

Green Hill Solar Farm

EN010170

Environmental Statement

Appendix 5.1: Site Selection Assessment

Revision A

Prepared by: Lanpro

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APFP Regulation 5(2)(a)



Schedule of Changes

Revision	Section Reference	Description of Changes	Reason for Revision
A	[cover]	Updated to Revision A	As required for submission at Deadline 1.
	[throughout]	Updates to document references	As required for submission at Deadline 1.
	2.3.5	Updated search radius for Point of Connection from 15km to 20km	Consistency check – corrected in response to RRs



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Issue Sheet

Report Prepared for: Green Hill Solar Farm

Examination Deadline 1

Site Selection Assessment

Revision A

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1 Introduction

1.1 Background

- 1.1.1 This Site Selection Assessment (SSA) has been prepared on behalf of Green Hill Solar Farm Limited (the Applicant) for the Green Hill Solar Farm project (hereafter referred to as the Scheme). As the Scheme comprises the construction of a generating station with a capacity of over 50MW it is defined as a Nationally Significant Infrastructure Project (NSIP) under sections 14(1)(a) and 15(2) of the Planning Act 2008 (Ref. 1) and therefore must be consented by way of a DCO. The Application is submitted to the Planning Inspectorate, with the decision whether to grant the DCO being made by the Secretary of State for the Department of Energy Security and Net Zero (hereafter referred to as the Secretary of State).
- 1.1.2 The DCO application is for the construction, operation (including replacement and maintenance) and decommissioning of the Scheme. The Scheme comprises a new solar energy generating station that will deliver electricity to the electricity transmission network using ground mounted Solar Photovoltaic (PV) panel arrays to generate electricity from the sun. The Scheme also includes Battery Energy Storage System (BESS).
- 1.1.3 The Scheme will be located within the area shown in Location Plan **[APP-006]** referred to as the 'Order Limits'. The Order Limits outline the maximum extent of the land that will be required to facilitate the construction, operation, maintenance, and decommissioning of the Scheme as depicted on the Works Plans **[EX1/GH2.4_B]**.
- 1.1.4 The Scheme comprises approximately 1,441.1 hectares of land located within the administrative areas of North Northamptonshire Council, West Northamptonshire Council and Milton Keynes City Council.
- 1.1.5 The Scheme consists of an electricity generating station with a capacity of over 50 MW comprising ground mounted solar arrays and associated development, the latter encompassing: energy storage, grid connection infrastructure and any other infrastructure as well as works integral to the construction, operation, maintenance, and decommissioning of the Scheme.
- 1.1.6 The national grid connection Point of Connection ('PoC') will be at the Grendon 400kV National Grid Substation ('Grendon Substation').
- 1.1.7 The Scheme comprises the two main parts:
- The nine sites (referred to collectively as 'the Sites' where the solar arrays, battery energy storage and other associated development (other than those parts of the grid connection cable to be located in the Cable Corridor) would be located; and
 - The Cable Route Corridor within which the underground cables connecting the Sites and PoC will be located.



- 1.1.8 The operational phase of the Scheme is anticipated to be 60 years in total. Once the Scheme ceases operating, the Scheme will be decommissioned and land restored to existing use. A full description of the Scheme is outlined in Chapter 4: Scheme Description **[EX1/GH6.2.4_A]**.

The Sites

- 1.1.9 The Sites are located between settlements to the west and south of Wellingborough and north and south-east of Northampton, near to the villages of Old, Walgrave, Mears Ashby, Earls Barton, Bozeat, Grendon and Lavendon, on fields located within a 20-kilometre (km) radius from Grendon Substation.
- 1.1.10 The Sites are referred to individually as Green Hill A, Green Hill A.2, Green Hill B, Green Hill C, Green Hill D, Green Hill E, Green Hill F, Green Hill G and Green Hill BESS and are described in detail in Chapter 3: Development Site **[EX1/GH6.2.3_A]**.
- 1.1.11 The Sites will accommodate ground mounted Solar Photovoltaic ('PV') generating modules, battery energy storage systems, energy storage infrastructure, grid connection infrastructure and are collectively referred to as the Solar Arrays.
- 1.1.12 The location of the Sites is shown in Location Plan **[APP-006]**.

The Cable Route Corridor

- 1.1.13 The Cable Route Corridor is shown in Figure 1.1 Location Plan **[APP-190]**. The Cable Route Corridor will comprise buried and underground electrical cables that will connect the Sites to the PoC at Grendon Substation.
- 1.1.14 The Cable Route Corridor width is approximately 50m wide. This width is wider than the final working area to allow flexibility in the final location (micro-siting) at the detailed design stage carried out following determination of the DCO application. This approach provides flexibility to the Applicant at this stage whilst providing certainty to affected landowners that effects will be no greater than those assessed in the ES.
- 1.1.15 In addition to land required for the buried cable trenches, temporary land is required for construction compounds, accessing the Cable Route Corridor, storage of soil and temporary cable laydown areas.

1.2 Purpose of this Report

- 1.2.1 The purpose of this report is to set out how other alternative, potentially suitable sites have been considered and how they compare to the Sites where the Scheme is proposed to be located, taking into consideration a range of planning, environmental and operational factors.
- 1.2.2 Environmental Statement Chapter 5: Alternatives and Design Evolution **[APP-042]** explains the legal and policy background to the consideration of alternatives.



1.2.3 The Site Selection Assessment sets out the process, findings and conclusions as follows:

- Section 2 describes the assessment methodology;
- Section 3 sets out the assessment results; and
- Section 4 draws conclusions from the assessment.

1.2.4 Supporting annexes include:

- Annex A: Legislation, Policy and Advice Notes;
- Annex B: References;
- Annex C: Assessment Indicators and Evaluation Criteria;
- Annex D: Criteria Table; and
- Annex E: Potential Development Area Proformas.

1.2.5 A list of figures is set out below:

Table 1-1: Figures

Figure Number	Figure Name
5.1 [APP-222]	Search Area
5.2 [APP-223]	Planning Environmental Constraints
5.3 [APP-224]	Unconstrained Land
5.4 [APP-225]	Brownfield Sites
5.5 [APP-226]	Topographical Gradients
5.6 [APP-227]	Potential Development Areas following Constraints Review
5.7 [APP-228]	Potential Development Areas 1 and 2
5.8 [APP-229]	PDA 1 Yardley Hastings to Olney
5.9 [APP-230]	PDA 2 Higham Ferrers to Bedford
5.10 [APP-231]	Green Hill Development Site Constraints



Figure Number	Figure Name
5.11 [APP-232]	Grade 3 Land
5.12 [APP-233]	Large Scale Land Ownerships
5.13 [APP-234]	Potential Development Areas 3 4 and 5
5.14 [APP-235]	Grade 3 PDA 3 – A14 to Wellingborough
5.15 [APP-236]	Grade 3 PDA 4 – Irthlingborough
5.16 [APP-237]	Grade 3 PDA 5 – A428 to Moulton
5.17 [APP-238]	Overall Constraints
5.18 [APP-239]	PDA 1 Flood Risk Mapping
5.19 [APP-240]	PDA 2 Flood Risk Mapping (a)
5.20 [APP-241]	PDA 2 Flood Risk Mapping (b)
5.21 [APP-242]	PDA 3 Flood Risk Mapping
5.22 [APP-243]	PDA 4 Flood Risk Mapping
5.23 [APP-244]	PDA 5 Flood Risk Mapping

2 Assessment Methodology

- 2.1.1 There is no standard methodology for the selection of sites for solar energy generating stations. The methodology used in this assessment has been informed by relevant planning policy which is set out in **Annex A**.
- 2.1.2 The selection of the Scheme's proposed location has followed a five-stage site selection process, which has sought to identify sites that meet the legislative and policy requirements, whilst recognising the need for the Scheme to be commercially viable. The site selection process and confirmation of the site suitability when considered against potential alternative sites is summarised in the following sections:

Stage 1 – Identification of the Area of Search



- 2.1.3 Irradiation (sunlight) levels and topography are key factors when determining the location of solar development. Solar developments are currently found across the UK; however, their efficiency is determined by the levels of irradiation at their location. The whole of England is well located geographically for solar gains. The Applicant therefore had no restrictions on where development should be in relation to irradiation levels.
- 2.1.4 The preference is for a flat site or a site with a southerly aspect. If a site with another aspect is pursued there is likely to be a need to increase the overall development footprint as there would be an operational need to increase the distance between arrays to avoid overshadowing.
- 2.1.5 As recognised by National Policy Statement EN-3 (Ref. 2) paragraphs 2.10.22 to 2.10.25 a viable grid connection is an essential material consideration for proceeding with a development and is instrumental in defining the search area.
- 2.1.6 During discussions with National Energy System Operator (NESO), formally named National Grid Electricity System Operator Limited, in 2022, the Applicant was notified of grid capacity at Grendon Substation. Due to the immediate availability of this Point of Connection (PoC), and in line with the recognition in NPS EN-1 that all suitable sites for energy infrastructure of the type proposed may be needed for future proposals, the Applicant did not consider any further alternative grid connection points for the Scheme. The Applicant made a grid connection application to NESO for connection at Grendon Substation and an offer was made by NESO for 500MW (AC).
- 2.1.7 As the grid connection offer specifies Grendon Substation as the PoC, the Applicant proceeded to look at sites that could accommodate a solar project in proximity to this location.
- 2.1.8 A land area of approximately 100 ha (including solar panels, landscaping and ecological mitigation land) is required to provide a solar scheme of 50MW (AC). To supply the grid connection offer of 500MW (AC), a total site size of approximately 1,000 ha (excluding cable route) is needed.
- 2.1.9 The Applicant sought to find a total site area which is around 10% larger than is needed for the grid connection offer (1,100 ha). Based on the Applicants experience of developing utility scale solar projects, a larger site size provides flexibility for the accommodation of additional mitigation measures and other constraints that may become known through the design development process.
- 2.1.10 An initial search area was identified at a 5 kilometre (km) radius from the Grendon Substation. The search area was then enlarged incrementally, with the clear preference of identifying land as close to the Grendon Substation as practicable, until sufficient options for the land required for the Scheme were identified with willing landowners within a 20km radius. This is considered by the Applicant to be a viable cable connection distance for a solar project of this scale. The search area is shown on Figure 5.1 **[APP-222]**.



