Steeple Renewables Project

Chapter 3 - Site Description, Site Selection and Iterative Design Process

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Chapter 3: Site Description, Site Selection and Iterative Design Process

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3. Site Description, Site Selection and Iterative Design Process

3.1 Introduction

3.1.1 This chapter of the ES provides a description of the Site and its surrounding context. Detailed topic specific descriptions are expanded upon in the supporting technical chapters and technical appendices. It also provides a description of the main alternatives considered, including the site selection process and the evolution of the Proposed Development to date.

3.1.2 This chapter includes the following sections:

- Site Description- a description of the existing conditions within the Proposed Development and the surrounding areas and the key receptors that will be assessed in detail within the technical topic chapters;
- Site Selection- an initial overview of the site selection process undertaken for the Proposed Development; and
- Iterative Design Process- an initial overview of the iterative design process undertaken so far and a description of the main alternatives to the Proposed Development.

3.2 Site Context and Description

The Order Limits

3.2.1 The Order Limits for the Proposed Development, which considers the maximum area of land potentially required for the construction, operation and decommissioning of the Proposed Development, is shown in **Figure 1.1 Site Location Plan [EN010163/APP/6.4.1]**.

3.2.2 The Order Limits show the maximum extent of land required for the Proposed Development. The **Land Plans [EN010163/APP/2.2]** show the extent of land over which rights of compulsory acquisition are sought as part of the Development Consent Order (DCO) application.

3.2.3 The Proposed Development has been subject to ongoing design development and the Order Limits have been refined in response to environmental and technical factors including the Environmental Impact Assessment (EIA) process, and consultation responses. This process has ensured that the Order Limits only include

land which is required to deliver the Proposed Development, highway improvement and mitigation works, and biodiversity mitigation areas.

3.2.4 The Site can be divided into two 'halves' that are formed around Sturton le Steeple (excluded from the Site): 'the western half'; and 'the eastern half' (see **Figure 2.1 – Indicative Site Layout [EN010163/APP/6.4.2]**).

3.2.5 Two areas in the east and western halves of the Site are void of development, with habitat enhancement measures to be delivered in these areas known as the 'Biodiversity Mitigation Areas', combined approximate area of 200ha.

Existing Conditions within and surrounding the Site

3.2.6 The existing constraints pertinent to the Site outlined within this chapter were identified through a desktop search of readily available data, and include the following:

- Statutory nature conservation designations;
- Local nature designations;
- Scheduled Monuments;
- Conservation Areas;
- Waterbodies;
- Flood zones;
- Areas of vegetation; and
- Public Rights of Way (PRoW).

3.2.7 The Site extends to 888.3 ha and primarily comprises multiple agricultural fields defined by hedgerow and individual trees. The figures supporting **Chapters 6 to 17 [EN010163/APP/6.2.2 - EN010163/APP/6.2.17]** of Environmental Statement, shown in ES Volume 3 show the location of existing baseline features in relation to the Order Limits.

3.2.8 The Site also includes part of the existing West Burton A Power Station site covering the area around the existing 400kV substation. The Point of Connection (POC) for the Proposed Development is at the existing 400kV substation in the former West Burton A Power Station. The West Burton A Power Station itself is currently in the process of being decommissioned.

3.2.9 A number of local roads are also included in the Order Limits including:

- Sections of Wheatley Road; Station Road; Gainsborough Road, and Wood Lane in the north-western half of the Site; and
- Littleborough Road, and Common Lane, in the eastern half of the Site.

3.2.10 The Site is located within the administrative area of Bassetlaw District Council (BDC).

3.2.11 The nearest settlement to the Site is Sturton le Steeple. The River Trent lies adjacent to the eastern boundary of the Site.

3.2.12 Within the wider surrounding area there are the following settlements including Knaith approximately 250m east on the opposite side of the River Trent, North Leverton with Habblesthorpe and Fenton located 500m to the south of the Site. South Leverton, Clarborough, North Wheatley and South Wheatley are located 1.km to the south, 850m to the west, 1.3km, and 1km to the north of the Site, respectively. Gainsborough is located c.5km to the north-east of the Site.

3.2.13 The Site comprises primarily agricultural land, generally relatively large, regular shaped arable fields, with some dividing hedgerows and individual trees. A small rectangular area located in the north-western portion of the Site has been excluded from the Site; this area is part of a separate development which has secured consent for solar development (Wood Lane Solar Farm under planning application 20/00117/FUL). Small woodland plantations are located within some of the fields. Individual properties are also located close to the boundaries of the Site and within the wider surrounding area.

