



Fendyke Solar Farm

Alternative Site Assessment & Site Justification Statement

On behalf of Enray Power Ltd

Document Control Sheet

Project Name: Fendyke Solar Farm

Project Ref: 333100869

Report Title: Alternative Site Assessment & Site Justification Statement

Doc Ref: 333100869/A5/ASA/SJS

Date: November 2024

	Name	Position	Date
Prepared by:	HK	Graduate Infrastructure and Environmental Planner	August 2024
Reviewed by:	AW	Planning Associate	August 2024
Approved by:	ID	Director	November 2024
For and on behalf of Stantec UK Limited			

This report has been prepared by Stantec UK Limited ('Stantec') on behalf of its client to whom this report is addressed ('Client') in connection with the project described in this report and takes into account the Client's particular instructions and requirements. This report was prepared in accordance with the professional services appointment under which Stantec was appointed by its Client. This report is not intended for and should not be relied on by any third party (i.e. parties other than the Client). Stantec accepts no duty or responsibility (including in negligence) to any party other than the Client and disclaims all liability of any nature whatsoever to any such party in respect of this report.

Contents

1	Introduction.....	3
2	The Site and Development Description.....	4
3	Planning Policy.....	8
4	Methodology	14
5	Defining the Search Area.....	16
6	Site Selection Criteria	18
7	Assessment of Alternative Sites.....	22
8	Assessment of the Site.....	27
9	Summary and Conclusion	36

Figures

Figure 2.1: Site Location Plan	4
--------------------------------------	---

Tables

Table 6.1 Site Selection Criteria.....	18
Table 8.1: Assessment of the Site.....	27
Table 8.2: Agricultural Land Quality of the Site and South Holland District Council	33

Appendices

Appendix A	Constraints Plan
Appendix B	Agricultural Land Classification Plan
Appendix C	Flood Zones
Appendix D	Topographical Survey

This page is intentionally blank

Executive Summary

The Alternative Site Assessment and Site Justification Statement (the “Assessment”) has been prepared for the construction and operation of a 20 MW solar farm and 10 MW battery energy storage system (BESS) (the ‘Development’), which will be located at land at Fendyke Farm, Old Fendyke, Sutton St James, Spalding (the ‘Site’).

The report explains the process of site selection and why the chosen Site accords with the Development Plan (Local Plan Policy 1 and 31) and national planning policy criteria regarding the sequential consideration of siting development on agricultural land, showing preference for lesser graded land.

The Assessment forms part of an application for full planning permission (the ‘Application’). This Assessment has been prepared on behalf of Integrum SPV 21004 Limited (the ‘Applicant’).

The Applicant has selected land for the development that is in the main Agricultural Land Classification Grade 3a and 3b, in an area of predominantly Grade 1 and Grade 2 agricultural land. This approach is clearly in compliance with policy which seeks preference is given for lesser graded land.

The following stages of work were undertaken in carrying out the Assessment including: defining a search area; determining site selection criteria; conducting a review of commercial rooftops, previously developed land (PDL), lower grade agricultural land and lower flood risk; assessment of the identified reasonable alternative sites; and assessment of the development site itself. This follows National Planning Policy Guidance paragraph 12 (reference ID: 5-012-2014306) on the considerations that relate to the siting of solar farms and adds to the robustness of the process.

Following the above stages of work, it has been concluded that there are no suitable alternative sites within the search area. The entire search area was split between Grade 1 and Grade 2, which is classed as Best and Most Versatile (BMV) agricultural land, indicating that there are no lower grades of agricultural land, given the site is predominantly 3a and 3b graded land. Flood risk within the study area is also largely unavoidable given South Holland District is subject to ‘district wide’ risk from tidal flooding.

The outlined stages of work demonstrate that in order to capitalise on the agreed connection and secured grid capacity and deliver the material benefit of renewable energy, for which there is an explicit need, development must occur on agricultural land and this site is of lesser grade than other land in the search area.

In response to flood risk constraints, appropriate mitigation measures have therefore been applied to the design and layout of the Development, which meets the Sequential and Exception Test set out in the NPPF.

The project is necessary and essential to delivering energy security and meeting net zero targets and is wholly reversible, unlike other forms of development on agricultural land such as residential or industrial warehousing. A suitable condition can be applied to ensure the land is returned to its original condition at the end of the 40 year term.

A further important material consideration is that South Holland District Council previously approved a solar farm on part of the Site (ref.H20-0764-14) and accepted that the land was sequentially preferable for the siting of a temporary solar farm. The assessment area for the previous permission was much smaller at 3km radius whereas the assessment accompanying the Application includes a wider 6km radius search area.

Whilst the chosen Site does include some BMV land:

- the ALC grade is lower than the surrounding land;
- the land use and ALC grade is undermined by an invasive weed species (blackgrass);

- the development will support the viability of the wider 230ha farm helping to sustain food production;
- the Site can still be grazed by livestock to continue its agricultural use;
- the land will be returned to arable land in 40 years;
- the Site represents a very small proportion of the total farmland within the district; and
- part of the Site was found acceptable for a solar farm in a previous application.

There is no formal requirement set out in planning policy to submit an Alternative Site Assessment or Site Justification Statement, so the search area and criteria are based on typical considerations for solar farm projects, that includes viability and environmental constraints as set out in national guidance and policy. The methodology adopted by this Assessment demonstrates a thorough and extensive assessment of alternative sites has been undertaken, and that the chosen site is justified with regard to the National Planning Policy Guidance's (PPG) consideration of ALC and BMV, and SELP Policy 1 and 31, given that the Development will be essential to delivering on energy security and meeting net zero targets.

1 Introduction

1.1 Overview

- 1.1.1 This Assessment has been prepared on behalf of Integrum SPV 21004 Limited (the 'Applicant') in support of a planning application for the construction and operation of a 20 megawatt (MW) solar farm and a 10 MW battery energy storage system (BESS) (the 'Development') at land at Fendyke Farm, Old Fendyke, Sutton St James, Spalding (the 'Site').
- 1.1.2 The purpose of this Assessment is to outline the site selection process undertaken by the Applicant and provide supporting justification for the chosen site to show compliance with spatial policy at national and local level. Alongside this, an assessment of the environmental and operational constraints of the Site and alternative sites was conducted to outline that the site is suitable for the Development and gives rise to no unacceptable impacts to other material matters.

1.2 Structure of this Report

- 1.2.1 The structure of this report is as follows:
- ▣ Introduction
 - ▣ Site and Development Description
 - ▣ Planning Policy
 - ▣ Methodology
 - ▣ Defining the Search Area
 - ▣ Site Selection Criteria
 - ▣ Review of Previously Developed Land (PDL) and Non-Agricultural Land
 - ▣ Assessment of Alternative Sites
 - ▣ Assessment of the Site
 - ▣ Summary and Conclusion

2 The Site and Development Description

2.1 Site Description and Context

- 2.1.1 The Site extends to 44.2 hectares (ha) and comprises primarily agricultural land. The Site is almost entirely bordered by drains and subdivided into four separate fields by virtue of the existing drainage system and Bardling's Drove running east-west through the Site. Four of these drains are unnamed and South Holland Main Drain is located 250m north of the Site.
- 2.1.2 The local area is characterised by several farms and businesses, as well as sporadic residences. Several large farm buildings, yards and commercial greenhouses are located along New Fen Dike, Bardling's Drove, Broad Gate and Old Fen Dike. The most notable of these are the large glasshouses at Poplar Farm Flowers Ltd on Old Fen Dyke to the east of the Site, the 'Lift and Shift' shipping container storage area immediately to the south on Broad Gate and the storage barns to the west at Wright R J Ltd, on New Fen Dike.
- 2.1.3 The settlement of Holbeach St Johns is 2.17km north west of the Site, Sutton St Edmund is 3km south west and the centre of Sutton St James is located 1.5km east.



Figure 2.1: Site Location Plan

2.2 Environmental Baseline Conditions

Biodiversity

- 2.2.1 There are no statutory ecological designations located within, or adjacent to the Site. There are no National Nature Reserves, Ramsar Sites, Sites of Special Scientific Interest, Special Areas of Conservation or Special Protection Areas within 10km of the Site.
- 2.2.2 There is a Local Nature Reserve (LNR), 'The Shrubberies', located 7.4km north-east of the Site. Two Nitrate Vulnerable Zones are within 10km of the Site, one 7km west and another 7.4km north-east.

- 2.2.3 A full assessment of the ecological benefits and mitigation measures can be found in the Primary Ecological Appraisal (PEA), supporting surveys, Ecological Impact Assessment (EclA) and Biodiversity Net Gain Plan with Metric submitted as a part of the Application. These documents set out how the Development has been refined and sensitively sited away from habitats to promote ecology and deliver significant biodiversity net gain.

PROWs

- 2.2.4 The following Public Rights of Way (PRoW) are located within the surrounding area:

- ☐ Public bridleway (Flee/7/1);
- ☐ Public bridleway (Flee/8/2);
- ☐ Public bridleway (SuSJ/2/2);
- ☐ Public bridleway (SuSJ/2/3);
- ☐ Public bridleway (Gedy/20/1); and
- ☐ Public bridleway (SuSJ/1/1).

The PDAS provides a detailed explanation of how the Development has been designed with a set back from the nearest bridleway, thereby minimising its impact on this receptor.