Stage 2 – Exclusion of Planning, Environmental and Spatial Constraints

2.1.11 Stage 2 of the site selection process has included the mapping of planning, environmental and spatial constraints within the search area which have been identified through a review of relevant national planning policies. **Table 2.1** below sets out the constraints that were mapped and considered.

Table 2-1 Planning and Environmental Constraints

Consideration	Discussion
Topography and site orientation	<p>It is important to note the following:</p> <p>Where potential sites are subject of physical obstructions which cannot be removed (such as woodlands, rivers, highways and topography) the site area will need to be increased. Areas including woodland were therefore not excluded at this stage.</p> <p>The preference is for a site with a southerly aspect; however, sites with other aspects were not dismissed at this stage. If a site with another aspect is pursued there is likely to be a need to increase the overall development footprint as there would be an operational need to increase the distance between arrays in order to avoid overshadowing.</p>
Agricultural Land Classification and land type	<p>Planning policy seeks to minimise impacts on the best and most versatile agricultural land (defined as grades 1, 2 and 3a) and preferably use land that is not classified as best and most versatile (grades 3b, 4 and 5) and where possible use previously developed land, brownfield land, contaminated land or industrial land.</p>
Designated international and national ecological and geological sites	<p>The following designations were identified and any land covered by these designations was excluded: Sites of Special Scientific Importance (SSSI), Special Areas of Conservation (SAC), Special Protection Areas (SPA), SPA protection buffer, Ramsar sites and National Nature Reserves (NNR).</p>
Nationally designated landscapes	<p>The presence of any National Landscapes or National Parks were considered and excluded from the area of search.</p>
Proximity to sensitive human receptors	<p>Consideration was given to the proximity of nearby sensitive human receptors which include residential dwellings and workplaces.</p>



2.2 Agricultural Land Classifications

- 2.2.1 As set out above, NPS EN-3 states that previously developed land, brownfield land, contaminated land and industrial land should be preferred for solar projects. Where use of agricultural land is necessary, poorer quality land should be preferred, avoiding the use of best and most versatile land where possible.
- 2.2.2 Consistent with national policy, as part of the site selection process the Applicant sought to exclude land that the best available data, being the Natural England Agricultural Land Classification (ALC) maps, identified as being within an agricultural land classification category that is, or includes, best and most versatile land: ALC grades 1, 2 and 3a.
- 2.2.3 The Natural England ALC maps do not differentiate between grades 3a and 3b. Therefore, at Stage 2 all land in Grades 1, 2 and 3 was excluded and the Applicant attempted to identify suitable sites within areas of Grade 4, 5 or unclassified land that was not affected by the other identified planning and environmental constraints listed above.

Stage 3 – Identifying Potential Solar Development Areas

- 2.2.4 Stage 3 of the SSA identifies potential alternative solar development areas for the location of the Scheme by applying the key operational criteria for large scale solar development – site size and land assembly; and topography. The use of previously developed (brownfield) land and alternative locations proposed through consultation have also been considered. The following sections explain the criteria applied to the unconstrained areas identified at Stage 2. As mentioned above, sites where there were physical constraints (such as woodland) were still considered at this stage although it was recognised that a larger site area would be required as a result of the constraint.

Site Size and Land Assembly

- 2.2.5 Large areas of undeveloped, open land are required for large scale solar development as they have less vegetation to be removed prior to installation of the solar infrastructure. The selection of large open areas also reduces the amount of buffering required for tree root protection and the avoidance of shading when compared to using smaller fields or built-up areas, and can therefore reduce the solar development's impact on vegetation such as hedgerows and trees.
- 2.2.6 An available single site of 1,100 ha. within sufficient proximity to the Grendon Substation was not identified. The Applicant therefore considered smaller individual sites that could be connected.
- 2.2.7 The minimum individual site size and overall area threshold is based upon the Applicant's economic analysis of the MW output per hectare to be achieved taking into consideration infrastructure costs including the grid connection and the need for a percentage of the land to provide appropriate environmental mitigation, if required. A smaller development area results in higher unit costs and an



assessment was made as to the maximum cost and minimum site area threshold that would be viable for the Scheme to hit the target financial metrics.

- 2.2.8 In the Applicant's experience, the minimum area for an individual site for large scale solar is at least 40 ha of contiguous land. This is the minimum site size threshold considered by the Applicant to be viable (based upon the balance of costs of connecting infrastructure between individual sites and electricity losses from the multiple connection cabling necessary) to form part of a network of sites in close proximity covering an area of approximately 1,100ha. The sites making up an NSIP-scale scheme should also be located in relative proximity to each other to ensure the level of voltage is maintained. This is the land area (including 10% contingency but excluding the land required for the cable route) required for a solar development to support the 500MW grid capacity available at Grendon Substation.
- 2.2.9 Areas of unconstrained land of at least 40ha were therefore taken forward to the Stage 4 assessment.
- 2.2.10 Where there were areas of unconstrained land that met the threshold of 40 ha but were isolated and so not viable to join other areas to form an approximate 1,100 ha area required, these were not taken forward to the Stage 4 assessment.

Previously Developed Land

- 2.2.11 The use of previously developed (brownfield) land and commercial roof-tops was considered. There was no brownfield land that met the minimum individual size threshold nor the area of approximately 1,100ha required for a network of sites in proximity to the Scheme, identified within the 20km search area from the Grendon Substation PoC. Figure 5.4 **[APP-225]** which shows all brownfield sites over 1 ha in size taken from the most up to date Brownfield Land Registers of Bedford Borough Council, West Northamptonshire Council, North Northamptonshire Council and Milton Keynes City Council. Sites smaller than 1ha and were discounted due to their inability to provide a viable land parcel of 40ha in combination with other land due to inefficiencies in both layout and required connection between sites. A list of the brownfield sites over 1ha have been outlined in **Annex 2**.
- 2.2.12 Of the sites over 1 ha in size, none were large or proximate enough to provide a viable land parcel of at least 40ha that could be developed as part of a network of sites near to Grendon PoC. Additionally, a number of sites have planning permission for residential development and/or are allocated for residential/mixed use development and were therefore not considered to be available for use for solar.
- 2.2.13 No commercial rooftops or combined brownfield land parcels of an adequate area to facilitate a large-scale solar project or provide a viable network of sites in proximity were identified.
- 2.2.14 Individual commercial rooftops would not meet the minimum 40 ha area site threshold as described above. The number of commercial rooftops required to meet this threshold would require multiple land ownerships, and the legal complexities and costs involved in combining multiple sites of this nature is not viable. The government has promoted financial incentives to encourage homeowners to install



solar PV systems, and rooftop solar is recognised as being clearly desirable, both on residential and commercial premises. However, rooftop solar is not considered to be an alternative to the Scheme. Commercial premises and houses are both consumers and generators of electricity, which therefore limits the contribution they provide as low carbon and renewable alternatives to conventional sources of electricity production, and rooftop solar is therefore not an alternative to electricity production at grid scale. As recognised in paragraph 2.10.10 of NPS EN-3, both roof-mounted solar panels and large scale ground mounted solar farms are required to meet Government targets.

- 2.2.15 There is a clear and urgent need for further renewable energy capacity, and this will likely include more distributed generation across the electricity distribution network. The Scheme presents a single, large-scale generating asset which addresses the project aims of delivering clean, cheap electricity to the consumer whilst making a significant contribution to the fulfilment of the UK's legally binding climate change commitments. More, smaller-scale solar PV developments will also be required in order to achieve these commitments, however they do not represent a realistic alternative to the development and are required in addition to large scale solar projects. Larger scale solar projects provide increased decarbonisation benefits and commercial benefits to consumers that are not achieved by smaller scale projects.

Topography

- 2.2.16 The development of large-scale solar development requires flat land as this is ideal for construction and helps reduce visual intrusion. As mentioned earlier in this report flat land also limits the shading between arrays and enables the panels to be optimally configured for the best productivity levels.
- 2.2.17 Topographical constraints within the unconstrained areas identified at Stage 2 have also been identified and mapped. All land with a 5% or less gradient which is considered to be very flat and optimal for solar generation has been considered potentially suitable to meet the Scheme's requirements of maximising energy generation and avoiding visual intrusion. This land has been taken forward to the Stage 4 assessment therefore identifying the flattest areas of land within the unconstrained area.

Stage 4 – Evaluation of Potential Solar Development Areas

- 2.2.18 As can be seen on Figure 5.11 **[APP-232]** the majority of available land of a sufficient size within 20km of Grendon Substation PoC has an ALC of Grade 3 or above.
- 2.2.19 However, two potential development areas (PDAs) were identified in Stage 3. These PDAs were subject to a desktop assessment to further understand the development constraints of these particular areas as part of Stage 4. The evaluation involved the assessment of the areas against a range of planning, environmental and operational considerations (see **Annex E**) which were developed having regard to relevant national and local planning policy and the optimal functionality of a large scale solar



development. These were named: PDA1 Yardley Hastings to Olney; and PDA2 Higham Ferrers to Bedford.