3.2.14 There are a number of both overhead electricity transmission/distribution lines, underground fuel, and water pipelines which pass through the Site. Within the eastern extent of the Site are four overhead lines (OHLs) which run out from the existing West Burton A Power Station site in a south-easterly direction.

3.2.15 **Figure 3.1 Site Constraints Plan [EN010163/APP/6.4.3]** provides an overview of identified environmental constraints. Further detail on topic-specific environmental constraints within, and outside of, the Site are set out in further detail within the individual technical chapters of this ES.

Landform and Topography

3.2.16 The Site lies towards the northern extent of National Character Area (NCA) 48: Trent and Belvoir Vales. The NCA is described as a *"gently undulating and low-lying landform in the main, with low ridges dividing shallow, broad river valleys, vales and flood plains"*. Amongst the key characteristics of the NCA it notes that: *"Immense coalfired power stations in the north exert a visual influence over a wide area, not just because of their structures but also the plumes that rise from them and the pylons and power lines that are linked to them".*

3.2.17 At the district level, BDC's Landscape Character Assessment[1] identifies the Site as lying across both the 'Mid Notts Farmlands' and 'Trent Washlands' character areas.

3.2.18 As shown on **Figure 3.2 – Topographical Survey [EN010163/APP/6.4.3]** the Site generally slopes from west to east, towards the River Trent. Levels along the eastern boundary are at approximately 3m Above Ordnance Datum (AOD), rising gradually westwards towards the village of Sturton le Steeple at approximately 10m AOD, then rising more steeply to high ground at approximately 75m AOD along the western boundary. A vegetated earth bund (flood defence) runs along the eastern Site boundary with a crest level of approximately 7m AOD and a height 3-4m above adjacent land.

Soils and Agricultural Land

3.2.19 Agricultural land can be graded according to its inherent limitations for agricultural use. Grade 1 is excellent quality and Grade 5 is very poor quality. Grade 3 is divided into subgrades 3a 'good' and 3b 'moderate' quality land. Grades 1, 2 and 3a are defined as the 'Best and Most Versatile' (BMV) in the Overarching National Policy Statement (NPS) EN-1 at Paragraph 5.11.12[2].

3.2.20 An Agricultural Land Classification (ALC) assessment was undertaken during July to September 2024 across the Site. The intrusive soil survey comprised at least one hand auger boring per hectare to a depth of 1.2m below ground level (where achievable). These were undertaken to examine the soil profiles, using standard soil survey methods. Further, in order to determine the subsoil structure, at least one inspection pit was excavated for each soil type encountered.

[1] Bassetlaw District Council (2009) Landscape Character Assessment [online] available [last accessed 30th July 2024].
[2] Department for Energy Security and Net Zero (2023) Overarching National Policy Statement for Energy (EN-1) [online] available

3.2.21 The ALC survey results identify at the Site 88.68% (640.24 ha) is BMV land, of which predominantly is Grade 3a (430.32 ha). The remaining Site area is non-BMV land, 11.32% (81.76 ha). Full details and assessment of the ALC survey results is set out in **Chapter 15 - Land use and Agriculture [EN010163/APP/6.2.15]**.

Landscape

3.2.22 The Site is not covered by any designation at a national, regional or local level that recognises it as having specific landscape importance. In the wider study area, there is an Area of Great Landscape Value in the West Lindsey District, to the east of the Site, which covers an area to the east and south of Gainsborough.

3.2.23 The Site broadly lies between the settlements of Retford and Gainsborough, occupying multiple agricultural fields within a relatively flat agricultural landscape primarily in arable use. The Site also includes part of the existing West Burton A Power Station site, covering the area around the existing 400kV substation.

3.2.24 The Site can generally speaking be divided into two halves from a character perspective, with the eastern section being more associated with the Trent valley with fewer hedgerows and more dividing drainage ditches and watercourses, and the western half more typical of the Mid-Nottinghamshire farmland with a stronger network of hedgerows and slightly more undulating ground.

3.2.25 A number of settlements or clusters of properties are located nearby beyond the Site boundaries, including Sturton le Steeple, North Leverton with Habblesthorpe and Fenton. Individual properties are also located close to the boundaries of the Site and within the wider surrounding area.