Heritage Designations

- 2.2.5 There are no designated heritage assets on or adjacent to the Site.
- 2.2.6 There is a Scheduled Monument located c.285m southeast of the Site, 'Boundary Cross, Old Fen Dike' which is associated with a Grade II Listed Building 'Remains of Cross about 20 metres North West of Cross' located on Old Fen Dike. Another Scheduled Monument 'St Ives Cross' is associated with Grade II Listed Building 'St Ives Cross at Junction of Fisher Gate and Chapel Gate' located 1.4km east of the Site located at the junction of Chapel Gate and Fisher Gate.
- 2.2.7 The Grade II Listed Building 'Sandy Gate Farmhouse' is located 860m south of the site on Sandy Gate. Within the town of Sutton St James, there is a Grade II Listed Building 'Chancel to Church St James' 2.1km east of the Site and Grade II* Listed Building 'Tower to Church of St James' 2km east of the Site.
- 2.2.8 There are no World Heritage Sites, Registered Park and Gardens or Registered Battlefields on or within 5km of the Site.
- 2.2.9 Pre-application consultation with the LPA's archaeological advisor has confirmed that a programme of evaluation trial trenching is required to support the planning application. Discussions in relation to scope and timing are ongoing.

Agricultural Land Classification

- 2.2.10 The Agricultural Land Classification (ALC) system divides agricultural land quality into five grades (from Grade 1 'Excellent' to Grade 5 'Very Poor'), with Grade 3 subdivided into Subgrade 3a 'Good' and Subgrade 3b 'Moderate'. 'Best and most versatile' ('BMV') agricultural land is classified as Grades 1, 2 or 3a.
- 2.2.11 An Agricultural Land Classification survey has been submitted as part of the Application. 41.3 ha of land has been assessed by Soil Environment Services Ltd and comprises the ALC

grades set out below. Roads, access areas and non-agricultural land within the redline boundary were excluded from testing.

- ☐ 2ha of Grade 2 (4.84%)
- ☐ 25.6ha of Grade 3a (61.98%)
- ☐ 13.7ha of Grade 3b (33.18% not BMV).

Flood Risk and Drainage

- 2.2.12 There are multiple unnamed drains within or adjacent to the Site. The Site is bordered to the south, east and west by 4 unnamed drains. Drains within the control of South Holland Internal Drainage Board (IDB) are situated at the following boundaries: northern boundary of the Site; southern boundary of the most northern field within the Site; along a small section of the westernmost part of Bardling's Drove as it intersects the Site; and along parts of the western and southern boundaries. South Holland Main Drain is 250m to the north of the Site. Required IDB access buffers of 9m have been provided in the layout of the Development accordingly, and this is supported by the IDB.
- 2.2.13 According to the UK Flood Map for Planning, the Site is located entirely in Flood Zone 3. This means there is a high probability (0.5% - 1% or higher) of flooding from rivers and sea. The layout accounts for this by raising finished floor levels of equipment out of the maximum flood depths for the relevant flood event.

Air Quality

- 2.2.14 The Site is not located within or close to an Air Quality Management Area (AQMA). There have been no AQMAs declared by South Holland District Council (SHDC) as Local Planning Authority (LPA) and Environmental Health Officers.

2.3 The Development

- 2.3.1 The Applicant is seeking planning permission for the construction and operation of a solar farm and battery energy storage system (BESS), vehicular access, internal access tracks, landscaping, boundary treatment, cabling and associated infrastructure.
- 2.3.2 The Development includes the following:
- ☐ Series of solar PV modules mounted on a piled metal framework (array) which will pivot on an axis at 1.5m so that the modules can tilt and follow the sun. At maximum tilt the array will have a total height up to 2.9m;
 - ☐ 6 Battery modules;
 - ☐ 1 Distribution Network Operator Control Room;
 - ☐ 1 Aux Transformer;
 - ☐ 2 Twin Skid;
 - ☐ 3 Battery Interface Cabinet;
 - ☐ 3 PCSK (BESS) Inverters;
 - ☐ 5 Solar Inverters;

- ▣ 1 Project Control Room (Switchgear);
 - ▣ 1 Water tank to support fire suppression;
 - ▣ Gravel access roads to provide field access and connecting the substation and transformer stations;
 - ▣ Deer fencing (height 2m);
 - ▣ CCTV cameras, facing inwards on circa up to 3m high columns; and
 - ▣ Landscape mitigation through additional vernacular planting.
- 2.3.3 Given that the Site comprises a series of fields, there are multiple existing accesses to the Site. The Development will be accessed via three access points along Bardling's Drove and one on Inley Dove. All four access points are existing.
- 2.3.4 The Development will have an operational lifespan of 40 years, after which it will be decommissioned leaving the land to be farmed again.
- 2.3.5 The Applicant has secured a grid connection from the DNO at South Holland Substation (on Jiggle's Gate to the northeast of the Site). The cabling route will be determined by the DNO who has permitted development rights to install the grid connection cable. It is intended the route will be along existing highway and therefore the principal environmental effects from any cable routing would not be significant and relate to those typically associated with utilities works, being undertaken over a short duration and with limited effects overall.

3 Planning Policy

3.1 Overview

- 3.1.1 The following national and local planning policies are relevant to the Assessment and the nature of the Development.

3.2 National Planning Policy

- 3.2.1 The urgency of the need for substantially greater quantities of renewable energy (including large scale solar) is self-evident given the dramatic step change in government energy policy driven by its declared Climate Emergency to achieve a 100% reduction in greenhouse gas emissions by 2050 (Net Zero). This is a legally binding target as set out in the Climate Change Act 2008 (2050 Target Amendment Order 2019).

National Planning Policy Framework (December 2023)ⁱ

- 3.2.2 The NPPF, revised in December 2023, outlines the planning policies of the Government of the United Kingdom for England. It serves as material guidance for the development of local planning policy documents and is a crucial material consideration in determining planning applications under the Town and Country Planning Act 1990 (TCPA 1990). The policies within the NPPF were primarily formulated with the intention of addressing development projects that have local or regional significance.
- 3.2.3 Chapter 14 'Meeting the challenge of climate change, flooding and coastal change' relates to meeting the challenges of climate change. Paragraph 157 states that the transition to a low carbon future in a changing climate is supported, "it should help to shape places in ways that contribute to radical reductions in greenhouse emissions, minimise vulnerability and improve resilience; encourage the reuse of existing resources, including the conversion of existing buildings; and support renewable and low carbon energy and associated infrastructure."
- 3.2.4 More specifically relating to renewable infrastructure, paragraph 160 explains that to increase the supply of renewable energy, local authorities should ensure renewable and low carbon energy developments are maximised while ensuring adverse impacts are addressed appropriately.
- 3.2.5 Paragraph 163 states that when determining planning applications for renewable and low carbon development, applicants should not be required 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. It goes on to state that local planning authorities should "approve the application if its impacts are (or can be made) acceptable."
- 3.2.6 Chapter 15 relates to conserving and enhancing the natural environment. Paragraph 180 states that planning policies and decisions should contribute to and enhance the natural and local environment by protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils. Paragraph 182 states that great weight should be given to conserving and enhancing landscape and scenic beauty in '*National Parks, the Broads and Areas of Outstanding Natural Beauty which have the highest status of protection in relation to these issues*' (notably the Site is not within a valued or 'designated' landscape in respect of the NPPF).
- 3.2.7 NPPF (paragraph 180) requires planning decisions to recognise the wider benefits from natural capital including the economic and other benefits of the BMV agricultural land. Footnote 62 of the NPPF goes on to say that the availability of agricultural land used for food production should be considered, alongside the other policies in the NPPF, when deciding

what sites are most appropriate for development and that areas of poorer quality land should be preferred to those of a higher quality.

- 3.2.8 However, since the adoption of paragraph 180 and Footnote 62, more recently there has been national shift on the consideration of BMV and more specifically food security. In his statement to the Commons Chamber on 18 July 2024, the energy secretary highlighted a key misconception brought up in debates on ground mounted solar and its threat to farmland:

“Credible external estimates suggest that ground-mounted solar used just 0.1% of our land in 2022. The biggest threat to nature and food security and to our rural communities is not solar panels or onshore wind; it is the climate crisis, which threatens our best farmland, food production and the livelihoods of farmers.”

- 3.2.9 Notably footnote 62 of the NPPF is proposed to be removed in the latest consultation version of the NPPF in 2024.

- 3.2.10 A further proposed change for the NPPF is at paragraph 164 for instance, with the proposed changes showing a greater level of upfront support for renewable energy projects:

“Local planning authorities should support planning applications for all forms of renewable and low carbon development. When determining planning applications for these developments, local planning authorities should:

a) not require applicants to demonstrate the overall need for renewable or low carbon energy, and give significant weight to the proposal’s contribution to renewable energy generation and a net zero future;

b) recognise that even small-scale projects provide a valuable contribution to ~~significant~~ cutting greenhouse gas emissions;

c) in the case of applications for the repowering and life-extension of existing renewable sites, give significant weight to the benefits of utilising an established site”.