- 2.2.20 Each PDA was evaluated against a series of planning, environmental and other operational assessment indicators which were derived from national and local planning and environmental policy objectives and the operational requirements of the Scheme. Figures 5.8 [APP-229] and 5.9 [APP-230] show the key environmental and planning constraints.
- 2.2.21 Information sources which include GIS data, online mapping and planning policy documents (see list of references in **Annex A**) have been used to inform the assessment. The evidence was then considered by planning professionals who have awarded a category of red, amber or green against each assessment indicator based on professional judgement. A statement setting out the justification for each categorisation has also been provided.
- 2.2.22 These indicators included further site designations (non-statutory), biodiversity, landscape and visual amenity, cultural heritage, flood risk, land use, access for construction constraints as well as operational considerations related to deliverability, such as the connection feasibility the areas to the Grendon Substation PoC.
- 2.2.23 Following the evaluation stage, neither of the two PDAs proved suitable for inclusion in the Scheme due to a combination of constraints, including presence of ancient woodland and other factors (such as existing land uses). The evaluation assessment then proceeded to consider areas of Grade 3 ALC on the Natural England ALC maps, as set out at Stage 5 below.

Stage 5 – Widening the Search to consider Grade 3 Agricultural Land

- 2.2.24 Following the decision that PDAs 1 and 2 were unsuitable for the Scheme, the site search was expanded to include the areas of Grade 3 agricultural land within the 20km search area. Potential areas (Figure 5.11 [APP-232]) were identified by following Stages 2 and 3.
- 2.2.25 Due to the large extent of Grade 3 agricultural land within the site area and in order to focus the search on available land. Land agents were contacted regarding potentially willing landowners within the area. The availability of willing landowners is an important consideration because it is typical for the land to be leased rather than permanently acquired due to solar farms consisting of temporary structures. In the absence of willing landowners, it would be necessary to permanently acquire land through compulsory acquisition powers which the Applicant sought to avoid. It is also desirable to compile a site in as few land ownerships as possible to minimise project complexities (including engineering, design and mitigation measures), legal complexities and project costs.
- 2.2.26 Three additional PDAs (PDA3 A14 to Wellingborough, PDA4 Irthingborough and PDA5 A428 to Moulton) were identified. These are shown on Figure 5.14 [APP-235], Figure 5.15 [APP-236] and Figure 5.16 [APP-237].



- 2.2.27 These PDAs were assessed against the same detailed range of planning, environmental and operational considerations used to assess the Stage 4 PDAs. Other areas of Grade 3 land within the 20km search area were discounted due to similar environmental and planning constraints to those discounted in Stage 4, lack of willing landowners, smaller land ownerships to be viewed as unviable due to project complexity (including engineering, design, costs and mitigation measures). These areas were not, therefore, investigated any further.

2.3 Summary of the Alternatives Assessment

- 2.3.1 This site selection assessment has followed a five-stage approach to evaluate the proposed Scheme location against other potential areas for solar development identified in order to establish whether the proposed Scheme is in a suitable location for a proposed solar development.

Stages 1 and 2: Identification of the Area of Search and Unconstrained Land

Stage 1 identified the search area based upon the need to provide a viable cable connection distance and the clear preference of identifying land as close to the POC at Grendon Substation as possible. The search area was enlarged incrementally until suitable options were found within a 20km radius. This is considered by the Applicant to be a viable cable connection distance for a solar project of this scale.

- 2.3.2 The results of Stage 2 are identified in **Figure 5.2, Annex D**. This figure maps the various high level national planning and environmental constraints identified within the 20km area of search. **Figure 5.3, Annex D** shows the output from this sift mapping, identifying areas of unconstrained land which have not been excluded from the Stage 1 and 2 sifting exercise.
- 2.3.3 Stages 2 and 3 of the assessment have involved GIS mapping to exclude environmental and planning constraints including all Grade 1, 2, and 3 agricultural land and apply operational considerations such as development area and topography within the 20km area of search.

Stages 3 and 4: Identifying Potential Development Areas and Further Evaluation

- 2.3.4 **Figures 5.4-8, Annex D** show the output following the application of the Stage 3 criteria.
- 2.3.5 **Figure 5.4** shows the brownfield land over 1 ha which has been identified using the brownfield register for the local planning authorities within the 20km area of search. As mentioned previously in this report and shown in **Figure 5.4**, the brownfield sites are too small and do not meet the minimum individual site size threshold of 40 ha or an area of approximately 1,100 ha sought for a network of sites in proximity to Grendon PoC.
- 2.3.6 **Figure 5.3, Annex D** illustrates the unconstrained Grade 4, 5 or unclassified land identified from the mapping at Stage 2 with a slope gradient of 5% or less.



- 2.3.7 **Figure 5.6, Annex D** uses the output shown in Figure 5.5.
- 2.3.8 Suitability of the PDAs identified on Grade 4, 5 agricultural land and unclassified land
- 2.3.9 As set out above, the two PDAs identified on Grade 4 and 5 agricultural land and unclassified land and shown on Figure 5.7 **[APP-228]** were discounted as unsuitable following evaluation against planning, environmental and other operational assessment indicators. Potential sites on Grade 3 agricultural land were then considered.

Stage 5 – Widening the Search

- 2.3.10 Three additional PDAs plus the Scheme were identified on Grade 3 agricultural land as shown on **Figures 5.14 to 5.16**. All were evaluated against the same planning, environmental and operational criteria. The PDAs had higher constraints than the Scheme, which is shown on Figure 5.10 **[APP-231]**
- 2.3.11 The Sites are within ten land ownerships, and this small number of landowners is advantageous in terms of minimising project complexity, legal complexity and cost. The landowners' ongoing operational requirements for farming and other diversified uses within their landholdings mean that not all the land was suitable, or available, for solar development. The combined factors of constraints assessment and landowner requirements influenced the choice and configuration of the Sites within the available landholdings.
- 2.3.12 Detailed ALC surveys and environmental surveys have been undertaken. The Applicant has worked closely with the landowners in relation to BMV land identified by ALC surveys, to ensure that the most appropriate land for solar panels is included in the Order Limits for the DCO Application. The Applicant has reviewed the proposed site layout and considered areas of exclusion where practicable. In terms of the specific areas of BMV land that will be retained within the Scheme, these are justified by factors related to their location and context within the Scheme, the wider landholdings and agricultural businesses, and in relation to adjacent and surrounding land. Further detail is set out in Chapter 5: Alternatives and Design Evolution **[APP-042]**.
- 2.3.13 The focus of the site selection process was on the large-scale landownerships which were identified by agents as having potentially willing landowners. Details of all the constraints researched during the site selection process were mapped over the whole of the 20km search area as shown on Figure 5.17 Overall Constraints **[APP-238]**. This identified that there are no other large areas of Grade 3 agricultural land identified that were free from constraints within the 20km search area. The Sites that make up the Scheme therefore represent the most appropriate and viable configuration of sites to take advantage of the connection availability at Grendon Substation.



Annex A

Legislation, Policy and Advice Notes

National Legislation and Policy

The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (Ref. 1)

Regulation 14(2) and Schedule 4, paragraph 2 of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (Ref. 1) (EIA Regulations) require: *“A description of the reasonable alternatives (for example in terms of development design, technology, location, size and scale) studied by the developer, which are relevant to the proposed project and its specific characteristics, and an indication of the main reasons for selecting the chosen option, including a comparison of the environmental effects”* to be presented in the ES.

The Conservation of Habitats and Species Regulations 2017 (as amended) (‘The Habitats Regulations’) (Ref. 2)

The regulations provide a framework for protection and assessment of important sites, habitats and species at a European level. The amended regulations transpose these into UK law, following the UK’s exit from the EU. They set a requirement to consider alternatives in order to avoid significant harm to biodiversity and geological interests.

National Policy Statement EN-1

National Policy Statement (NPS) EN-1 (Ref. 3) Paragraph 4.3.9 states that *“as in any planning case, the relevance or otherwise to the decision-making process of the existence (or alleged existence) of alternatives to a proposed development is, in the first instance, a matter of law.”* The NPS confirms that there is no *“general requirement to consider alternatives or to establish whether the proposed project represents the best option from a policy perspective”*.

Paragraph 4.3.10 requires that *“The applicant must provide information proportionate to the scale of the project, ensuring that the information is sufficient to meet the requirements of the EIA Regulations.”*

Paragraph 4.3.15 states:

“Applicants are obliged to include in their ES, information about the reasonable alternatives they have studied. This should include an indication of the main reasons for the applicant’s choice, taking into account the environmental, social and economic effects and including, where relevant, technical and commercial feasibility;”

Paragraph 4.3.22 requires that the Secretary of State should give appropriate weight to the consideration of alternatives. However, these alternatives need to be proportionate to the manner of the scheme. Furthermore, only the alternatives that meet the objectives of the proposed should be considered.



Paragraph 4.3.23 states:

“The Secretary of State should be guided in considering alternative proposals by whether there is a realistic prospect of the alternative delivering the same infrastructure capacity (including energy security, climate change, and other environmental benefits) in the same timescale as the proposed development.”

Paragraph 4.3.24 states:

“The Secretary of State should not refuse an application for development on one site simply because fewer adverse impacts would result from developing similar infrastructure on another suitable site and should have regard as appropriate to the possibility that all suitable sites for energy infrastructure of the type proposed may be needed for future proposals.”

Paragraph 4.3.26 states:

“if the Secretary of State concludes that a decision to grant consent to a hypothetical alternative proposal would not be in accordance with the policies set out in the relevant NPS, the existence of that alternative is unlikely to be important and relevant to the Secretary of State’s decision”

Paragraph 4.3.27 requires that any alternatives which mean the necessary development could not proceed, for example because the alternative proposal is not commercially viable, can be excluded because they are not relevant to the Secretary of States decision.

National Policy Statement EN-3

Section 2.3 of NPS EN-3 (Ref. 4) sets out at paragraph 2.3.6, 2.10.18 – 2.10.69 the factors that are likely to influence the key considerations involved in the siting of a solar farm. These include irradiance and site topography, availability of grid connection, proximity of a site to dwellings, agriculture land classification and land type, accessibility, and capacity of a site.