3.2.26 A network of roads is located both within the Site and adjacent to the boundary, the Sheffield – Lincoln railway line passes through the western section of the Site and passes through the western section of the Site and the Torksey Branch railway line lies adjacent to the southwestern corner of the Site both are located outside of the Site boundary and are both minor rail lines, with the Torksey Branch currently disused, following the closure of Cottam power station.

3.2.27 The River Trent lies adjacent to the eastern boundary of the Site. The Catchwater Drain is located in the eastern section of the Site close to the Site's boundary with the eastern side of Sturton le Steeple.

3.2.28 As shown by **Figure 3.3 -Public Rights of Way [EN010163/APP/6.4.3]** a series of PRoWs are located within the Site, including a number of footpaths travelling west from Sturton le Steeple to the surrounding settlements. A footpath runs northwards through the Site, from Fenton to Sturton le Steeple, and a further footpath to the east of this also routes north through the Site. The long-distance path known as the Trent Valley Way travels through the Site from east to west through the southern edge of the settlement of Sturton le Steeple.

3.2.29 An Arboricultural Survey has been undertaken for the Site (see **Appendix 6.5 – Arboricultural Survey Report [EN010163/APP/6.3.6]**). No ancient Semi-Natural Woodlands (ASNW) are located within the Site. The survey work recorded 1,081 arboricultural features within the Site. Thirty-six individual trees and six groups of trees have been recorded as high-quality (BS 5837:2012 Category A) features. The species of trees break down as twenty oak, one crab apple, four maple, six willow, one hawthorn, three ash, one lime and groups of oak, ash, lime, willow and sycamore.

3.2.30 To the west of the Site (adjacent to the River Trent), is a large area of wetland habitat, where mature willow trees including crack willow, while willow, goat willow and osier willow are located. This whole area of tree cover was recorded as a BS 5837:2012 Category A tree group with the subcategory '3' due to the conservation and ecological value of this habitat and the trees within.

3.2.31 One off-Site oak (T493) has been recorded as a 'veteran' tree; however, it could also be considered to be 'ancient' due to its exceptionally large stem diameter. This tree is located outside of the Site but the applied 30m buffer extends into the eastern-most half of the Site.

3.2.32 The Proposed Development will not require the complete removal of any individual trees, or the removal of entire tree groups, woodlands or hedgerows. Circa 1070 linear meters of combined hedgerows across the Site will be removed to facilitate the proposed access tracks, passing places, visibility splays, watercourse crossings, perimeter fencing, trenching and laying of cables and re-routing of a PRoW.

Biodiversity Features and Environmental Designations

3.2.33 There are six Sites of Special Scientific Interest (SSSIs), four Special Areas of Conservation (SACs), one Special Protection Area (SPA) and one Ramsar site within

30km of the Site, as set out in Table 3.1. All of the sites set out below are designated for biological reasons only.

Table 3.1 Statutory Designated Sites (biological only) within the vicinity of the Site

Site Name	Designation	Distance from the Site	Summary of designation
Clarborough Tunnel	SSSI	40m southwest	Notified for its unimproved calcareous grassland that have formed on the cuttings and spoil heaps associated with the operational railway.
Chesterfield Canal	SSSI	1.9km west	Nationally uncommon aquatic plant communities.
Lea Marsh	SSSI	2.3km northeast	Unimproved floodplain meadow and wet pasture adjacent to the River Trent. Supports a number of scarce plant species and notable breeding wading bird species.
Ashton's Meadow	SSSI	2.2km south	Unimproved, species-rich neutral grassland.
Treswell Wood	SSSI	2.5km south	Ash-oak-maple wood and ancient semi-natural woodland on heavy clay soils.
Sutton and Lound Gravel Pits	SSSI	3.8 km west	Open water and margins that support an assemblage of breeding wetland birds and a nationally important population of wintering gadwall. The site also

Site Name	Designation	Distance from the Site	Summary of designation
			supports wintering and passage birds.
Birklands and Bilhaugh	SAC	17.2km north	Supports Annex I habitat 'old acidophilous oak woods' and is notable for its rich invertebrate fauna, particularly spiders, and for a diverse fungal assemblage.
Hatfield Moors	SPA	19.8km north	Lowland raised bog, that supports Annex I habitat 'degraded raised bogs still capable of natural regeneration'. Is also notable for its invertebrate fauna.
Thorne and Hatfield Moor	SAC	20km north	Supports populations of European nightjar *Caprimulgus europaeus,* which is closely associated with lowland heathland and felled or recently planted conifer plantations. The site also supports small numbers (at non-qualifying levels) of other Annex I species: hen harrier *Circus cyaneus*, merlin *Falco columbarius,* short-eared owl *Asio flammeus* and hobby *Falco subbuteo*.