- 3.2.11 Chapter 14 ‘Meeting the challenge of climate change, flooding and coastal change’ noted above also addresses how the planning system and developments should account for flood risk. Paragraph 165 explains that developments should be safe for lifetime from flooding and not increase flood risk elsewhere. The NPPF expands on this by requiring a sequential test for developments to guide developments to areas with the lowest risk of flooding. As explained in paragraph 173, sequential tests should demonstrate the following:

“a) within the site, the most vulnerable development is located in areas of lowest flood risk, unless there are overriding reasons to prefer a different location;

b) the development is appropriately flood resistant and resilient such that, in the event of a flood, it could be quickly brought back into use without significant refurbishment;

c) it incorporates sustainable drainage systems, unless there is clear evidence that this would be inappropriate;

d) any residual risk can be safely managed; and

e) safe access and escape routes are included where appropriate, as part of an agreed emergency plan”.

National Planning Practice Guidance (February 2024)ⁱⁱ

- 3.2.12 National Planning Practice Guidance (PPG) is a web-based resource, which brings together planning guidance on various topics. The guidance sets out the importance of planning for renewable and low carbon energy.
- 3.2.13 PPG paragraph 12 (reference ID: 5-012-2014306) states the planning considerations for solar photovoltaic technology. This includes siting systems to receive optimal energy from the sun, finding sufficient area for solar modules, protecting designated areas and the colour, appearance and design of the solar farm. The PPG states that a local planning authority will need to consider ground mounted solar proposals in the context of whether the proposed use of any agricultural land has been shown to be necessary and poorer quality land has been used in preference to higher quality land; that the proposal allows for continued agricultural use where applicable; and/or encourages biodiversity improvements around arrays. This Assessment and other supporting documents with the Application, find the proposals to be in accordance with these factors.
- 3.2.14 PPG paragraph 13 (reference ID: 5-013-20150327) does not set out any requirement for a sequential test for alternative sites (nor does the NPPF), however, the PPG discusses the following planning considerations for local planning authorities in relation to large scale ground-mounted solar farms:
- ☐ Effective use of land;
 - ☐ High quality agricultural land;
 - ☐ Temporary nature of solar farms can ensure installations are removed and the land is restored;
 - ☐ Visual impact and the effect of glint and glare;
 - ☐ Security measures such as lighting and fencing;
 - ☐ Heritage assets;
 - ☐ Landscape and visual impacts; and
 - ☐ Energy generation potential.
- 3.2.15 The PPG also addresses flood risk and the sequential test. Paragraph 24 (reference ID: 7-024-20220825) states that where it is not possible to locate development in low-risk areas, the Sequential Test should compare 'reasonably available' sites "within medium flood risk and then, only where there are no 'reasonably available' sites in low and medium risk areas, development can be located within high-risk areas. Paragraph 28 (ID: 7-028-20220825) defines a reasonably available site as an area suitable for the type of development and available for the time period the development requires.

Overarching National Policy Statement for Energy (NPS EN-1) (January 2024)ⁱⁱⁱ

- 3.2.16 Designated in January 2024, the National Policy Statement (NPS) sets out national policy for energy infrastructure. The overarching NPS (EN-1) sets out the background context, scope and geographical coverage of the 4 parts of the NPS.
- 3.2.17 Paragraph 2.2.1 of EN-1 states that the UK legislated for a 2050 net zero greenhouse gas emissions target through the Climate Change Act 2008 Order 2019. However, in 2020, the UK communicated that greenhouse gas emissions should be reduced from 1990 levels by 68% by 2030. In April 2021, the government legislated the sixth carbon budget which requires the UK

to reduce greenhouse gas from 1990 levels by 78% by 2035. Paragraph 2.2.2 explains that the UK government will continue to update this decarbonisation plan in the coming years.

- 3.2.18 To meet the noted net zero targets, EN-1 sets out goals for decarbonising the power sector, enabling security of energy supplies, and enforcing sustainable development. Paragraph 2.3.3 states that our objectives for the energy system are to ensure our supply of energy always remains secure, reliable, affordable and consistent with meeting our target to cut greenhouse gas emissions to net zero by 2050. EN-1 clearly states the need for new energy infrastructure to increase the supply of clean energy from renewables, nuclear and hydrogen manufactured, as well as developing carbon capture and storage.
- 3.2.19 Paragraph 3.3.62 states that the Government has concluded that there is a critical national priority (CNP) for the provision of nationally significant low carbon infrastructure. Low carbon infrastructure is defined within the policy document as including all onshore and offshore electricity generation that does not involve fossil fuel combustion. Solar is an example of such infrastructure.
- 3.2.20 Paragraph 3.3.63 goes on to state that the urgent need for CNP infrastructure will in general outweigh any other residual impacts not capable of being addressed by application of the mitigation hierarchy. On this basis the Government strongly supports the delivery of CNP infrastructure and advises it should be progressed as quickly as possible.
- 3.2.21 Paragraph 3.3.65 states there is an urgent need for new electricity infrastructure to meet the UK's energy objectives.

Overarching National Policy Statement for Renewable Energy Infrastructure (NPS EN-3) (January 2024)^{iv}

- 3.2.22 The NPS EN-3 is a technology specific NPS regarding renewable electricity generation, including solar PV. EN-3 describes essential renewable sources by stating "solar farms are one of the most established renewable electricity technologies in the UK and the cheapest form of electricity generation".
- 3.2.23 EN-3 describes key factors which should influence site selection and design for solar PV farms (paragraph 2.10.18 to paragraph 2.10.48) which are noted below:
- ☐ Irradiance and site topography;
 - ☐ Network connection;
 - ☐ Proximity of a site to dwellings;
 - ☐ Agricultural land classification and land type;
 - ☐ Accessibility;
 - ☐ Public rights of ways; and
 - ☐ Security and lighting.

- 3.2.24 To expand on agricultural land classification and land type, paragraph 2.10.29 states that:

"While land type should not be a predominating factor in determining the suitability of the site location applicants should, where possible, utilise suitable previously developed land, brownfield land, contaminated land and industrial land. Where the proposed use of any agricultural land has been shown to be necessary, poorer quality land should be preferred to higher quality land avoiding the use of 'Best and Most Versatile' agricultural land where possible".

- 3.2.25 EN-3 expands that development of ground mounted solar arrays is not prohibited on Best and Most Versatile agricultural land and that it is recognised at this scale, applicants' developments will likely use some agricultural land. Although preference is for development to be on suitable brownfield, low and medium grade agricultural land.
- 3.2.26 Technical considerations for solar farms (paragraph 2.10.49 to paragraph 2.10.69) are listed as:
- ☐ Capacity of a site;
 - ☐ Site layout design and appearance;
 - ☐ Decommissioning; and
 - ☐ Flexibility in the project details.
- 3.2.27 Impacts to be considered from a solar development (paragraph 2.10.73 to paragraph 2.11.44) include:
- ☐ Biodiversity, ecological, geological conservation and water management;
 - ☐ Landscape, visual and residential amenity;
 - ☐ Glint and glare;
 - ☐ Cultural heritage; and
 - ☐ Construction including traffic and transport noise and vibration.
- 3.2.28 In terms of flooding and drainage, paragraph 2.10.84 states solar farms impact on drainage is, in general, not significant as panels will drain to the existing ground. Paragraph 2.10.86 states that impact on existing drainage systems and watercourses should be avoided.

3.3 Local Planning Policy

South East Lincolnshire Local Plan 2011-2036 (March 2019)^v

- 3.3.1 South Holland District Council (SHDC) has produced a Local Plan with Boston Borough Council and Lincolnshire County Council, known as the South East Lincolnshire Local Plan (SELP). The Plan identifies land and allocates sites for development, as well as protects areas from development for historic or environmental importance. The following policies are relevant to the Development and the Assessment:
- ☐ **Policy 1 Spatial Strategy:** The policy sets out the development hierarchy for the district. Part D allows for development to be permitted where it meets the sustainable development needs of the area in terms of economic, community or environmental benefits.
 - ☐ **Policy 2 Development Management:** Developments should be sustainable in relation to size, design, material and resource usage, vehicle generation levels, drainage and flood risk, and enhancement of natural habitats and historical assets.
 - ☐ **Policy 3 Design of New Development:** Developments should not be inappropriately designed in comparison to the local area. Developments should consider mitigation of flood risk, using locally sourced building materials, and protecting best and most versatile soils. Hedgerows and trees should be incorporated and enhanced.

- ▣ **Policy 4 Approach to Flood Risk:** Developments within Flood Zones 2 and 3 will be permitted if there are no available areas at a lower risk of flooding, the infrastructure is essential, and the application can be supported with a flood risk assessment which includes allowances made for climate change.
- ▣ **Policy 28 The Natural Environment:** Internationally designated sites should not be harmed by developments, unless there are no alternative sites that could cause less or no harm, the benefits of the development outweigh the adverse impacts and suitable mitigation is implemented. Development proposals should provide a net gain in biodiversity.
- ▣ **Policy 29 The Historic Environment:** Developments should conserve and enhance the character of designated and non-designated heritage assets, such as listed building, conservation areas, archaeology and scheduled monuments and registered parks and gardens.
- ▣ **Policy 30 Pollution:** No adverse impacts to health and safety of the public, amenities of the area, and the natural or historic environment from air, noise, light, land or water pollution.
- ▣ **Policy 31 Climate Change and Renewable and Low Carbon Energy:** For renewable developments, excluding wind energy, there should be no significant harm to:
 - Visual amenity, landscape character or skyline;
 - Residential amenity in respect of noise, fumes, odour, vibration, shadow flicker, sunlight reflection, broadcast interference and traffic;
 - Highway safety;
 - Agricultural land take;
 - Aviation and radar safety;
 - Heritage assets; and
 - The natural environment

Following decommission, infrastructure should be removed, and the site should be reinstated.