Paragraph 2.10.20 states: *“In order to maximise irradiance, applicants may choose a site and design its layout with variable and diverse panel types and aspects, and panel arrays may also follow the movement of the sun in order to further maximise the solar resource.”*

The availability of a grid connection point with capacity is recognised as being an important consideration in terms of project viability and site selection at paragraphs 2.10.22 – 2.10.25 as follows:

“Many solar farms are connected into the local distribution network. The capacity of the local grid network to accept the likely output from a proposed solar farm is critical to the technical and commercial feasibility of a development proposal.

Larger developments may seek connection to the transmission network if there is available network capacity and/or supportive infrastructure.

In either case the 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.”



Paragraphs 2.10.25-2.10.26 note that: *“To maximise existing 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.”*

Where this is the case, applicants should consider the cumulative impacts of situating a solar farm in proximity to other energy generating stations and infrastructure.”

In terms of agricultural land classification and land type, paragraph 2.10.29 states:

“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. ‘Best and Most Versatile’ agricultural land is defined as land in grades 1, 2 and 3a of the Agricultural Land Classification.”

Paragraph 2.10.30 goes on to note:

“Whilst the development of ground mounted solar arrays is not prohibited on Best and Most Versatile agricultural land, or sites designated for their natural beauty, or recognised for ecological or archaeological importance, the impacts of such are expected to be considered and are discussed under paragraphs [2.10.73 – 92 and 2.10.107 – 2.10.126.]”

Paragraph 2.10.31 requires that applicants *“explain their choice of site, noting the preference for development to be on suitable brownfield, industrial and low and medium grade agricultural land”*.

Paragraph 2.3.32 states:

“Where sites on agricultural land, consideration may be given as to whether the proposal allows for continued agricultural use and/or can be co-located with other functions (for example, onshore wind generation, storage, hydrogen electrolyzers) to maximise the efficiency of land use.”

Paragraph 2.10.34 encourages Applicants to prepare and implement a Soil Resources and Management Plan in order to minimise adverse impacts on soil health and potential land contamination.

National Policy Statement EN-5

NPS EN-5 (Ref. 5) includes the following relevant policies on alternatives at paragraphs 2.2.7 – 2.2.9:

“The connection between the initiating and terminating points of a proposed new electricity line will often not be via the most direct route. Siting constraints such as engineering, environmental, or community considerations will be important in determining a feasible route.

There will usually be a degree of flexibility in the location of the development’s associated substations, and applicants should consider carefully their location, as well as their design



In particular, the applicant should consider such characteristics as the local topography, the possibilities for screening of the infrastructure and/or other options to mitigate any impacts.”

National Guidance

Guidance on the pre-application stage for Nationally Significant Infrastructure Projects (April 2024) (Ref. 6)

Guidance from the Ministry of Housing, Communities and Local Government and the Department for Levelling Up, Housing and Communities on the pre-application stage for NSIPs states:

“Applicants are advised to fully document all optioneering exercises and decision-making on alternatives from the inception of their projects in their application, and reference this appropriately in their Environmental Statement.” (Paragraph 011 Reference ID 02-011-20240430)

It does, however, note that:

“There is no general requirement to consider alternatives for specific applications. The decision to make an Order granting development consent for an application is based on its own merits, not that there may be better or different alternatives either elsewhere or at a later stage.”

Applicants are also encouraged to set out in brief the main alternatives to their preferred scheme, as *“this can demonstrate how project designs have been refined to take into account environmental, socio-economic and community effects”*. (Paragraph 015 Reference ID 02-015-20240430).



Annex B

References

- Ref. 1 UK Government (2017) The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017. Available at: <https://www.legislation.gov.uk/ukxi/2017/572/contents>
- Ref. 2 UK Government, (2017) The Conservation of Habitats and Species Regulations 2017 (as amended). Available at: <https://www.legislation.gov.uk/ukxi/2017/1012/contents>
- Ref. 3 UK Government, Department for Energy Security and Net Zero (2023) National Policy Statement for Energy (EN-1). Available at: <https://www.gov.uk/government/publications/overarching-national-policy-statement-for-energy-en-1>
- Ref. 4 UK Government, Department for Energy Security and Net Zero (2023) National Policy Statement for Renewable Energy Infrastructure (EN-3). Available at: <https://www.gov.uk/government/publications/national-policy-statement-for-renewable-energy-infrastructure-en-3>
- Ref. 5 UK Government, Department for Energy Security and Net Zero (2023) National Policy Statement for Renewable Energy Infrastructure (EN-5). Available at: <https://www.gov.uk/government/publications/national-policy-statement-for-electricity-networks-infrastructure-en-5>
- Ref. 6 UK Government (2024) Guidance on the pre-application stage for Nationally Significant Infrastructure Projects. Available at: <https://www.gov.uk/guidance/planning-act-2008-pre-application-stage-for-nationally-significant-infrastructure-projects>



Annex C

Sites from the Brownfield Registers of West and North Northamptonshire, Milton Keynes, and Bedford Borough Council

Location	Site Size (ha)	Comments
West Northamptonshire		
Brixworth: Old Station Yard, Station Road NN6 9BP	2.86	Permissioned DA/2013/0066: Erection of industrial and housing units. Development started, but stalled.
Deanshanger: Hayes Road MK19 6HP	1.58	Permissioned S/2014/1941/OUT: Redevelopment of the former Elementis Works site for 15 custom-built detached dwellings, 3 live/work units, 7 self-contained employment units.
Towcester: Green Lane Nursery NN12 6JD	1.47	Not permissioned Commercial use of nursery has ceased.
Wootton: Former Sewage Works, Quinton Road NN4 6LS	1.16	Not permissioned Part of Former Wootton Sewage Works. Part of the site is within flood zone 2,3 and 3B. Allocated in Local Plan (Part 2).
Northampton: Ransome Road/Nunn Mills Road NN4 8AA	11.85	Not permissioned WNN/2023/0027: Residential development of 217 no dwellings. Not yet decided Dec 24.
Northampton: Railway Station Car Park, St Andrews Road NN1 2PB	2.13	Not permissioned Allocated in Northampton Local Plan (Part 2). WNN/2023/0083 (OL 280 units) not yet decided Dec 24.
Northampton: Car Garage Workshops, 409 Harlestone Road NN5 6PB	1.09	Not permissioned Allocated in Northampton Local Plan (Part 2). No permissions.
Northampton: Former St Crispins Hospital, St Crispin Drive NN5 4DN"	2.75	Permissioned N/2015/1454: demolition, restoration/conversion to 13 apartments, restoration of admin building, conversion to 4 apartments, erection of 120 apartments and 98 houses (235 dwellings total). Under construction Dec 2024.



Location	Site Size (ha)	Comments
Northampton: St Peters Way/ Court Road/ Freeschool Street NN1 1ST	1.17	Not permitted Allocated for mixed use including residential in Northampton Local Plan Part 2.
Northampton: University of Northampton Avenue Campus, St Georges Avenue NN2 6JA	6.03	Permitted Allocated in Northampton Local Plan (Part 2). N/2016/0810 outline: up to 200 units approved 19/3/2021. RM WNN/2021/0927: 104 dwellings approved. Under construction Dec 24.
Northampton: Former Dairy Crest Depot, Horsley Road NN2 6LS	1.11	Not permitted Allocated in Northampton Local Plan (Part 2). Units demolished under N/2019/0223. No further permissions on site.
Northampton: Former Bus Station, Greyfriars NN1 2ER	1.75	Not permitted Allocated in Northampton Local Plan (Part 2) for mixed use including residential.
Northampton: Ryland Soans Garage, Harlestone Road NN5 6PD	1.93	Not permitted Allocated in Northampton Local Plan (Part 2).
Northampton: Railway Station (rail freight), St Andrews Road NN1 2SD	5.68	Not permitted Allocated in Northampton Local Plan (Part 2), identified as proposed allocation in West Northamptonshire Local Plan (Reg 18). No active permissions on site.
Northampton: 381 Harlestone Road NN5 6PD	3.01	Not permitted 2024/4540/FULL Development of 84 dwellings. No decision Dec 24 .
Northampton: Kings House, 40 Billing Road NN1 5BA	1.43	Permitted 2024/2032/PND Change of Use from offices to 8 apartments. Not started Dec 24.
Daventry: Arnex House, London Road NN11 4NR	1.59	Permitted 2023/5560/MAF: Residential Development of 52no. Dwellings. Approval awaiting legal agreement.
North Northamptonshire		
Kettering Football Club, Rockingham	1.62	Full planning permission Since this time a planning application for Erection of 49 no. dwellings including associated access and public



Location	Site Size (ha)	Comments
Road, Kettering, NN16 9EU		open space (KET/2018/0519) has been received. This was refused at Planning Committee on 17/12/2019. A full planning application for this site was refused for 49 dwellings on 23/02/2020. An appeal on this decision has been received and subsequently decided. This appeal was dismissed. A new application (KET/2020/0101) on the site was approved on 28th March 2021.
Desborough Leisure Centre, Off Broadlands, Desborough, NN14 2YH	3.42	<p>Outline planning permission</p> <p>Former Leisure Centre has been demolished. Site has been subject to an outline application for 304 dwellings with associated access, infrastructure, public open space, nature areas and surface water management measures. (KET/2016/0044) albeit this was refused by Kettering Borough Council on 26/05/2016. In response a successful appeal was made to the Planning Inspectorate and outline planning permission was obtained at the site on 22/12/2017(APP/L2820/W/16/3162430).</p> <p>A reserved matters application for 255 dwellings (NK/2021/0372) was received in April 2021 and is yet to be determined.</p>
Land At Bosworth's Nursery And Garden Centre, Finedon Road, Burton Latimer, NN15 5QA	2.72	<p>Reserved matters approval</p> <p>KET/2013/0750 - Residential development for up to 69 no. dwellings with access.</p> <p>KET/2016/0883 - Appearance, landscaping, layout and scale in respect of KET/2013/0750 for 69 no. dwellings with access - Reserved matters approved 08.06.2018</p>
Reddens Scrap Yard, Leys Road / Highfield Road, Wellingborough, NN8 1PL	1.14	The site is allocated in the Plan for the Borough of Wellingborough under Policy Site 7 (Leys Road/Highfield Road) for housing redevelopment of up to 40 dwellings.
Car Park And Others, High Street/Jackson Lane, Wellingborough, NN8 4JJ	3.12	<p>Full planning permission</p> <p>WP/14/00175/FUL- Demolition of existing building at 48 West St and redevelopment of part of car park on High Street, Wellingborough for 114 dwellings consisting of 85 houses, 29 apartments, roads, car parking, landscaping and boundary treatments was approved on 08/04/2020. This consent lapsed on 08/04/2023.</p>