Site Name	Designation	Distance from the Site	Summary of designation
Humber Estuary	SAC	25.5km north	Supports various Annex I costal habitats, and Annex II species sea lamprey Petromyzon marinus, River lamprey Lampetra fluviatilis and grey seal Halichoerus grypus.
Humber Estuary	Ramsar	25.5km north	A representative example of a near-natural estuary with the following component habitats: dune systems and humid dune slacks, estuarine waters, intertidal mud and sand flats, saltmarshes, and coastal brackish/saline lagoons. Supports internationally important assemblages of passage and wintering waders and waterfowl, as well as supporting aquatic and marine species.
Thorne and Hatfield Moor	SAC	28.2km north	Lowland raised bog, that supports Annex I habitat 'degraded raised bogs still capable of natural regeneration'. Is also notable for its invertebrate fauna.

3.2.34 There are 30 non-statutory designated sites and two areas of Ancient Semi-Natural Woodland (ASNW) or Plantations of Semi-Woodland Sites (PAWS) within 30km of

the Site (see **Chapter 7 - Ecology and Biodiversity [EN010163/APP/6.2.7]**for further information).

3.2.35 There are five Local Wildlife Sites (LWS) within the Site: Blue Stocking Lane, Clarborough; High House Road Verges, Sturton le Steeple; Mother Drain, Upper Ings; Mother Drain, Upper Ings; Littleborough Lagoons. Two LWSs are within 100m of the Site: West Burton Meadow and Clarborough Tunnel (which is also notified as a SSSI).

3.2.36 All other statutory designated sites and ASNW or PAWS are located over 130m from the Site.

3.2.37 The habitats within the Site are primarily cropland bound by managed native species hedgerows or drainage ditches. The cropland was primarily winter stubble during the January to March 2024 walkovers, with signs of being sown with cereal crops during the previous summer. The Site is typical of agricultural farmland; it has areas of pasture, grassland leys, and occasional areas sown with game cover mixes.

3.2.38 Several small blocks of woodland are present, and a traditional orchard is present in the north of the Site

3.2.39 There are areas of permanent grassland, typically forming arable field margins and the banks of drains, and also several parcels of modified and neutral grassland. Blue Stocking Lane SINC is located partially within the Western Biodiversity Mitigation Area and is designated in part for species-rich grassland along a bridleway.

3.2.40 Several small ponds are present at the Site. There is one larger waterbody present in the eastern biodiversity mitigation area which is designated as a SINC (Littleborough Lagoons). There is a network of watercourses within the Site, including drains and wet ditches, some of which are designated as SINCs (Mother Drain and Thornhill Lane Drain).

3.2.41 An area of land in the east of the Site is subject to occasional flooding and may be floodplain wetland mosaic and Coastal Floodplain Grazing Marsh (CFGM) but is currently mapped as its constituent sub-habitats (lakes, ponds, ditches, willow scrub, modified grassland, other neutral grassland, ruderal vegetation).

Cultural Heritage

3.2.42 There are no designated heritage assets within the Site.

3.2.43 Within 3km of the Site, the following designated heritage assets are located (as shown on **Figure 9.2 - Designated Heritage Assets within Relevant Study Area [EN010163/APP/6.4.9]**.

- Six Scheduled Monuments
- Nine Grade I Listed Buildings;
- Eight Grade II* Listed Buildings;
- 123 Grade II Listed Buildings; and
- Two Conservation Areas

3.2.44 No Registered Parks and Gardens, Registered Battlefields or World Heritage Sites were located within the 3km study area.

3.2.45 A geophysical survey has been undertaken across the Site (refer to **Appendix 9.2 Magnitude Surveys Geophysical Survey Report [EN010163/APP/6.3.9]**). This identified several discrete areas of archaeological potential, indicating possible enclosures within internal features. Although these are currently undated, some areas of archaeological potential are almost certain to represent Romano-British remains, while other could feasibly be of late prehistoric and/or Roman date.

