon Budget will incorporate the UK's share of international aviation and shipping emissions. The statement also notes that the UK continues to break records in renewable energy generation, which has more than quadrupled since 2010, with low carbon electricity accounting for other 50% of total generation.

The new target will be given statutory force by the end of June 2021, with legislation to be introduced through Parliament on 21 April 2020.

7.10 The UK's Integrated National Energy and Climate Plan

The UK draft National Energy and Climate Plan ('NECP')[30] was produced in January 2020 and sets out the UK Government's climate and energy objectives, targets, policies and measures covering the five dimensions of the Energy Union. The NECP highlights the role of advanced solar PV technologies in the delivery of cost efficient, clean and secure supplies of electricity.

7.11 Renewables, Recovery, and Reaching Net Zero

The National Infrastructure Commission ('the NIC'), whose remit is to advise the Government on major long-term infrastructure challenges, published Renewables, Recovery and Reaching Net Zero in August 2020[31]. The report states that delivering a 'highly renewable electrical system is the best way to deliver low cost, low carbon electricity' and predicts that the demand for electricity in the UK will increase in the coming years. The NIC advises that in order to tackle the climate crisis and provide low-cost electricity for consumers, 65% of Britain's electricity should be provided by renewable sources by 2030. The report emphasizes the importance of ensuring that there is an energy generation mix of both wind and solar to effectively balance supply and demand throughout the day and across the year.

7.12 Assessment of Relevant Material Considerations

With reference to the PPG on Renewable and Low Carbon Energy, the location of the Development has been informed by the ALC Report (Appendix 10) which indicates that the Site includes a mix of Grade 3a and b land. Development was omitted from areas of Grade 2. The proposed landscaping measures will deliver a substantial net gain for biodiversity and increase the habitat value of the Site as demonstrated by the Landscape and Biodiversity Management Plan (Appendix 2).

The Development has been designed to minimise visual impact, glint and glare, and impacts on heritage assets as set out above. Security measures such as fencing and CCTV cameras have been incorporated into the design. At the end of the operational lifespan of the solar development, the solar PV arrays and associated infrastructure will be removed and the Site will be fully restored. The Development will make use of the significant energy generating potential of the Site to provide 35,000 MWh of low carbon energy per year, sufficient to power approximately 10,115 homes in North Lincolnshire.

[29] UK Government (2021) *Press release: UK enshrines new target in law to slash emissions by 78% by 2035* [Online] Available at: https://www.gov.uk/government/news/uk-enshrines-new-target-in-law-to-slash-emissions-by-78-by-2035 (Accessed 28/09/2021)

[30] Department for Business, Energy and Industrial Strategy (2019) *The UK's Draft Integrated National Energy and Climate Plan* [Online] Available at: https://www.gov.uk/government/publications/uk-national-energy-and-climate-plan-necp (Accessed 28/09/2021)

[31] National Infrastructure Commission (2020) *Renewables, Recover and Reaching Net Zero* [Online] Available at: https://nic.org.uk/studies-reports/renewables-recovery-and-reaching-net-zero/ (Accessed 28/09/2021)

The Development will make a substantial contribution to the overall supply of affordable low-carbon renewable energy, making a contribution to the aims of the Net Zero Strategy, Energy White Paper, UK Renewable Energy Roadmap, UK Solar PV Strategy, the UK's Integrated National Energy and Climate Plan and the legally binding Net Zero 2050 emissions target.

The UK Solar PV Strategy identifies a need for large-scale solar farms on greenfield sites so long as environmental considerations are given appropriate weight, as is the case with this Development. As acknowledged in the 2020 Committee on Climate Change Progress Report to Parliament, large-scale solar farms such as this Development will play an essential role in decarbonising the UK's energy supply.

8 CONCLUSION

The Development is an opportunity to provide a significant amount of low carbon renewable energy in an appropriate location. Considerable care has been taken in the design of the Development to avoid unacceptable environmental and amenity effects, whilst ensuring that the Development can make a contribution to the UK's requirement for renewable energy generation.

The principle of the Development is supported by North Lincolnshire's Core Strategy CS1, CS2 and CS18; The Yorkshire and Humber Plan Policy YH2; Saved Policies of the North Lincolnshire Local Development Plan DS1, ST1 and DS21 and Emerging North Lincolnshire Local Development Plan Policies SS1p, SS3p, DQE7 and DQE9. These policies ultimately seek a reduction in carbon emissions and supports sustainable energy generation.

The Development incorporates an extensive scheme of landscape enhancement as set out in the Landscape Mitigation Plan and Landscape and Biodiversity Management Plan (Appendix 2), including the creation of new grassland, woodland, hedgerows and shrubs, which will deliver a substantial net biodiversity gain of 167.7%, screen views of the Development, and ultimately improve the landscape character and habitat value of the Site.

The Development is acceptable with regards to ecology and ornithology; the historic environment; agricultural land use; hydrology and flood risk; glint and glare; noise; contamination; landscape and visual; access, transport and traffic; and public rights of way. The Development complies with Local Plan policies which concern these environmental and amenity matters. Furthermore, the Development will contribute to the decarbonisation of the UK energy supply, the Net Zero 2050 emissions target and other national energy and climate policies.

It is integral to planning decision-making that a balancing exercise has to occur in respect of considering the benefits of development against the impacts. In this case, there are clear benefits which arise from the renewable energy credentials of the Development and the enhancements proposed in respect of biodiversity and landscape, which clearly outweigh the minimal localised adverse impacts. Any construction phase impacts would be short term, approximately 6 months, and any operational phase impacts would be reversible after the 40 year lifespan of the project. Through the sequential test, although the Site is located partly on Grade 3a agricultural land, no other suitable brownfield or lower grade land was available within a viable distance of the grid connection point. There would also be continued agricultural activity on the Site in the form of sheep grazing and the proposals will not prevent the continued operational poultry farm activities at Sweetbriar Farm.

Taking into account all policies relevant to the Development and material considerations, the Development is in compliance with these policies and considerations, and planning permission should therefore be granted. It is therefore respectfully requested that the Council approve this planning application.