Location	Site Size (ha)	Comments
East Of Eastfield Road, Wellingborough, NN8 1RJ	10.88	The site was part of a larger allocation in the previous local plan under Policy U20. The majority of that site has now been developed this section remains undeveloped. The site is allocated in the Plan for the Borough of Wellingborough under Policy Site 6 (East of Eastfield Road). Policy H1 (Urban Housing Allocations) outlines the site has capacity for up to 75 dwellings.
Rectory Business Centre, Rushden (Policy EN33)	1.1	The site is allocated in the East Northamptonshire Council Part 2 Local Plan under policy EN33 (Rectory Business Centre, Rushden). Allocation is for approximately 35 dwellings.
Federal Estates, Newton Road, Higham Ferrers (Policy EN34)	4.4	The site is allocated in the East Northamptonshire Council Part 2 Local Plan under policy EN34 (Federal Estates/ former Textile Bonding factory site, Newton Road/Midland Road, Higham Ferrers) . Allocation is for approximately 120 dwellings.
Milton Keynes		
MK Gateway, MK Gateway, Saxon Court, Avebury Boulevard, Central Milton Keynes	1.12	Permissioned
The Agora, The Agora Centre, Church Street, Wolverton, MK12 5LG	1.2	Permissioned
Railway Works, Railcare Maintenance Depot, Stratford Road, Wolverton, MK12 5NT	15.8	Permissioned Demolition of all existing structures (except part of the lifting shop building and the brick wall on Stratford Road which are partially demolished) and development to create a new employment floorspace (use classes B1/B2/B8), up to 375 residential units (Use class C3), a new foodstore (use class A1), a new community facility (use class D1 or D2) new hard and soft landscaping, open space and public realm, amended site vehicular access including alterations to junctions and pavements
Warren Yard, Warren Yard, Wolverton Mill,	1.97	



Location	Site Size (ha)	Comments
Milton Keynes, MK12 5NW		
Atrium 19 Capital Drive, Linford Wood, Milton Keynes	1.88	
Site D3.4, Secklow Gate, Central Milton Keynes	1.03	
Food Centre, Lower Twelfth Street, Central Milton Keynes	2.38	
Bedford Borough Council		
Wixams New Settlement LPH14 H31, Wixams (Land focused on the Elstow Storage Depot)	189.72	Permissioned Mixed use development of residential, employment, retail, leisure, community uses and open space (844 units to be completed).
Britannia Iron Works, Kempston Road Phase E, Bedford	3.73	Permissioned Erection of 206 residential units forming apartments, mezzanine and family 2, 3 and 4 bedroom units. Monitoring Report 2020/21 shows completed.
Land at RAF Cardington, Phase 2A, The Highway, Shortstown	4.01	Permissioned Phase 2A, erection of 93 dwellings, 6xB1 office units, access roads, parking, open space, public art landscaping and associated works pursuant to outline permission 02/01920/OUT. Monitoring Report 2020/21 shows completed.
Land at RAF Cardington, Phase 2B, The Highway, Shortstown	4.55	Permissioned
Land at RAF Cardington, Phase 2C, The Highway, Shortstown	5.43	Permissioned Phase 2B, erection of 128 dwellings, access, parking, open space including play areas landscaping and associated works pursuant to outline permission 02/01920/OUT. Monitoring Report 2020/21 shows completed.



Location	Site Size (ha)	Comments
Former De Montford University site, Lansdowne Road, Bedford	1.84	Permissioned Phase 2C, erection of 171 dwellings, parking, open space, landscaping and associated works pursuant to outline permission 01/01920/OUT. Monitoring Report 2020/21 shows completed.
Former Putnoe Lower School, Overdale, Bedford	1.06	Permissioned Demolition of existing buildings and erection of 152 dwellings. Monitoring Report 2022/23 shows completed.
Former Stewartby Brickworks, Green Lane, Stewartby	54.35	Permissioned Erection of 54 assisted living and 34 retirement living apartments and associated communal facilities. Total 88 units. Monitoring Report 2022/23 shows completed.
Borough Hall, Bedford	3.91	Not permissioned Local Plan 2030 allocation.
Ford End Road, Bedford	24.58	Not permissioned Local Plan 2030 allocation. Delivery of the site may continue beyond 2030.
Greyfriars, Bedford	1.19	Not permissioned Local Plan 2030 allocation.
South of the river, Bedford	14.66	Not permissioned Local Plan 2030 allocation. Delivery of the site may continue beyond 2030.
The Station area, Bedford	4.46	Not permissioned Local Plan 2030 allocation. Delivery of the site may continue beyond 2030.
The Bury, Cemetery Rd, Kempston	1.65	Permissioned Refurbishment and new dwellings in grounds to provide 55 units gross. Reserved matters 19/01282/MAR. Monitoring Report 2022/23 shows completed.
Former Hazelwood Foods Ltd Site, Dallas Road, Bedford	2.83	Permissioned Development of site to provide 341 dwellings.
Land at 59-61 Roxton Road, Great Barford	2.61	Permissioned Development of site to provide 77 dwellings (originally 81 dwellings reduced in reserved matters)



Location	Site Size (ha)	Comments
		18/02667/MAR). Monitoring Report 2022/23 shows completed.
Bury Court, Church Lane, Bedford	1.03	Permissioned Demolition of dilapidated garages and erection of new build block of 9 flats
Aspects Leisure Park, Bedford	4.69	Pending decision Redevelopment of Aspects Leisure Park including the erection of 128 residential flats (total) in 4 blocks. Resolution to grant subject to s106.
Technology House, 239 Ampthill Road, Bedford	3.06	Permissioned Change of use from offices to dwellings.
Old Stable Yard, Lower Farm Road, Bromham	1.6	Not permissioned Bromham Neighbourhood Plan allocation.



Annex D

Assessment Indicators and Evaluation Criteria

B1 Land Use

Assessment Indicator: Does the potential development area have any existing land uses/development allocations/ safeguarded areas/extant planning permissions which would potentially conflict with the proposed development having regard to the following evaluation criteria?

- Type of existing land uses within and adjacent to the potential development area.
- Extant planning permissions within the potential development area.
- Local plan/ emerging local plan development allocations within the potential development area.
- Number and location of public rights of way within the potential development area.

	The potential development area has the potential to conflict with existing land uses, extant planning permissions and policy allocations which would be difficult to avoid.
	The potential development area has the potential to conflict with existing land uses, extant planning permissions and policy allocations which can be avoided.
	The potential development area has no land use conflicts

B.2 Deliverability of Grid Connection

Assessment Indicator: Is the potential development area's grid connection likely to encounter constraints e.g. crossing of roads, rivers and railway and sensitive environmental designations and require significant land take?

- Type and number of constraints and designations.
- Length of connection.

	The potential development area has potential to have significant constraints to achieve its grid connection which would be very difficult to mitigate/overcome.
	The potential development area has potential to have some constraints to achieve its grid connection.



	The potential development area is unlikely to encounter any constraints to achieve its grid connection
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B.3 Ecology and Biodiversity

Assessment Indicator: Is the potential development area likely to adversely impact any internationally, nationally or locally designated site of ecological, biological or geological importance, (b) habitats identified as being of principal importance for the conservation of biodiversity having regard to the following evaluation criteria?

- Proximity of designated sites.
- Level of designation and sensitivity of those designated sites.
- Potential for provision of mitigation measures.

	The potential development area has potential to have a significant adverse impact on (a) an internationally, nationally or locally designated site of ecological, biological or geological importance, (b) protected species, (b) habitats identified as being of principal importance for the conservation of biodiversity, which may be difficult to mitigate.
	The potential development area has potential for some adverse impact on (a) an internationally, nationally or locally designated site of ecological, biological or geological importance, (b) protected species, (b) habitats identified as being of principal importance for the conservation of biodiversity, which could be mitigated through appropriate buffers and management measures.
	The potential development area is unlikely to impact upon on (a) an internationally, nationally or locally designated site of ecological, biological or geological importance, (b) habitats identified as being of principal importance for the conservation of biodiversity.

B.4 Landscape and Visual

Assessment Indicator: Is the potential development area likely to adversely impact a locally or nationally designated landscape, or sensitive viewpoints, having regard to the following evaluation criteria?

- Proximity of the potential development area from locally or nationally designated landscape, or sensitive viewpoints.
- Sensitivity and number of locally or nationally designated landscape, or potentially sensitive viewpoints such as from public rights of way or other public locations.
- Proximity of the potential development area from local community receptors.



- Potential for provision of screening or other mitigation measures.

	The potential development area has the potential to have a significant adverse impact on a locally or nationally designated landscape, or important/sensitive viewpoints, which may be difficult to mitigate.
	The potential development area has potential to have some adverse impact on a locally or nationally designated landscape, or important/sensitive viewpoints, which may be difficult to mitigate.
	The potential development area is unlikely to have an adverse impact on a locally or nationally designated landscape, or important/sensitive viewpoints, other than one which is unlikely to be difficult to mitigate

B.5 Cultural Heritage

Assessment Indicator: Is the potential development area likely to adversely impact designated heritage assets, having regard to the following evaluation criteria?