3.2.46 The largest concentration of geophysical anomalies recorded within the Site lies in the south-east and broadly corresponds with a Historic Environmental Record (HER) which identified a trackway, pits and linear features in the same location. See **Chapter 9 - Cultural Heritage [EN010163/APP/6.2.9]** for further information.

Noise and Vibration

3.2.47 The noise climate on and in the vicinity of the Site is typical of a relatively rural area, consisting of sound generated by vehicle movements along the local and more distant wider road network, birds and wildlife, farm machinery, localised human activities and overhead aircraft movements with some industrial sound emanating from the former power station site to the north of the Site.

3.2.48 Existing sources of vibration emanate from traffic movements in the area, in particular Heavy Good Vehicle (HGV) movements. Some existing vibration may also result from the very occasional tremor and as a result of the decommissioning works that are currently taking place at the West Burton A Power Station.

Air Quality

3.2.49 The Site is not located within an Air Quality Management Area (AQMA) and is approximately 18.6 km north-west from the nearest AQMA, named 'Lincoln NO_2 AQMA', which is located in City of Lincoln Council's (CoLC's) administrative area. This AQMA has been declared for exceedances of the annual mean nitrogen dioxide (NO_2) Air Quality Objective (AQO). See **Chapter 14 - Air Quality [EN010163/APP/6.2.14]** for further information.

Hydrology

3.2.50 OS mapping and the Environment Agency's (EA) web-based mapping indicates that the nearest EA Main River is the River Trent which runs along the eastern Site boundary. It flows in a northerly direction, eventually discharging into the Humber Estuary at Blacktoft Sands approximately 38km north of the Site. A large flood storage area is located on the River Trent approximately 3km north (downstream) of the Site, to the west of Gainsborough.

3.2.51 OS mapping also identifies a number of Ordinary Watercourses crossing the Site, as shown in **Figure 8.1 -Watercourses [EN010163/APP/6.3.8]**.The EA categorise these watercourses as primary, secondary and tertiary rivers. Primary watercourses consist of Main Rivers and major Ordinary Watercourses, secondary watercourses consist of smaller Ordinary Watercourses, and tertiary watercourses comprise drainage ditches and Ordinary Watercourses receiving limited flows. Two primary rivers are shown within the Site. The first is the Catchwater Drain which flows from south to north through the eastern part of the Site, discharging to the River Trent approximately 1km to the northeast of the Site. The second is the Mother Drain which flows from south to north just within the southeastern Site boundary, also discharging into the River Trent to the northeast of the Site. A significant number of unnamed secondary and tertiary watercourses pass through the Site, generally flowing from west to east, and discharging into the Catchwater Drain or the Mother Drain. Many of these were noted as dry during the site visit (July 2024), which was undertaken on a dry sunny day.

3.2.52 The Ordinary Watercourses in the eastern half of the Site, including and to the east of the Catchwater Drain, are managed by the Trent Valley Internal Drainage Board (IDB). Those Ordinary Watercourses that do not fall under the IDB's jurisdiction are the responsibility of Nottinghamshire County Council, the Lead Local Flood Authority (LLFA). The River Trent (Main River) falls within the EA's control.

Hydrogeology

3.2.53 Hydrogeological information was obtained from the online Magic Maps service. These maps indicate that the Alluvium and River Terrace Deposits are classified as a Secondary A superficial aquifer (a permeable layer, generally unconsolidated and loose, that supports local water supplies and may contribute to river base flow). The pocket of Till deposits is classified as a Secondary (Undifferentiated) aquifer. The bedrock geology is classified as a Secondary B aquifer.

3.2.54 Defra's MAGIC maps confirm that the Site is not located within 1km of a groundwater Source Protection Zone or within 1km of a Drinking Water Safeguard Zone (surface water or groundwater). However, the eastern part of the Site (land lying east of the Catchwater Drain) falls within a Drinking Water Protected Area. These are defined as locations where raw water is abstracted for human consumption providing, on average, more than 10 cubic metres per day, or serving more than 50 persons, or is intended for such future use.

3.2.55 MAGIC maps show there are no SSSIs, SACs, SPAs or Ramsar sites within the Site boundary. The Clarborough Tunnel SSSI is located adjacent to the western Site boundary. It is an area of calcareous grassland designated due to its biological interest. No other statutory designations for nature conservation and ecology are identified within 1km of the Site.