4 Methodology

- 4.1.1 There is no defined methodology for the assessment of alternative sites set out in local or national planning policy or guidance. We have informed our methodology from the NPPF, PPG and Local Plan, as well as alternative site assessments from approved local solar developments including that for the previous approval of a solar farm on the Site (ref. H20-0764-14), the Bicker Fen Solar Farm project (which is in South Holland) (ref. H04-0849-22); Mallard Pass NSIP (discussed further below in this document); and, recent precedents which were decided by the Planning Inspectorate to show application of relevant policies and guidance at national level. Such precedents include Longfield Solar Farm (Planning Inspectorate Ref: EN010118) - this Development Consent Order (DCO) was consented by the Government on 26 June 2023).
- 4.1.2 The Applicant made contact with SHDC in early 2024 to seek officers' views on what should be scoped into the assessment; however, no advice on this was given other than sequential tests for flood risk should apply to the whole district. Consequently, the assessment has been informed by the following stages of investigation:
- Stage 1: Defining the Study Area
 - Stage 2: Defining Site Selection Criteria
 - Stage 3: Assessment of Alternative Sites
 - Stage 4: Assessment of the Site
- 4.1.3 The first stage of the Assessment is to define a reasonable study area in which alternative sites can be identified and assessed.
- 4.1.4 Connection to the national grid is used as the principle starting point for defining the study area as this is fundamental to the deliverability of a solar farm and the required renewable energy.
- 4.1.5 The need to achieve net zero would not be addressed if schemes were undermined by unreasonable connection expectations which do not account for the complexities (including the greater impact to local communities, associated with lengthier cable connections) and subsequent costs associated with connection. Consequently, as explained later in this document, it is not proportionate or reasonable for the Applicant to consider the entire district given that the key locational factor for a solar farm is its point of connection to the grid; nor is it set out in national and local policy or guidance. This is a material point which has been noted in SHDC Officer reports, as well as planning appeal decisions and DCO decisions most recently - APP/V2635/W/23/3323065, dated 5th March 2024.
- 4.1.6 The second stage in the Assessment is to develop appropriate site selection criteria informed by national and local planning policy and guidance. The site selection criteria also explain relevant commercial considerations as well as operational requirements. The criteria are established by specific requirements during the operational phase and the site selection criteria has been split into operational requirements and environmental considerations. The selection criteria reflect the PPG, NPPF and NPS considerations.
- 4.1.7 The third stage of the Assessment assesses previously developed land (PDL), land of lower agricultural quality and land at lower flood risk within this study area. This stage demonstrates that the site selection process is in accordance with NPS EN-3 and SELP Policies 1, 4 and 31.
- 4.1.8 If any sites are identified for potential solar development in Stage 3, they are assessed against site selection criteria to determine the viability of the site in Stage 4.

- 4.1.9 In the final stage of the Assessment, the assessment of the chosen Site will be completed, which will identify the benefits of the site.
- 4.1.10 The above process is considered to be robust and represent, alongside the wider application and information provided, compelling evidence for the location of the Development.

5 Defining the Study Area

5.1 Overview

- 5.1.1 To undertake the Assessment, an appropriate and reasonable study area was defined. There is no national or local planning policy which provides guidance on the size of the search area when assessing alternative sites.
- 5.1.2 The starting point for setting the search area is the location of the grid connection point given that this is the main locational factor for solar farm development. The availability of the capacity on the national grid is not only a key driver from a locational perspective but can also be critical in terms of timescale for the delivery of the project.
- 5.1.3 Requiring consideration of other points of connection does not account of the queuing system, and subsequent backlog which would delay the delivery of the renewable energy and material benefits.
- 5.1.4 These challenges with grid connections for renewable developments are recognised by the UK Government. The Environmental Audit Committee published a report in May 2024^{vi} stating that the “*first-come, first-served approach*” of procuring a grid connection has led to a “*long queue of energy projects awaiting connection. Combined, these projects could theoretically generate almost 400 GW of electricity*”.
- 5.1.5 Furthermore, NPS EN-3 states in paragraph 2.10.24 that “*connection voltage, availability of network capacity, and the distance from the solar farm to the existing network can have a significant effect on the commercial feasibility of a development proposal*”. Therefore, the availability of grid connection and the ability to connect to the grid is a material consideration in the site selection process.
- 5.1.6 A recent application of the material points was set out in the approved appeal case of APP/V2635/W/23/3323065 (paragraphs 41-44), dated 5th March 2024 for a solar development in Wisbech, Norfolk:

“In this respect, the Appellant has undertaken a site selection process. This is based on the logical approach of contacting UK Power Network, who are responsible for large parts of the electricity infrastructure network, and identifying a Point of Connection (PoC). One such point was identified at Walsoken substation. Once capacity was identified the Appellant then sought to identify areas within a 3.5km search area. This sought to identify land for use as a solar farm, and assessing its potential within this search area by considering factors such as visual impacts, agricultural land classification, and ecological considerations.

I acknowledge that the Council have criticised the narrowness of this search area and basing it on this PoC over others that may exist locally. The Council considers that for it to meet the threshold of ‘compelling evidence’ the site selection process should have considered other PoC within the area. However, such an approach is akin to a form of ‘sequential test’. That is not what policy at either local or national level requires; and neither main party was able to direct me to where such a requirement exists.

I find that the Appellant has adopted a pragmatic and proportionate approach in this case. A PoC, and one with capacity, which is fundamental to getting the energy from the solar farm into the National Grid, is a logical starting point in order to inform the potential location(s) of energy creating development.”

- 5.1.7 The Applicant has made a successful application for a grid connection to the DNO and has secured a connection with capacity at South Holland BSP Substation (located on Jiggles Gate).

- 5.1.8 Subject to several factors, including planning permission, the date of connection can be brought forward. Therefore, in the event of planning permission the Applicant will undertake all reasonable steps to bring the connection date forward, noting that this relies upon third parties.
- 5.1.9 The agreed connection point and capacity secured is therefore the reasonable starting point from which the search for alternative sites emanates.
- 5.1.10 There is no specified radius that must be considered when conducting an alternative site assessment. The previously approved solar farm on the Site set a 3km radius for its assessment of alternative sites; and it is noted that the Bicker Fen Solar Farm application in South Holland (H04-0849-22), approved in July 2023, set a 4km radius search area.
- 5.1.11 The Longfield Solar Farm in Essex, and NSIP scale solar project (Planning Inspectorate Ref: EN010118) was granted development consent in 2023, with a 5km radius search area set for its assessment of alternative sites, which both the Inspector and Secretary of State were satisfied with. Obviously, the development economics of an NSIP scale scheme are different.
- 5.1.12 The Applicant would typically view a 3km radius as a viable connection distance but to demonstrate robustness in the Application, a 6km radius from the substation was chosen, exceeding all examples cited above.
- 5.1.13 Further extending the search area is not considered necessary for the reasons given above, or reasonable given the radius beyond 6km would lead to additional costs of cables, increased environmental impacts of their installation, mitigation of said impacts and numerous landowner negotiations, making the project unfeasible.
- 5.1.14 This is supported by NPS EN-3 paragraph 2.10.25 which explains that,
- “to maximise grid infrastructure, minimise disruption to existing local community infrastructure or biodiversity and reduce overall costs, applicants may choose a site based on nearby available grid export capacity. Going too far from a suitable grid connection can lead to power loss of transferring the electricity generated to the grid. Also, increased cabling and labour costs would make the project uneconomical”.*
- 5.1.15 Whilst there is no set guidance/policy on the matter we consider a 6km radius from the agreed point of connection at South Holland Substation located on Jiggles Gate to be justified.

6 Site Selection Criteria

- 6.1.1 The site selection criteria listed in Table 6.1 below relate to environmental constraints, planning considerations, operational requirements and technical design considerations as listed in NPS EN-3 and Policy 31 'Climate Change and Renewable and Low Carbon Energy' of the Local Plan.
- 6.1.2 The extent of the search area and defined site selection criteria are then applied to assess the suitability of brownfield land for accommodating the Development. If no suitable brownfield sites are available, consideration is then given to PDL. As defined in the NPPF, PDL also known as brownfield land, refers to land that has already been built upon but is no longer in use. Examples include abandoned industrial sites.
- 6.1.3 Following this, if non-agricultural sites are not available, agricultural sites accommodating no or little BMV are considered; and finally, consideration is given to BMV land if no other sites are suitable.

Table 6.1 Site Selection Criteria

Operational Requirements	Suitable location which benefits from high levels of sunlight	Potential sites should be contained within an area of the UK that receive high levels of solar radiation in accordance with the Solar Photovoltaic Power Potential UK map^{vii}. High solar radiation ensures high power output of the solar modules and this efficiency reduces the extent of land needed for the development whilst maximising renewable energy generation.
	Suitable size, shape, orientation and topography	The Development seeks planning permission for a solar farm of 20 MW and 10 MW BESS. In order to deliver a scheme of this scale, the Applicant requires a site area of a minimum of approximately 35ha. Solar, on average, requires 2.5/3 acres per MW, then there is further additional land needed for inverters, transformers, control rooms and access. In this instance too, space for BESS is needed. The size requirement is also impacted by physical obstructions and constraints, such as trees or watercourses which also require stand offs. A fragmented site containing constraints such as trees and watercourses in which the development footprint would be divided across multiple fields, would further increase the size of the site area needed for a 20 MW of solar farm and 10 MW BESS facility.