- Proximity to designated heritage assets.
- Level and sensitivity of designated heritage assets.
- Potential for screening the potential development area from the asset.

	The potential development area has potential to have harm to a large number of designated heritage assets, which may be difficult to avoid and mitigate.
	The potential development area has potential to have harm to a large number of designated heritage assets but could incorporate mitigation e.g. buffers/screening or has potential to have harm to a small number of designated heritage assets which may be difficult to mitigate/avoid.
	The potential development area is likely to cause harm to a small number of designated assets and can accommodate appropriate buffers/mitigation measures to reduce impacts.

B.6 Access for Construction Traffic

Assessment Indicator: Is the local road network, from the primary road network to the potential development area, suitable for HGV access, having regard to the following evaluation criteria?

- General suitability of the public highway.



- Distance to the primary road network.
- Sensitivity of land uses along the route to the primary road network.
- Physical or engineering constraints (bridges, level crossings, visibility, access points etc.).
- Access to fields without having to remove hedgerows.

	The local road network has significant constraints to HGV access
	The local road network has some constraints to HGV access.
	The local road network is suitable for HGV access.

B.7 Flood Risk

Assessment Indicator: Is the potential development area likely to be constrained by the risk of flooding?

- Proximity to nearby watercourses.
- Proportion of the potential development area within Flood Zone 2 or 3.

	The majority of the development area is within an area with moderate or significant risk of flooding.
	The majority of the development area is within an area with no or a low risk of flooding, but part of the area is within an area with a moderate or significant risk of flooding.
	The development area is entirely within an area with no or a low risk of flooding.

B.8 Solar Array Shading

Assessment Indicator: Is the potential development area likely to be constrained by features which would result in shading having regard to the following factors?

- Type and coverage (number) of features that might shade e.g. trees/woodland.

	The potential development area has field boundary features which are likely to significantly constrain the solar array design
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	The potential development area has field boundary features which are likely to moderately constrain the solar array design.
	The potential development area has field boundary features which are unlikely to constrain the solar array design.

B.9 Topography

Assessment Indicator: Is the potential development area affected by an undulating terrain of multiple gradients?

- Proportion of the potential development area that is undulating/has varied topography.

	The potential development area has significant undulation which is likely to significantly constrain the solar array design.
	The potential development area has undulation which is likely to moderately constrain the solar array design.
	The potential development area has insignificant undulation which is unlikely to constrain the solar array design.



Annex E Criteria Table

Stage 2: Spatial Mapping Constraints/Stage 4 Assessment Indicator and Justification	Relevant National Policy Statement Policy	Relevant Local Planning Policy
<p>Land Use</p> <p>Planning policy expects developments to minimise the loss of the best and most versatile agricultural land (grades 1, 2 and 3a Agricultural Land Classification) and preferably use land that is not classified as best and most versatile (grades 3b, 4 and 5). Policies also encourage the use of previously developed land unless there are no reasonable alternative sites for development. Planning policy aims to protect the following land uses/designations:</p> <p>Local amenity – avoiding amenity impacts from development on local residents and users of an area</p> <p>Mineral resources – by avoiding development permanently sterilising mineral resource.</p> <p>Public rights of way</p>	<p>NPS EN-1</p> <p>Paragraph 5.11.12</p> <p>Paragraph 5.11.13</p> <p>Paragraph 5.11.14</p> <p>Paragraph 5.11.18</p> <p>Paragraph 5.11.19</p> <p>Paragraph 5.11.28</p> <p>Paragraph 5.11.30</p> <p>NPS EN-2</p> <p>Paragraph 2.10.28</p> <p>Paragraph 2.10.29</p> <p>Paragraph 2.10.30</p> <p>Paragraph 2.10.31</p> <p>Paragraph 2.10.33</p>	<p>Wellingborough Local Plan Part 2 – Policy Site 9</p> <p>South Northamptonshire Local Plan – Policy INF1</p> <p>Northamptonshire Minerals and Waste Local Plan – Policy 30</p> <p>Milton Keynes Plan – Policy FR1</p> <p>Emerging MK City Plan 2050 – Policy GS10</p>



Stage 2: Spatial Mapping Constraints/Stage 4 Assessment Indicator and Justification	Relevant National Policy Statement Policy	Relevant Local Planning Policy
<p>Existing and proposed development uses – from conflicting development types.</p>	<p>Paragraph 2.10.40</p> <p>Paragraph 2.10.41</p> <p>Paragraph 2.10.42</p> <p>Paragraph 2.10.43</p> <p>Paragraph 2.10.44</p> <p>Paragraph 2.10.45</p>	
<p>Grid Connection</p> <p>With increased distance from the connection point comes increased potential for environmental impact associated with construction of a longer connection infrastructure and potential for increased complexity if multiple land owners and/or requirements to cross other features in the landscape (roads, railways etc.) are involved.</p>	<p>NPS EN3</p> <p>Paragraph 2.10.21</p> <p>Paragraph 2.10.22</p> <p>Paragraph 2.10.24</p> <p>Paragraph 2.10.25</p> <p>Paragraph 2.10.26</p> <p>BRE: Planning guidance for the development of large scale ground mounted solar PV systems</p> <p>https://www.bre.co.uk/filelibrary/pdf/other_pdfs/KN5524_Planning_Guidance_reduced.pdf (accessed June 2021)</p>	



Stage 2: Spatial Mapping Constraints/Stage 4 Assessment Indicator and Justification	Relevant National Policy Statement Policy	Relevant Local Planning Policy
<p>Ecology and Biodiversity</p> <p>Planning policy aims to protect designated sites of ecological, biological or geological importance, protected species, habitats or other species identified as being of principal importance for the conservation of biodiversity. This includes ancient woodland and veteran trees. National policy expects consents to be refused if significant harm to biodiversity resulting from a development cannot be avoided adequately mitigated, or, as a last resort, compensated for.</p>	<p>NPS EN-1</p> <p>Paragraph 5.4.35</p> <p>NPS EN-3</p> <p>Section 2.10 (paragraphs 2.10.75 to 2.10.92)</p> <p>NPS EN-5</p> <p>Section 2.5</p>	<p>North Northamptonshire Joint Core Strategy 2011 to 2031 – Policy 4</p> <p>West Northamptonshire Joint Core Strategy Local Plan – Section 10</p> <p>Milton Keynes Council Plan: MK 2016-2031 Section 12</p> <p>Bedford Borough Council Local Plan 2030 – Policies 7S, 32, 35S, 38, 39, 40, 42S and 43.</p> <p>Daventry Local Plan Part 2 - Policy ENV9</p>
<p>Landscape and Visual</p> <p>Planning policy affords the highest protection to nationally designated landscapes such as National Parks, the Broads and Areas of Outstanding Natural Beauty) and also aims to avoid impacts on sensitive visual receptors. Outside nationally designated areas, there are local landscapes that may be highly valued locally and protected</p>	<p>NPS EN-1</p> <p>Paragraph 5.10.19</p> <p>Paragraph 2.10.25</p>	<p>North Northamptonshire Local Plan (Adopted 2016) - Policy 4 and Policy 19.</p> <p>North Northamptonshire Joint Core Strategy – Policy 3</p> <p>West Northamptonshire Joint Core Strategy – Policy S11 and Policy BN5</p> <p>Wellingborough Local Plan Part 2</p> <p>Milton Keynes Council Plan – Policy SD1</p>



Stage 2: Spatial Mapping Constraints/Stage 4 Assessment Indicator and Justification	Relevant National Policy Statement Policy	Relevant Local Planning Policy
<p>by local designation. NPS EN-1 policies expects the consideration of local policies for DCO applications where a local development document in England has policies based on landscape character assessment and states that it will need to be determined whether the visual effects on sensitive receptors such as local residents outweigh the benefits of the proposed development.</p> <p>NPS EN-1 suggests that adverse landscape and visual effects may be minimised through appropriate siting of infrastructure within that site, design including colours and materials, and landscaping schemes.</p>		<p>Emerging MK City Plans – Policy GS6</p> <p>Bedford Borough Local Plan 2030 (Adopted 2020)</p> <p>Emerging Bedford Borough Local Plan 2040 (Examination underway)</p> <p>Daventry Local Plan Part 2 – ENV1</p> <p>South Northamptonshire Local Plan Part 2 – Policy SS2</p>
<p>Cultural Heritage</p> <p>Protection and conservation of designated and undesignated heritage assets. The higher the significance of the asset, the greater the presumption in favour of its conservation. Some heritage assets have a level of significance</p>	<p>NPS EN-1</p> <p>Paragraph 5.9.9</p> <p>Paragraph 5.9.10</p> <p>NPS EN-3</p> <p>Paragraph 2.10.107</p>	<p>North Northamptonshire Joint Core Strategy – Policy 26</p> <p>West Northamptonshire Joint Core Strategy – Policy S10 and Policy BN1, BN3, BN4 and BN5</p> <p>Milton Keynes Plan – Policy HE1 and Policy D1</p> <p>Emerging MK City Plans – Policy GS6 / GS9 and Policy ECP5</p>



Stage 2: Spatial Mapping Constraints/Stage 4 Assessment Indicator and Justification	Relevant National Policy Statement Policy	Relevant Local Planning Policy
that justifies official designation. Categories of designated heritage assets are: World Heritage Site; Scheduled Monument; Protected Wreck Site; Protected Military Remains, Listed Building; Registered Park and Garden; Registered Battlefield; Conservation Area. NPS EN-1 also states that there are heritage assets with archaeological interest that are not currently designated as scheduled monuments, but which are demonstrably of equivalent significance and therefore in some cases should also be subject to the same policy considerations as those that apply to designated heritage assets. There is a desirability for new development to make a positive contribution to the character and local distinctiveness of the historic environment. The NPPF introduce the concept that heritage assets can be harmed or lost through alteration or destruction or development within their setting. This harm ranges from less than substantial through to substantial. With regard to designated assets	Paragraph 2.10.108 Paragraphs 2.10.112 to 117.	Daventry Local Plan Part 2 – SP1 and ENV7 South Northamptonshire Local Plan Part 2 – Policy SS2 and HE1 / HE7