3.2.56 The latest EA published Flood Zone map included as **Figure 8.1 -Watercourses [EN010163/APP/6.3.8]** of this ES shows that the western half of the Site lies within Flood Zone 1, representing a less than 1 in 1000 annual probability of fluvial or tidal flooding. A central band of the Site (affecting approximately 5% of the Site) lies within Flood Zone 2, representing a 1 in 100 to 1 in 1000 annual probability of fluvial flooding or a 1 in 200 to 1 in 1000 annual probability of tidal flooding. The eastern half of the Site (approximately 45% of the Site) falls within Flood Zone 3 with a greater than 1 in 100 annual probability of fluvial flooding or a greater than 1 in 200 annual probability of tidal flooding. The flood risk in this area is primarily fluvial but there is a degree of tidal influence on the River Trent. Flood defences are present along the River Trent.

3.2.57 The EA has provided outputs from its latest flood model undertaken by Jacobs in 2023. These show a significant reduction in flood extents when the flood defences are taken into account.

3.2.58 Further information can be found in **Chapter 8 - Hydrology, Hydrogeology, Flood Risk and Drainage [EN010163/APP/6.2.8]** of this ES.

Geology and Ground Conditions

3.2.59 Based on published geological records for the area (British Geological Survey (BGS) online mapping), the eastern part of the Site between the Catchwater Drain and the River Trent is underlain by Alluvium (clay, silt, sand and gravel) and River Terrace Deposits. A small, isolated area of Till is located in the northeast of the Site. The western part of the Site has no mapped superficial deposits. The bedrock geology for the whole Site is recorded as Mercia Mudstone Group (mudstone, siltstone and sandstone).

3.2.60 A Phase 1 Geoenvironmental Desk Study has been undertaken for the Site (see **Appendix 2.2 – Phase 1 Geoenvironmental Desk Study [EN010163/APP/6.3.2]**). No geological faults are present on the Site, nor is the Site affected by coal mining, brine, or other mineral extraction.

3.2.61 The western half of the Site is underlain by weathered bedrock comprising mudstones with beds of dolomitic siltstone and possible gypsum beds of Mercia Mudstone of early Triassic Age. Anticipated ground conditions in this part of the Site are a thin cover of topsoil/subsoil (<0.5m) over weathered mudstone bedrock and locally more resilient dolomitic siltstone beds.

3.2.62 The eastern half of the Site is underlain by variable thicknesses of superficial deposits including alluvium, river terrace deposits and Glacial Till. Anticipated ground conditions are a thin cover of topsoil/subsoil (<0.5m) over silty sands, sandy clays and sands and gravels to depths of between 4.5m and 16m based on a limited number of boreholes. Bedrock comprises Mudstones of the Mercia Mudstone Group.

3.2.63 With regard to the potential for sources of contamination, no significant contaminative processes have operated on the majority of the Site. Potential contaminants may be anticipated onsite in areas currently occupied by farm buildings, railway embankments and West Burton A Power Station. However, the Site is deemed as being of low overall risk of significant contamination, and it is not considered necessary to undertake a ground investigation prior to granting of the DCO application.

3.2.64 A small area in the in the eastern half of the Site is underlain by Sand and Gravel. The Proposed Development will not impact on the safeguarding or sterilisation of

the minerals within the Order Limits as no mineral workings will be pursued in the Order Limits and no impediment to mineral extraction would remain after the Proposed Development has been decommissioned. Further details are provided in the **Planning Statement [EN010163/APP/7.1].**

3.3 Alternatives in EIA

Legislation, Policy and Advice Notes

3.3.1 The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017[3] (hereafter referred to as the EIA Regulations), note in Schedule 4, Paragraph 2 the following for inclusion in an Environmental Statement (ES):

"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".

3.3.2 National Policy Statement (NPS) EN-1 at 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 the proposed development is, in the first instance, a matter of law. This NPS does not contain any general requirement to consider alternatives or to establish whether the proposed project represents the best option from a policy perspective…".

3.3.3 The NPS EN-1 confirms that from a policy perspective there is no general requirement to consider alternatives or to establish whether a development represents the best option.

3.3.4 There are specific legislative requirements and policy circumstances which require the consideration of alternatives. These include the requirement to avoid significant harm to biodiversity and geological conservation interests; flood risk; and development within national designated landscapes set out in respective sections 5.4, 5.8 and 5.10 of NPS EN-1.