		Additionally, each site would require specific individual infrastructure giving rise to increased project capital expenditure due to higher construction costs. As such, a site that is contained within one single parcel is preferred given it is more viable and therefore deliverable in line with NPS EN-3 states in paragraph 2.10.24.
	Proximity to settlements	If possible, sites should avoid being in close proximity to dwellings and settlements to reduce impacts on visual amenity, noise and impacts of glint and glare, and shading.
	Accessibility for construction phase and maintenance activities	The site and associated access roads must be appropriate for the construction phase, operational and decommissioning phases to allow for vehicles to enter and leave the site using the public road network. This is particularly relevant given the Heavy Goods Vehicles (HGVs) used in the construction phase.
	Suitable for the entire construction, operational and decommissioning phase	The site must be available for the entire construction, operation, decommissioning phases of the Development in order to be considered viable. The operation phase of this Development will last 40 years.
	No interference with the allocations of the South East Lincolnshire Local Plan	Appendix 5 of the Local Plan details a list of housing and employment allocations. The Development location should consider these allocations to ensure no significant individual or cumulative effects or impacts to the operation of these allocations and enable SHDC to meet their housing and further policy targets.
Environmental Considerations	Sensitive areas as classified by the Environment Impact Assessment Regulations 2017 (EIA)	EIA sensitive areas are classified as: ▪ Land notified under section 28(1) (Sites of Special Scientific Interest) of the Wildlife and Countryside Act 1981(21) ▪ A National Park within the meaning of the National Parks and Access to the Countryside Act 1949; ▪ The Broads; ▪ A property appearing on the World Heritage List kept under article 11(2) of the 1972 UNECO Convention for the

		Protection of the World Cultural and Natural Heritage; ▪ A Scheduled monument within the meaning of the Ancient Monuments and Archaeological Areas Act 1979; ▪ An Area of Outstanding Natural Beauty designated as such by an order made by Natural England under section 82(1) (areas of outstanding natural beauty) of the Countryside and Rights of Way Act 2000(26); and ▪ A European site within the meaning of regulation 8 of the Conservation of Habitats and Species Regulations 2010(27) Projects should avoid being in proximity to the listed designations to avoid adverse impacts that arise within sensitive areas.
	Flood Risk	Potential projects in high-risk flood areas should be avoided where possible. In cases where a development is necessary, solar panels can adapt to flooding through design mechanisms such as raising infrastructure. Preference is given to lesser areas of flood risk in line with the sequential test but flood risk does not preclude development as flood risk can still be managed as part of the development.
	Landscape and Visual Impacts	The physical features of the landscape as well as the landscape character of the site and the surrounding area can be affected by developments. Local and national planning policy ensure developments are carefully designed to reduce such impacts. The Strategic Landscape Capacity Study for South Holland District Council (July 2003)^{viii} will be used to identify and define landscape character. Notably, the Site for this Development is not within a 'designated' landscape such as an AONB as per NPPF paragraph 180.
	Cultural Heritage	Developments should ensure there are no unacceptable impacts on heritage assets such as scheduled monuments or listed buildings. If an impact on heritage assets is

		identified, mitigation measures should be considered to reduce any effect.
	Ecological	Habitats can be lost or gained during the lifespan of a development. Similarly, species can be disturbed from the development or from habitat degradation. Proposed projects should avoid areas inhabited by important species.

6.1.4 The site selection criteria above is mapped within the defined search area on the following plans:

- ☐ Appendix A: Constraints Plan
- ☐ Appendix B: Agricultural Land Classification Plan
- ☐ Appendix C: Flood Zones Plan
- ☐ Appendix D: Topography Plan

7 Assessment of Alternative Sites

7.1 Overview

- 7.1.1 Paragraph 2.10.29 of NPS EN-3 encourages applicants to utilise, where possible, PDL, brownfield land, contaminated land, industrial land and lower grade land over Best and Most Versatile agricultural land (BMV). Alternative sites for the Development were searched by reviewing available commercial rooftops, PDL and agricultural land of lower grades. As mentioned within the site selection criteria, these sites need to measure 35ha in order to ensure the development is deliverable and viable as per NPS EN-3 states in paragraph 2.10.24. Alternative sites measuring at least 35ha were taken forward in the assessment and notwithstanding the issues outlined above, to remain robust, those of similar size albeit fragmented were also taken forward.

7.2 Commercial Rooftops

- 7.2.1 A search for commercial rooftops within the established search area was completed. There were no large commercial spaces which measured close to 35ha to facilitate the Development.
- 7.2.2 Multiple commercial rooftops undermine the feasibility of a solar development. If the Development was required to be split across multiple rooftops of varying size and distance from each other, it would:
- a) undermine the power output and efficiency, requiring a greater space for the same output;
 - b) increase the infrastructure needed to connect the components, giving rise to increasing complexity with landowners and building tenants;
 - c) impact delivery and maintenance; and
 - d) could impact adjacent buildings and receptors if located in a built-up area, which overall, would increase the costs and impact feasibility.
- 7.2.3 **On this basis, it is considered reasonable to conclude that locating and combining several commercial rooftops to meet the equivalent power output would not be viable for the Development and as such, rooftops were not considered further in the Assessment.**

7.3 Previously Developed Land, Non-Agricultural Land and Brownfield Sites

- 7.3.1 As detailed in the NPPF, PDL is defined as *“Land which is or was occupied by a permanent structure, including the curtilage of the developed land (although it should not be assumed that the whole of the curtilage should be developed) and any associated fixed surface infrastructure. This excludes:*
- ☐ *Land that is or was last occupied by agricultural or forestry buildings*
 - ☐ *Land that has been developed for minerals extraction or waste disposal by landfill where provision for restoration has been made through development management procedures;*
 - ☐ *Land in built-up areas such as residential gardens, parks, recreation grounds and allotments; and*
 - ☐ *Land that was previously developed but where the remains of the permanent structure or fixed surface structure have blended into the landscape”.*

- 7.3.2 Appendix B 'Agricultural Land Classification Plan' shows that the defined search area is mostly agricultural land. There are settlements which comprise permanent structures in addition to agricultural land, including Holbeach, Sutton St James, Holbeach St Johns, Whaplode St Catherine, Fleet Fen and Whaplode Fen.
- 7.3.3 **There is no PDL meeting the definition of the NPPF within the search area which could facilitate the scale of the Development and therefore this has been discounted from the Assessment.**
- 7.3.4 A search of SHDC's Brownfield Land Register 2023¹ was completed to identify any suitable brownfield sites within SHDC's administrative area. The brownfield sites ranged from 0.03 ha to 2.58 ha which are not large enough for the Development proposed. A smaller development would not realise the potential benefits from the agreed connection and secured capacity.
- 7.3.5 **On this basis, there are no suitable alternative sites on the SHDC Brownfield Land Register at the time of writing within the defined search area and, consequently, such will not be considered further in the Assessment.**

7.4 Lower Grade Agricultural Land

- 7.4.1 As commercial rooftops, PDL, non-agricultural land and brownfield sites have been shown to not be suitable alternatives, a review of agricultural land with consideration of its ALC grading was undertaken.
- 7.4.2 The quality of agricultural land is graded from Grade 1 (highest quality agricultural land) to Grade 5 (poorest quality agricultural land). Grades 1-3a are classified as Best and Most Versatile land. The quality of agricultural land is graded as follows:
- Grade 1: excellent quality agricultural land;
 - Grade 2: good quality agricultural land;
 - Grade 3a: good to moderate quality agricultural land;
 - Grade 3b: moderate quality agricultural land;
 - Grade 4: poor quality agricultural land; and
 - Grade 5: very poor-quality agricultural land.
- 7.4.3 Appendix B 'Agricultural Land Classification Plan' shows the grades of agricultural land within the established search area.
- 7.4.4 According to Department for Environment, Food & Rural Affairs (DEFRA) and Natural England ALC Dataset, within South Holland District Council there is approximately 72,812 ha of Grade 1, 2 and 3 agricultural land in the SHDC area, occupying nearly 89% of the total area.
- 7.4.5 By grade there is 42,837 ha of Grade 1, 29,650 ha of Grade 2 and 325 ha of Grade 3. The dataset does not split Grade 3 land into 3a or 3b and therefore it cannot be concluded exactly how much BMV is within SHDC area.