Stage 2: Spatial Mapping Constraints/Stage 4 Assessment Indicator and Justification	Relevant National Policy Statement Policy	Relevant Local Planning Policy
such as listed buildings, paragraph 199 states that great weight should be given to an asset's conservation and 'the more important the asset, the greater the weight should be'. This is irrespective of the level of harm to its significance as a result of any proposals. Distinction is drawn between those assets of exceptional interest (e.g. grade I and grade II* listed buildings), and those of special interest (e.g. grade II listed buildings). NPPF paragraph 200 requires any harm or loss of heritage significance to have clear and convincing justification, and substantial harm or loss should be wholly exceptional with regard to those assets of greatest interest. NPPF paragraph 201 explains that in instances where development would cause substantial harm to or total loss of significance of a designated asset, consent should be refused unless that harm or loss is "necessary to achieve substantial public benefits that outweigh that harm or loss". In instances where development would cause less than substantial harm to the significance		



Stage 2: Spatial Mapping Constraints/Stage 4 Assessment Indicator and Justification	Relevant National Policy Statement Policy	Relevant Local Planning Policy
<p>of a designated asset, paragraph 202 states ‘this harm should be weighed against the public benefits of the proposal including where appropriate, securing its optimum viable use’. Significance with regard to heritage planning policy is defined in the Glossary of the NPPF as: ‘The value of a heritage asset to this and future generations because of its heritage interest. The interest may be archaeological, architectural, artistic or historic. Significance derives not only from a heritage asset’s physical presence, but also from its setting.’</p>		
<p>Traffic and Access</p> <p>Planning policy expects the impacts of traffic from development to be minimised. Accessibility to land areas is important to allow construction without significant traffic management or alterations to the road network ‘A new energy NSIP may give rise to substantial impacts on the surrounding transport infrastructure and NPS EN-1 expects the Secretary of State</p>	<p>NPS EN-3</p> <p>Paragraph 2.10.120</p> <p>Paragraph 2.10.121</p> <p>Paragraph 2.10.126</p>	<p>North Northamptonshire Joint Core Strategy – Policy 3 and Policy 26</p> <p>Daventry Local Plan – CW1</p> <p>Milton Keynes Plan – Policy SD1 and Policy CT2</p> <p>Emerging MK City Local Plan 2025 – Policy CEA7</p>



Stage 2: Spatial Mapping Constraints/Stage 4 Assessment Indicator and Justification	Relevant National Policy Statement Policy	Relevant Local Planning Policy
to therefore ensure that the applicant has sought to mitigate these impacts, including during the construction phase of the development.		
<p>Flood Risk</p> <p>Planning policy expects the avoidance of Flood Zones 2 and 3 for development demonstrating a sequential approach to locating development with respect to flood risk has been followed.</p> <p>NPS EN-5 expects electrical connection infrastructure to be resilient to flooding.</p>	<p>NPS EN-2</p> <p>Paragraph 2.10.84</p> <p>Paragraph 2.10.85</p> <p>Paragraph 2.10.86</p> <p>Paragraph 2.10.87</p> <p>Paragraph 2.10.88</p> <p>NPPF</p> <p>Paragraph 159</p> <p>Paragraph 163</p> <p>Paragraph 164</p> <p>Paragraph 167</p> <p>Paragraph 169</p> <p>Paragraph 174</p>	<p>North Northamptonshire Joint Core Strategy – Policy 5</p> <p>West Northamptonshire Joint Core Strategy – Policy BN1 and BN7</p> <p>Daventry Local Plan Part 2 – ENV11</p> <p>South Northamptonshire Local Plan Part 2 – Policy SS2</p> <p>Northamptonshire Minerals and Waste Local Plan – Policy 27</p> <p>Milton Keynes Plan – Policy FR1 and FR2 and Policy NE4</p> <p>Emerging MK City Plans – Policy GS9 and Policy CEA7</p>



Stage 2: Spatial Mapping Constraints/Stage 4 Assessment Indicator and Justification	Relevant National Policy Statement Policy	Relevant Local Planning Policy
<p>Solar Array Shading</p> <p>Shading can have impacts on solar thermal and photovoltaic system outputs. Accounting for shading factors is therefore a very important aspect of solar energy system design.</p>	<p>Relevant Guidance The Solar Design Company</p> <p>https://www.solardesign.co.uk/shading-intro.php (accessed June 2021)</p> <p>BRE: Planning guidance for the development of large scale ground mounted solar PV systems</p> <p>https://www.bre.co.uk/filelibrary/pdf/other_pdfs/KN5524_Planning_Guidance_reduced.pdf (accessed June 2021)</p>	
<p>Topography</p> <p>Flat land which does not undulate significantly is preferred for solar PV energy generation optimisation and makes it easier to visually screen the development</p>	<p>NPS EN3</p> <p>2.10.19 and 2.10.20</p> <p>Relevant Guidance The Solar Design Company</p> <p>https://www.solardesign.co.uk/shading-intro.php (accessed June 2021)</p> <p>BRE: Planning guidance for the development of large scale ground mounted solar PV systems</p> <p>https://www.bre.co.uk/filelibrary/pdf/other_pdfs/KN5524_Planning_Guidance_reduced.pdf (accessed June 2021)</p>	



Annex F Potential Development Area Proformas

PDA 1 - Yardley Hastings to Olney (Figure 5.8)

Category	Appraisal	
Size (ha)	The total area of this PDA is 1,167.5 ha.	
Indicator	RAG	Justification
Land use	Red	Does not include Best and Most Versatile (BMV) agricultural land according to Natural England mapping. No Grade 3 ALC identified. However, the PDA site does include large areas of existing woodland.
Grid Connection	Green	All four sites are located within 20 km from POC
Ecology and Biodiversity	Red	There are three designed Site of Special Scientific Interest (SSSI) adjacent to the PDA site. There are 53 areas designated for ancient woodland within the PDA Site. No SAC, SPA and Ramsar identified within the PDA Site.
Landscape and Visual	Light Green	The sites lie outside an Area of Outstanding Natural Beauty. The sites lie outside any local landscape designations within the Milton Keynes Local Plan.
Cultural Heritage	Yellow	Three of the four sites lies within a 500m distance to Grade I and Grade II listed properties. The only Grade 1 listed building is the Church of St Michael, located southeast within 500m of the site. There are six listed buildings and 2 scheduled monuments within the PDA site. These are the Lavendon Caste and The Bury. There are also two Conservations Areas.
Access for Construction Traffic	Yellow	Sites would be accessed through local roads from M1 and A509 road. Local roads would be needed – potential issues with abnormal load deliveries due to non-availability of Black Routes to the PDA site.
Flood Risk	Red	According to the EA's Flood Map for Planning (updated March 2025), three of the five land parcels which make up the PDA are



Category	Appraisal	
		<p>within Flood Zone 3. Flood Zone 3 covers a total of 185.24 hectares or 15.87% of the PDA.</p> <p>According to the EA's Risk of Surface Water Flooding (RoFSW) map (updated January 2025), the PDA is largely at Very Low (<0.1% annual probability) of surface water flooding, with areas of Low to High risk of surface water flooding. The extents of the surface water flood risk across the northernmost parcels largely concur with pathways and minor depressions which bisect the agricultural fields, with surface water extents in the southernmost parcels largely associated with existing watercourses / land drains.</p> <p>BGS Geology Mapping indicates the superficial deposits comprise largely Oadby Member with some small areas of Glaciofluvial Deposits and Head in the northernmost parcels, with some additional deposits of Alluvium, Felmersham Member and Stoke Goldington Member in the southernmost parcels. Soils mapping indicates that the site is located in soils with a varying range of permeability, areas in closest proximity to the watercourses within the sites are shown to have naturally wet drainage and are expected to have higher groundwater levels.</p>
Topography		Land is within acceptable limits (under 5 degrees gradient)

PDA 2 - Higham Ferrers to Bedford

Category	Appraisal	
Size (ha)	The total area of this PDA is 1,112.6 ha.	
Indicator	RAG	Justification
Land use		Excludes 100% Best and Most Versatile (BMV) agricultural land according to Natural England mapping. However, the PDA site includes other existing land uses including airport and race track uses which would limit the viability of replacing with solar farm development.
Grid Connection		All four sites are located within 20 km from POC.



Category	Appraisal	
Ecology and Biodiversity		<p>None of the four sites lies within or adjacent to the designed Site of Special Scientific Interest (SSSI).</p> <p>Three of the four sites lie within areas of designated Ancient Woodland.</p>
Landscape and Visual		<p>The sites lie outside an Area of Outstanding Natural Beauty.</p> <p>The sites lie outside any local landscape designations within local planning policy.</p>
Cultural Heritage		<p>There is a Grade II* listed building (Melchbourne House) with the site boundary.</p>
Access for Construction Traffic		<p>Sites would be accessed through local roads from M1 and A509 road. Local roads would be needed – potential issues with abnormal load deliveries due to non-availability of Black Routes to the PDA site.</p>
Flood Risk		<p>According to the EA's Flood Map for Planning (updated March 2025), two of the four land parcels within PDA 2 have areas within Flood Zone 3, albeit these remain small portions of the site. Flood Zone 3 covers a total of 0.43 hectares or 0.03% of the PDA.</p> <p>According to the EA's Risk of Surface Water Flooding (RoFSW) map (updated January 2025), the parcels are largely at Very Low (<0.1% annual probability) of surface water flooding, with areas of Low to High risk of surface water flooding. The extents of the surface water flood risk across PDA 2 are largely associated with topographic lows within the agricultural land uses.</p> <p>BGS Geology Mapping indicates the PDA has superficial geology which largely comprises Oadby Member with some small areas of Alluvium and Head deposits. Soils mapping indicates that the PDA is located in soils largely with impeded drainage or slightly impeded drainage.</p>
Topography		<p>Land is within acceptable limits (under 5 degree gradient)</p>



PDA 3 - A14 to Wellingborough

Category	Appraisal	
Size (ha)	The total area of this PDA is 3,664.64 ha.	
Indicator	RAG	Justification
Land use	Red	The PDA is within an area of Grade 3 land and includes some Grade 2 land.
Grid Connection	Green	All four sites are located within 20 km from PoC.
Ecology and Biodiversity	Red	There are four designed Site of Special Scientific Interest (SSSI) adjacent to the PDA site.
Landscape and Visual	Light Green	The sites lie outside an Area of Outstanding Natural Beauty. The sites lie outside any local landscape designations within local planning policy.
Cultural Heritage	Red	There is a Grade II listed building within the part of the PDA site. There are two Grade I listed buildings, The Church of St Peter and the Church of St Andrew, which are both within 500m of the PDA site. There are a total of 16 Grade II listed buildings within 500m of the PDA site. There are three Scheduled Monuments at within 100m. These are named as the abandoned areas of Walgrave Medieval Village.
Access for Construction Traffic	Yellow	Sites would be accessed through local roads from M1 and A509 road. Local roads would be needed – potential issues with abnormal load deliveries.
Flood Risk	Light Green	According to the EA's Flood Map for Planning (updated March 2025), five of the six main parcels within the PDA have areas within Flood Zone 3. The largest of the parcels (in the west) has the most significant area of coverage due to the presence of a Main River running through the central extents. Flood Zone 3 covers a total of 89.88 hectares or 2.45% of the PDA.



Category	Appraisal	
		<p>According to the EA's Risk of Surface Water Flooding (RoFSW) map (updated January 2025), the PDA is largely at Very Low (<0.1% annual probability) of surface water flooding, with concentrated areas of Low to High risk of surface water flooding. The extents of the surface water flood risk and flow routes across the PDA largely concur with existing land drains / watercourses which run through the wider area.</p> <p>BGS Geology Mapping indicates the PDA has superficial geology which comprises a mix of Alluvium, Alluvial Fan Deposits, River Terrace Deposits, Glaciofluvial Deposits and Oadby Member. Soils mapping indicates that the site is located in soils with a varying range of permeability, areas in closest proximity to the watercourses within the parcels are shown to have naturally wet drainage and are expected to have higher groundwater levels.</p>
Topography		Land is within acceptable limits (under 5 degree gradient)

PDA 4 - Irthlingborough

Category	Appraisal	
Size (ha)	The total area of this PDA is 1,132.15ha.	
Indicator	RAG	Justification
Land use		The PDA is within an area of Grade 3 land.
Grid Connection		All four sites are located within 20 km from POC.
Ecology and Biodiversity		<p>There is one designed Site of Special Scientific Interest (SSSI) within the PDA site.</p> <p>Three of the four sites lie within areas of designated Ancient Woodland.</p>
Landscape and Visual		<p>The sites lie outside an Area of Outstanding Natural Beauty.</p> <p>The sites lie outside any local landscape designations within local planning policy.</p>



Category	Appraisal	
Cultural Heritage		<p>There are 3 Grade II listed buildings within the second site.</p> <p>There is a Grade I listed building, St Marys Church, within 100m from the Site.</p> <p>There are 2 Grade II* listed buildings within 100m from the site. These are Charity House and Attached Walls and Vicarage, Chantry House, Bede House and Attached Carriage House.</p>
Access for Construction Traffic		Sites would be accessed through local roads from M1 and A509 road. Local roads would be needed – potential issues with abnormal load deliveries.
Flood Risk		<p>According to the EA's Flood Map for Planning (updated March 2025), the PDA has some small areas along the periphery within Flood Zone 3. Flood Zone 3 covers a total of 21.55 hectares or 1.9% of the PDA.</p> <p>According to the EA's Risk of Surface Water Flooding (RoFSW) map (updated January 2025), the PDA is largely at Very Low (<0.1% annual probability) of surface water flooding, with areas of Low to High risk of surface water flooding. The extents of the surface water flood risk across the PDA largely concur with topographic lows, ponding in routes which bisect the agricultural fields and existing roads.</p> <p>BGS Geology Mapping indicates the PDA has superficial geology which comprises a mix of Alluvium, Oadby Member and Ecton Member. Soils mapping indicates that the PDA is located in soils with slightly impeded drainage.</p>
Topography		Land is within acceptable limits (under 5 degree gradient)

PDA 5 - A428 to Moulton

Category	Appraisal	
Size (ha)	The total area of this PDA is 1329.02ha.	
Indicator	RAG	Justification
Land use		The PDA is within an area of Grade 3 land.



Category	Appraisal	
Grid Connection		All four sites are located within 20 km from the Grendon substation POC.
Ecology and Biodiversity		<p>None of the four sites lies within or adjacent to the designed Site of Special Scientific Interest (SSSI).</p> <p>One of the sites lies within 100m to Pitsford Lake SSSI.</p>
Landscape and Visual		<p>The sites lie outside any Area of Outstanding Natural Beauty.</p> <p>The sites lie outside any local landscape designations within local planning policy.</p>
Cultural Heritage		There are 7 Grade II listed buildings within the site boundary.
Access for Construction Traffic		Sites would be accessed through local roads from M1 and A509 road. Local roads would be needed – potential issues with abnormal load deliveries.
Flood Risk		<p>According to the EA's Flood Map for Planning (updated March 2025), three of the five separate land parcels within the PDA have areas within Flood Zone 3. However, the Sites are largely outside of the Flood Zones with the Flood Zones mainly present along the periphery. Flood Zone 3 covers a total of 23.26 hectares or 1.75% of the PDA.</p> <p>According to the EA's Risk of Surface Water Flooding (RoFSW) map (updated January 2025), the sites are largely at Very Low (<0.1% annual probability) of surface water flooding, with areas of Low to High risk of surface water flooding. The extents of the surface water flood risk across the sites largely concur with existing land drains / watercourses which run through the PDA and wider areas.</p> <p>BGS Geology Mapping indicates the site has superficial geology which comprises a mix of Alluvium, Oadby Member, Glaciofluvial Deposits.</p> <p>Soilscapes mapping indicates that the site is located in soils with a varying range of permeability, areas in closest proximity to the watercourses within the sites (associated with Alluvium) are shown to have naturally wet drainage and are expected to have higher groundwater levels.</p>



Category	Appraisal	
Topography		Land is within acceptable limits (under 5 degree gradient)

PDA 6 – Green Hill Development Site Area

Category	Appraisal	
Size (ha)	The total area of this PDA is 1,200.6 ha.	
Indicator	RAG	Justification
Land use		The PDA is within and area of Grade 3 land and includes areas of Grade 2 land.
Grid Connection		All sites are located within 20 km from the Grendon substation Point of Connection. Green Hill BESS, Green Hill E and Green F are within 5km of the
Ecology and Biodiversity		<p>This area does not lie within a designed Site of Special Scientific Interest (SSSI).</p> <p>The area lies near to the Upper Nene Gravel Pits Special Protection Areas and Site of Special Scientific Interest.</p> <p>The area is adjacent to areas of designated Ancient Woodland.</p>
Landscape and Visual		<p>The sites lie outside any Area of Outstanding Natural Beauty.</p> <p>The sites lie outside any local landscape designations within local planning policy.</p>
Cultural Heritage		<p>The PDA lies outside any Registered Park and Garden. Castle Ashby Registered Park and Garden lies in close proximity to the site boundary at the proposed Green Hill BESS site (at Grendon substation).</p> <p>There are no Conservation Areas within the site boundary. There are four conservation areas within proximity to the development areas (Castle Ashby, Easton Maudit, Grendon and Mears Ashby).</p> <p>There are no listed buildings within the site boundary. There are a number of listed buildings within the 500m study area including</p>



Category	Appraisal	
		the Grade I listed Church of St Mary (Bozeat), Church of St Peter and St Paul (Easton Maudit), Church of St Mary Magdalen (Castle Ashby), Church of All Saints (Earls Barton).
Access for Construction Traffic		Except for Green Hill D, all the Sites would be accessed through local roads from M1 and A509 road and good availability of Black Routes. The Sites are located close to suitable junctions to the Strategic Road Network.
Flood Risk		<p>According to the EA's Flood Map for Planning (updated March 2025), four of the eight separate land parcels and the proposed BESS area have areas within Flood Zone 3. The Sites are largely outside of the Flood Zones with the Zones just clipping the Sites in many locations. Flood Zone 3 covers an area of around 50 hectares or under 5% of the PDA.</p> <p>According to the EA's Risk of Surface Water Flooding (RoFSW) map (updated January 2025), the sites are largely at Very Low (<0.1% annual probability) of surface water flooding, with areas of Low to High risk of surface water flooding. The extents of the surface water flood risk across the sites largely concur with existing land drains / watercourses which run through the wider area, or topographic lows.</p> <p>BGS Geology Mapping indicates the site has superficial geology which comprises a mix of Alluvium, Glaciofluvial Deposits, Oadby Member, Ecton Member, Milton Sand and Bozeat Till. Soils mapping indicates that the site is located in soils with a varying range of permeability, areas in closest proximity to the watercourses within the sites are shown to have naturally wet drainage and are expected to have higher groundwater levels.</p>
Topography		Land is within acceptable limits (under 5 degree gradient).