¹ [Brownfield Land Register - South Holland District Council \(sholland.gov.uk\)](https://www.sholland.gov.uk/brownfield-land-register)

7.5 Assessment of possible Agricultural Land and preference of lesser grade land

- 7.5.1 The data from DEFRA and Natural England identifies all of the land within the search area as Grade 1 and Grade 2. It is reasonable to assume that the data from DEFRA and Natural England is broad in its coverage and assessment and therefore does not identify lower agricultural grades of 3a and 3b present within the search area. However, it would not be plausible or proportionate to test the precise agricultural grades of the entirety of the 6km search area to determine whether the dataset is entirely accurate.
- 7.5.2 The previous permission at the Site (planning reference H20-0764-14) was supported by an assessment of the agricultural land grading. This evidenced that this Site was predominantly lower grade land when considered in the wider context of the DEFRA and Natural England data. On this basis, given the national policy and guidance approach seeking preference to use lesser ALC graded land and the point of connection fixing the search area, it is a reasonable approach to consider the precedent site and its surrounds for its suitability in siting the Development.
- 7.5.3 A further consideration was that the approved permission (planning reference H20-0764-14) was also supported by an assessment of alternative sites. This assessment was found acceptable, sufficiently justifying the use of the site, noting the agricultural grading, for solar development. The assessment search area was across an area with a 3km wide radius around South Holland Substation at Jiggles Gate. Our assessment is again fixed by the same substation, but the search area extends to a 6km radius for additional robustness.
- 7.5.4 Overall, the submitted ALC Survey, confirms that the Site contains mostly medium grade land with:
- 2ha of Grade 2 (4.84%)
 - 25.6ha of Grade 3a (61.98%)
 - 13.7ha of Grade 3b (33.18% not BMV).
- 7.5.5 Given that the search area is otherwise entirely Grade 1 and Grade 2 as per the DEFRA and Natural England data set, the Site is 95% lesser graded (3a and 3b) agricultural land. This is in compliance with national policy and guidance on the siting of large-scale solar development.
- 7.5.6 A material point in this instance is that the Site was evidenced to be lesser graded land via a precedent application which was approved, accepting the conclusions of that assessment of alternative sites and use of agricultural land. This then was a reasonable starting point, when connection and capacity was agreed at the same substation.
- 7.5.7 On the basis of the above, the use of agricultural land and BMV is considered to be necessary in accordance with national policy and guidance, and the Site is preferable given the preponderance of higher graded land in the study area.**

7.6 Flood Risk

- 7.6.1 The Flood Zones Plan (Appendix C) demonstrates the majority of the defined search area is within Flood Zone 3. There are pockets of the search area with decreased flood risk in Flood Zone 2 concentrated in the northwest of the study area.
- 7.6.2 However, these areas are not considered suitable because: individual areas alone do not measure 35 ha undermining feasibility and adding complexity; they are located in an area of Grade 1 Agricultural Land and there is lesser graded land in the search area; they are located immediately adjacent and around Whalpolde, Whalpolde Fen and Whalpolde St Catherine

settlements; they are in proximity to an allocated Local Wildlife Site; and, one has a scheduled monument within it. On this basis, they would conflict with policy and guidance on agricultural land, and likely give rise to further impacts in terms of the considerations set out.

7.6.3 Additionally, solar farm developments are noted as essential infrastructure in PPG and can be developed within areas of higher flood risk, subject to satisfying an Exception Test.

7.6.4 On this basis, it is considered there are no more suitable sites of lesser flood risk satisfying the Sequential Test for flood risk, notwithstanding footnote 56 of the NPPF.

7.7 Other Site Selection Criteria within Search Area

7.7.1 As previously mentioned, the grade of agricultural land is not the only factor to consider in the siting of solar developments. Other environmental considerations are required to be taken into account as per PPG Paragraph 013, such as heritage, ecology and topography. Lower grade land (Grade 2 in this case) within the search area has therefore been assessed for any obvious spatial constraints.

a) Topography

7.7.2 The Topography Plan (Appendix D) demonstrates the Site is 0.7m to 2.3m above AOD, indicating the flatness of the area. There is no unsuitable location in terms of topography within the study area.

b) Heritage, Landscape and Visual impact

7.7.3 The Constraints Plan (Appendix A) shows that there are several scheduled monuments, listed buildings, and multiple PProW through the Grade 2 land in the study area.

7.7.4 There are no designated heritage assets within, underneath or immediately adjacent to the Site. The Site is not located within any statutory landscape designations nor is it a 'valued landscape' as per paragraph 180 of the NPPF. The Development addresses its spatial and physical context with regards to heritage and visual impact. It is considered no unacceptable impacts arise from the Development on the Site.

7.7.5 On this basis, it is reasonable to conclude that there is no preferable site within the search area with regards to Heritage, Landscape and Visual Impact considerations.

c) Ecology

7.7.6 The Constraints Plan (Appendix A) identifies the only designated ecological constraint to be buffers for Special Protection Areas which are located outside of the defined search area. Therefore, there are no ecological constraints presented within or close to the search area.

7.7.7 There are no statutory ecological designations located within or adjacent to the Site. There are no National Nature Reserves, Ramsar Sites, Sites of Special Scientific Interest, Special Areas of Conservation or Special Protection Areas within 10km of the Site.

7.7.8 Whilst there are Local Wildlife Sites within the search area, they are not located within immediate proximity to the Site.

7.7.9 On this basis, the Site does not give rise to any site-specific ecological impacts beyond what would arise on other sites in the search area.

7.8 Conclusion

- 7.8.1 The environmental and operational constraints mapped within the above plans demonstrate that all alternative sites have been considered and discounted from the assessment based on reasonable conclusions.**
- 7.8.2 No alternative sites will be brought forward in the assessment out of the commercial rooftops, PDL, non-agricultural land, brownfield sites, lower flood risk or lower grade agricultural land. Therefore, the next section assesses the specific considerations of the chosen Site.

8 Assessment of the Site

8.1.1 The site selection criteria have been used to assess the chosen Site in Table 8.1. The assessment provides details regarding operational requirements and environmental considerations of the Site and how the Development addresses these.

Table 8.1: Assessment of the Site

Operational Requirements	Suitable location which benefits from high levels of sunlight	The Site benefits from a photovoltaic power potential of 2.6 to 2.8 kWh a day or 949 to 1,022 kWh a year. This indicates levels of sunlight at the Site are suitable for optimal solar PV energy production.
	Suitable size, shape, orientation and topography	The Site is of 44.2 ha and comprises 4 fields within a single ownership with whom the Applicant has an agreement for 40 years. On this basis, the Site is considered readily available. Whilst the Site is intersected by Bardling's Drove and several drains, the Site is otherwise relatively clear of vegetation and obstructions. These features of land drains and roads fragmenting sites are considered typical of the search area. Ultimately, there is no obstruction on a scale that would result in the Development not being viable. On the basis of the above, the Site is considered not overly fragmented and does not extend over multiple parcels which would otherwise have implications for delivering the Development. The topography of the Site does not cause challenges in the positioning and orientation of the PV panels as shown in Appendix D.
	Proximity to settlements	The Site is within a spatial context where it has no immediate adjacent settlements as defined in the Local Plan, the closest being Sutton St

		James, its centre 1.5km east of the Site. Whilst there are sporadic dwellings in proximity to the Site, there are existing physical elements or vegetation which limit the relationship between the Site and receptors, and where this is not existing the Development steps back sufficiently or proposes additional landscaping. On this basis, the Site is not within proximity to any settlements and residential amenity will not be unacceptably impacted by the Development.
	Accessibility for construction phase and maintenance activities	The Site is comprised of arable fields currently used for farming. The Site has several existing accesses which support farming and facilitate large vehicle movements associated with this use. The wider highway network supports a range of vehicles most commonly for farming given the area, which includes bulk haulage and large tractors/equipment vehicles. The Development will be accessed by 4 accesses all of which are existing. Three accesses will be from Bardling's Drove and a further access from Inley Drove to the north of the Site. The proposed use of existing access points provide viable access for HGVs to enter and exit the Site from the wider road network. The wider road network is suitable for vehicles associated with farming, so there is not expected to be any unacceptable impacts arising and the wider road network

		enables access from the strategic road network to the Site via mostly routes of A and B classified roads during the construction phase.
	Suitable for the entire construction, operational and decommissioning phase	The Site comprises part of the wider holdings of RJ Wright Farms. RJ Wright are looking to diversify their farm business in response to modern pressures on farming, making the farm more resilient and sustain ongoing food production and operations, which provide existing jobs. This point is expanded on below. On this basis, the Site is available and suitable for the duration of the entire project from construction, operation to decommissioning phase where it can be readily turned back into arable land.
	No interference with the allocations of the South East Lincolnshire Local Plan	The Site is not within or adjacent to any areas allocated for Development within the Local Plan.
Environmental Considerations	Sensitive areas as classified by EIA regulations	The Site does not comprise land which is in part, fully within or adjacent to any statutory designations classified as 'sensitive areas' within the EIA Regulations 2017. This is confirmed by the plan contained at Appendix A.
	Flood Risk	As identified in Appendix C, the Site is located within an area of higher flood risk assessed to be Flood Zone 3. This Assessment has outlined why there are no reasonably available suitable sites within an area of lesser flood risk. This is considered to show compliance with the Sequential Test for flood risk, notwithstanding footnote 56 of the NPPF. Further to this, the Development will be subject to the Exception

		Test. Appropriate mitigation measures in accordance with local and national planning policy have been provided which involves raising the finished floor levels of essential infrastructure above the maximum flood depths of the relevant flood event. Please see the submitted Flood Risk Assessment for further details on these measures.
	Landscape and Visual	The Site is not located within any statutory landscape designations nor is it a 'valued landscape' as per paragraph 180 of the NPPF. The Site is located within the 'Peaty Fens Landscape Character Type' which is defined as flat topography dissected by rivers and drains. Visual impacts are expected from Bardling's Drove which crosses through the centre of the Site. The red line boundary of the Site has been reduced to increase the distance from nearby receptors as part of the iterative design process. Further to this, landscaping is proposed to further limit impacts and deliver ecological and biodiversity net gain. Overall, the Development does not give rise to unacceptable impacts in terms of landscape and visual matters. This makes the Development acceptable in this regard.
	Cultural Heritage	There are no designated heritage assets within, underneath or immediately adjacent to the Site. A programme of trial trenching is being agreed with Lincolnshire County Archaeologist.

		The closest asset is the 'Boundary Cross, Old Fen Dike' Scheduled Monument located 260m east of the Site. The setting of this Scheduled Monument will be protected by an adequate landscape strategy and no unacceptable harm is considered to arise from the Development.
	Ecological	There are no statutory ecological designations located within or adjacent to the Site. There are no National Nature Reserves, Ramsar Sites, Sites of Special Scientific Interest, Special Areas of Conservation or Special Protection Areas within 10km of the Site. The Site was pulled back from the South Holland drain to the north given its ecological value. The Development provides enhancement of the drains via minimum buffers and delivery of grassland on site improving foraging for wildlife, and skylark mitigation and monitoring supported by Lincolnshire Wildlife Trust. Overall, there will be the delivery of significant BNG as follows: 53.67% net gain for area habitats 16.75% net gain for watercourse habitats; and, 195.03% for hedgerows habitats.

- 8.1.2 The major constraints of the Development include the grid connection point, flood risk and BMV agricultural land. As explained above, the Development has been designed to address specific site constraints and implement adequate mitigation measures accordingly.

8.2 Design and Mitigation Measures

Grid Connection

- 8.2.1 The connection to the national grid is vital and controls the location and subsequent scale of a development. It is noted by National Policy Statement EN3 as a key factor in site selection. The Applicant has an agreed connection and secured capacity at South Holland Substation on Jiggles Gate.
- 8.2.2 Without the grid connection the key benefits of the Development would not be delivered. These are:
- The contribution of 20 MW export capacity of clean renewable electricity generation to help meet both national and local renewable energy targets. This provides a carbon dioxide displacement of **7,212 tonnes per annum** compared to the same energy generated from fossil fuel sources. This is being provided at a time of a 'Climate Emergency'.
 - The storage of 10 MW of energy helping to support the resilience of the National Grid; delivering power at peak times, maximising the impact of the renewable energy generated onsite.
 - The generation of clean renewable energy exported to the local electricity distribution network providing the equivalent electricity every year as used by **12,015 average households** per annum.

Use of BMV Agricultural Land

- 8.2.3 The Assessment shows that the use of agricultural land is out of necessity and on comparatively lower grade agricultural land, which is in line with national and local policy.
- 8.2.4 As the Site comprises BMV land, the impact on the availability of agricultural land for food production has been assessed.
- 8.2.5 As a starting point, there is no permanent loss of agricultural land, and the land can continue to be grazed. Suitable conditions can be applied to ensure the land is returned to its original condition at the end of the 40-year consent and that best practice for the sustainable use of soils on construction sites will be complied with to preserve soil quality. Notwithstanding this, as noted, there is the opportunity to graze livestock during the operation of the solar farm which will maintain the land in agricultural use. This approach results in dual use of the land for both ongoing agriculture and creation of renewable energy.
- 8.2.6 NPPF (paragraph 180) requires planning decisions to recognise the wider benefits from natural capital including the economic and other benefits of the BMV agricultural land. Footnote 62 of the NPPF goes on to say that the availability of agricultural land used for food production should be considered, alongside the other policies in the Framework, when deciding what sites are most appropriate for development and that areas of poorer quality land should be preferred to those of a higher quality.
- 8.2.7 However, more recently there has been national shift on the consideration of BMV and more specifically food security. In his statement to the Commons Chamber on 18 July 2024², the Secretary of State for Energy Secretary and Net Zero highlighted a key misconception brought up in debates on ground mounted solar and its threat to farmland:

² <https://hansard.parliament.uk/Commons/2024-07-18/debates/1B2ABCB9-1455-4C86-8E2F-5E763B38E888/CleanEnergySuperpowerMission>

“Credible external estimates suggest that ground-mounted solar used just 0.1% of our land in 2022. The biggest threat to nature and food security and to our rural communities is not solar panels or onshore wind; it is the climate crisis, which threatens our best farmland, food production and the livelihoods of farmers.”

- 8.2.8 In the wider context of the South Holland District, Table 8.2 shows a breakdown of agricultural land in this area:

Table 8.2: Agricultural Land Quality of the Site and South Holland District Council

ALC Grade	Total amount (ha) in South Holland District	Total Amount (ha) in the Site	% of ALC Grade Temporarily Lost
1 Excellent	42,837	0	0%
2 Very Good	29,650	2	0.00007%
3a Good	325	25.6	12.1%
3b Moderate		13.7	
4 Poor	974	0	0%
Total	73,786	41.3	0.0006%

(Source: Natural England ALC GIS data set)

- 8.2.9 The Development includes the use of 41.3 ha of the total 73,786 ha of agricultural land in South Holland District, which equates to only 0.0006% of the total (Source: Natural England ALC GIS data set). The Development will be temporary for a period of 40 years and there is no compelling evidence stating that temporarily removing this portion of agricultural land would have a significant impact on food production.
- 8.2.10 Food production is not determined solely by the ALC grade of the land, and whether or not it is BMV. Food production requires inputs from the farmer, which is a business, and subject to market forces and volatility like any other sector.
- 8.2.11 Firstly, the quality of the BMV land on Site will be protected through the application of DEFRA's Code of Practice for Sustainable Use of Soils on Construction Sites. Such practices include avoiding construction in wetter periods to reduce the risk of soil compaction, protecting the quality of soil.
- 8.2.12 The resting of the land and inclusion of biodiversity improvements results in benefits to the soil as noted on other solar schemes that have been approved at appeal. The granted solar appeal for Ledwyche Solar (Ref: APP/G2713/W/23/3315877) found that the change of use from arable to pastoral and lack of fertilizers associated with this change was beneficial to soil health. The granted DCO at Little Crow Solar (Ref: EN010101) also identified a moderate beneficial effect for the quality of soil as intensive cropping is replaced with grass.
- 8.2.13 On this basis, the ALC as a factor in the production of food will be maintained, protected and rested for use by future generations to produce food. The 'asset' of the soil will not be lost or negatively impacted overall.
- 8.2.14 Secondly, UK farms have faced unprecedented challenges in recent years due to increased production costs exacerbated by the war in Ukraine, extreme weather and changes to the subsidy framework. To ensure continued food production, farms must be maintained and be resilient in the face of these challenges.

- 8.2.15 The land which comprises the Site is currently farmed by R J Wright Ltd, who are a local farming business in South Holland. R J Wright farms some 230ha of land in total across the local area producing food and supporting the local economy through farming, job creation and working with wider businesses associated with farming in the supply chain.
- 8.2.16 The farm has, much like most farms, experienced significant business pressures. Recently, with growing costs and cheap imports, to keep the business viable and sustain its primary objective as a farm producing food, they are looking to diversify their revenue streams.
- 8.2.17 The Site represents 18% of the wider farm holding. The Site is the least productive land, by virtue of it being subject to an ongoing and persistent blackgrass problem. Blackgrass is a native annual grass weed that occurs throughout the UK but is found mainly in the cereal growing areas of southern and eastern England. It is one of the most problematic and damaging agricultural weeds in Western Europe. It thrives on heavy land, particularly where drainage is poor. It undermines crops by occurring at high densities and competing with the crop. It has developed resistance to a range of herbicides used to control it.
- 8.2.18 In 2024 alone despite trying to manage blackgrass with herbicides (which is an example of added costs discussed above), R J Wright Ltd lost a significant amount (45 - 50%) of its wheat yield due to blackgrass. This indicates that despite the land grade, the productivity of the Site is limited and can be readily undermined by other factors.
- 8.2.19 On this basis, the Site can remain as grazing land, the Development will help address the Blackgrass undermining yields and the wider farm business as a crucial factor in food production will be maintained to produce food for the 40 year period of the Development.
- 8.2.20 Furthermore, there are two further material points in this instance which relate to the impact of using agricultural land and its acceptability -
- 8.2.21 Firstly, there is no current planning policy requiring landowners of BMV land to use it solely for food production and there are other policy measures such as Sustainable Farming Initiatives, which could take the land out of food production in favour of alternative uses. This point was clearly articulated by an Inspector in the recent Scruton appeal (APP/G2713/W/23/3315877) where the determining authority refused the scheme based on the impact on agricultural land. However, the Inspector noted in their consideration that:
- “...the specific way agricultural land is used is not a matter that is subject to planning controls...Given this, the fact that the proposal would limit the ability to carry out any arable farming does not, in my opinion, mean that it results in the loss of agricultural land when it can still be used for other agricultural uses. Furthermore, current government schemes actually encourage farmers to take land out of production and put it to grass, meadows, or trees for carbon capture.”*
- 8.2.22 Secondly, is that South Holland District Council previously approved a solar farm on part of the Site (ref.H20-0764-14) and accepted that the land was sequentially preferable for the siting of a temporary solar farm. The assessment area for the previous permission was much smaller at 3km whereas the assessment accompanying this application includes a wider 6km search area.
- 8.2.23 Overall, the Site accounts for 18% of the total holding that could otherwise be diversified to grow energy crops, animal feed or used as part of the Government's Sustainable Farming Incentive – all of which would utilise the land for non-food purposes in a similar vein to a solar farm and not deliver the renewable energy to support the mandated net zero.
- 8.2.24 The chosen Site in this Assessment would provide a guaranteed income to the farm at a time of significant uncertainty for the farming industry as a whole and would do so in a sustainable way, creating renewable energy and allowing the blackgrass to be addressed, the soil to rest from intensive agricultural practices and significantly boosting local biodiversity at the same

time. The Development would also help to support the local rural supply chain by making the farm more economically and operationally resilient, overall enabling it to confidently continue to produce food on the more suitable land holding.

- 8.2.25 Importantly, the Development will be decommissioned after 40 years of operation and the land will be restored to arable use. There will only be a temporarily loss of agricultural land, which is wholly reversible and can continue to support grazing opportunities as well as soil protection measures.
- 8.2.26 Consequently, the proposal will have a very small and temporary impact on the availability of agricultural land in the district. The Applicant has been diligent in the choice of land for the development. Proximity to the grid connection is a key locational factor; and national and local planning policies in respect of selecting lower grade agricultural land, have been complied with. The resting of the land and inclusion of biodiversity improvements has significant benefits in itself and the provision of a temporary solar farm will provide guaranteed income to a local farm at a time of significant uncertainty for the farming industry as a whole enabling it to continue to produce food.

Flood Risk

- 8.2.27 The Site is classified as Flood Zone 3, indicated high risk of flooding. As shown in Appendix C, the defined search area is largely within Flood Zone 3, with smaller pockets of lower flood risk in the northwest of the search area.
- 8.2.28 These areas are within an area of Grade 1 agricultural land which is the highest grade and designated Best and Most Versatile land, which is valued by national and local policy, and a steer to using lesser grade land. The Site is evidenced to be predominantly Grade 3a and 3b land. This is lower than Grade 1. Using the areas of lesser flood risk would give rise to conflict with policy and guidance on use of BMV land.
- 8.2.29 Further to this, these areas are not large enough to facilitate the Development. They would require several land parcels in order to facilitate the Development and capitalise on the agreed connection and secured capacity giving rise to complications as set out above in this Assessment. This would undermine both the feasibility and viability of the project.
- 8.2.30 As advised in PPG, solar farms are essential infrastructure which can remain operational in times of flooding as long as adequate design measures are put in place. Such design measures include increasing the finished floor levels of the essential infrastructure beyond the maximum flood depths during the relevant flood event.
- 8.2.31 This ensures essential parts of the solar farm that are not compatible with water are suitably mitigated against flood risk and the Development does not give rise to additional flood risk.

9 Summary and Conclusion

- 9.1.1 The Alternative Site Assessment set out above comprised of four stages: defining the study area, defining the site selection criteria, assessment of alternative sites; and the assessment of the Site.
- 9.1.2 The study area was defined by:
- a) the location of the agreed grid connection with secured capacity at the South Holland BSP Substation; and,
 - b) selecting a radius of 6km surrounding the Substation (which exceeds the distance associated with Alternative Site Assessments on other TCPA and NSIPs in the locality).
- 9.1.3 A greater distance from the grid connection would lead to increased environmental and community impacts, costs and negotiations with landowners which would undermine the viability of the Development.
- 9.1.4 The consideration of these factors and discounting extending the search area further, is supported by policy from NPS EN-3 and recent planning decisions within SHDC (i.e. the previous approval of a solar farm on the Site, Bicker Fen Lincolnshire, Mallard Pass) and more widely through the granting of Longfield Solar Farm DCO (Ref: EN010118).
- 9.1.5 Based on the above, the defined search area is considered robust.
- 9.1.6 This Assessment has considered several site selection criteria split into two categories of operational requirements and environmental considerations. These considerations reflect national guidance on relevant considerations in the siting of large-scale solar farms. The criteria applied are therefore considered suitable.
- 9.1.7 The Assessment methodically works through several categories of other possible locations and sites for the Development within the limits of the search area. Each category was considered against relevant factors leading to reasonable conclusions of discounting these categories as plausible locations for the Development. Consequently, the use of agricultural land is necessary in line with national policy and guidance, and SELP Policy 1.
- 9.1.8 The DEFRA and Natural England ALC data for the search area sets out that the ALC comprises Grade 1 and Grade 2 land. The Site was known to comprise in part lower grade land via the accepted ALC survey supporting a precedent approved solar development reference H20-0764-14. Following this, a further survey was undertaken which outlines 95% the Site comprises 3a and 3b grade land. On this basis, the use of the Site represents the use of lower graded agricultural land in line with national policy and guidance on this matter.
- 9.1.9 Flood risk within the search area has also been considered and is largely unavoidable given the district-wide risk from tidal flooding. Lesser areas of flood risk have been considered and discounted given conflict with national and local policies on use of BMV land. Further to this was the consideration that these areas are not suitable for reasons of scale and complexity of using several Sites in response. Appropriate mitigation measures have been applied to the design and layout of the Development to ensure it meets the Exception Test set out in the NPPF
- 9.1.10 It is noted that approximately 67% of the Site is considered Best and Most Versatile (2ha of Grade 2 (4.84%) and 25.6ha of Grade 3a (61.98%).
- 9.1.11 Consideration of the use of BMV needs to take into account the following material points:

- a. No Grade 1 land is within the Site and the Site represents in total only 0.0006% of the agricultural land in South Holland District.
 - b. The Development is temporary. The Development would be for a period of 40 years. The impacts of the Development are reversible and will it apply the best practice DEFRA's Construction Code of Practice for the Sustainable Use of Soils on Construction Sites and allow the land to rest from intensive arable farming. This will protect the soil and maintain its suitability for arable farming for future generations. Whilst removed from arable farming for the consented period, the land would be readily available for grazing as pasture for livestock farming. This approach results in dual use of the land for both ongoing agriculture and creation of renewable energy. On this basis, there will be no irreversible loss of agricultural land in accordance with SELP Policy 31.
 - c. It is important to outline that the ALC alone does not deliver yield in food production or determine its monetary value. It also does not take account of invasive weeds that can undermine crop growth and yields. This Site is undermined by pervasive blackgrass. Further to this, there is no current planning policy requiring landowners of BMV land to use it solely for food production and there are other policy measures such as the Sustainable Farming Initiatives, which could take the land out of food production in favour of alternative uses.
- 9.1.12 Overall, the Assessment is robust and concludes the use of the Site for the Development is necessary and uses of lower ALC grade land. There is clear compliance with national policy and SELP Policy 1. The Development is temporary with opportunities for grazing, and controls to protect and enhance the agricultural soil for future farming. On this basis, the Development does not give rise to significant harm in terms of 'agricultural land take' as set out in SELP Policy 31. Lastly, the Assessment has outlined how there are several factors, some of which are outside the planning system control, which affect food production, whereas it is clear the farm business produced food across the wider holding would be supported and sustained by rental income from the Development; which in turn gives rise to wider economic benefits to the local economy.
- 9.1.13 Given these points, as well as the fact that the Site represents only 0.0006% of the agricultural land in South Holland District, there is no compelling evidence to sufficiently conclude a material impact on food production from the Development.
- 9.1.14 For these reasons, the Assessment as well as the wider information in the Application and material benefits set out, comprise the most compelling evidence for the Site's use for the Development, and that there is no clear conflict with the Local Plan or material national policies and guidance.

Appendix A Constraints Plan

Appendix B Agricultural Land Classification Plan

Appendix C Flood Zones

Appendix D Topographical Survey

ⁱ Department for Levelling Up, Housing & Communities National Planning Policy Framework. Available from:

https://assets.publishing.service.gov.uk/media/65a11af7e8f5ec000f1f8c46/NPPF_December_2023.pdf

ⁱⁱ Planning practice guidance. Available from:

<https://www.gov.uk/government/collections/planning-practice-guidance>

ⁱⁱⁱ Department for Energy Security & Net Zero Overarching National Policy Statement for Energy (EN-1). Available from:

<https://assets.publishing.service.gov.uk/media/65bbfbd709fe1000f637052/overarching-nps-for-energy-en1.pdf>

^{iv} Department for Energy Security & Net Zero. National Policy Statement for Renewable Energy Infrastructure (EN-3). Available from:

<https://assets.publishing.service.gov.uk/media/65a7889996a5ec000d731aba/nps-renewable-energy-infrastructure-en3.pdf>

^v South East Lincolnshire Local Plan 2011-2036. Available from:

<https://www.southeastlincslocalplan.org/wp-content/uploads/2019/02/Local-Plan-text-March-2019.pdf>

^{vi} Enabling sustainable electrification of the economy. Available from:

<https://committees.parliament.uk/publications/45077/documents/223429/default/>

^{vii} Solar Photovoltaic Power Potential United Kingdom Map. Available from:

<https://solargis.com/maps-and-gis-data/download/united-kingdom>

^{viii} Strategic Landscape Capacity Study for South Holland District Council. Available from:

<https://www.southeastlincslocalplan.org/wp-content/uploads/2017/06/South-Holland-District-Council-Strategic-Landscape-Capacity-Study-July-2003.pdf>