3.3.5 NPS EN-3 and NPS EN-5 are not considered to include any additional policy on alternatives to that cited above.

[3] HMSO (2017) The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017

3.3.6 The Nationally Significant Infrastructure Projects - Advice Note Seven: Environmental Impact Assessment: process, preliminary environmental information and environmental statements[4] sets out that PINS considered that a good ES is one that, among other things:

"explains the reasonable alternatives considered and the reasons for the chosen option taking into account the effects of the Proposed Development on the environment."

3.3.7 This Chapter has been prepared in compliance with the requirements of the EIA Regulations to provide a description of the reasonable alternatives studied by the Applicant. In complying with the EIA Regulations, this chapter is also in accordance with NPS EN-1.

Scope of Assessment

3.3.8 This chapter seeks to describe the alternatives studied in developing the siting and design of the Proposed Development, taking into account the requirements of the EIA Regulations and the policy position of the NPS.

3.3.9 The main alternatives to the Proposed Development that the Applicant has considered so far are:

- The 'No Development' Alternative, discussed at Section 3.4;
- Alternative Sites through the Site Selection process, discussed at Section 3.5; and
- Alternative Designs / Layouts, discussed at Section 3.6.

3.3.10 An important factor when considering alternatives for the Proposed Development is the land acquisition strategy proposed by the Applicant, which seeks to deliver the Proposed Development through voluntary agreement which are either agreed or are being negotiated at the time of writing. The Applicant will be seeking compulsory acquisition powers for works.

3.4 The 'No Development' Alternative

3.4.1 The 'No Development' Alternative refers to the option of leaving the Site in its current use and physical state.

[4] PINS (2025) Nationally Significant Infrastructure Projects - Advice Note Seven: Environmental Impact Assessment: process, preliminary environmental information and environmental statements

3.4.2 Without development, it is anticipated that the Site would continue to be primarily in agricultural use. The agricultural processes on the Site may change over the next 40 years, depending on a number of factors, including the global market for products and chemical costs.

3.4.3 The 'No Development' alternative would result in the loss of opportunity for providing much needed renewable energy generation within the UK. In the British Energy Security Strategy, published in April 2022, there is the target of increasing the quantity of solar generation within the UK by 5 times by 2035. At the time of publication of the Strategy there was 14GW of solar operating within the UK, a five-fold increase on the 14GW would mean 70GW of installed capacity by 2035. Such a target will be challenging and so all opportunities and possible locations for solar farms need to be considered.

3.4.4 No further assessment has been undertaken for the 'no development' scenario because this option is not considered a reasonable alternative to the Proposed Development as it would not deliver the additional electricity generation and electricity storage proposed.

3.4.5 As set out in NPS EN-1 at Paragraph 4.2.1, the Government has committed to fully decarbonising the power system by 2035, underpinning its 2050 net zero contributions. The Government has therefore concluded that there is a Critical National Priority (CNP) for the provision of nationally significant low carbon infrastructure (Paragraph 4.2.4 of NPS EN-1). The Proposed Development (if consented) would contribute to this need.

3.4.6 NPS EN-1 notes however at Paragraph 4.2.7 that the CNP policy does not create an additional or cumulative need case or weighting to that which is already outlined for each type of energy infrastructure. The policy applies following the normal consideration of the need case, the impacts of the project, and the application of the mitigation hierarchy.

3.4.7 Not assessing the no development alternative is supported by NPS EN-1 at Paragraph 4.3.27 which states that:

"Alternative proposals which mean the necessary development could not proceed, for example because the alternative proposals are not commercially viable or alternative proposals for sites would not be physically suitable, can be excluded on the grounds that they are not important and relevant to the Secretary of State's decision.".

3.5 Site Selection

3.5.1 This section sets out the key technical and environmental elements that were considered when determining a suitable site to accommodate the Proposed Development.

3.5.2 There is no standard methodology for the selection of sites for renewable energy generation projects, however, assessing the environmental impacts of an NSIP requires consideration of how a site was selected for development and how any alternatives to the Proposed Development were reviewed.

3.5.3 NPS-EN1 also requires an explanation of alternatives considered when a proposal involves development of a site in a flood zone, and a **Flood Risk Sequential Assessment and Exception Test [EN010163/APP/7.5]** has been prepared separately outside the EIA process. Additionally, **Chapter 8 - Hydrology, Hydrogeology, Flood Risk and Drainage [EN010163/APP/6.2.8]** of this ES demonstrates how a wide range of factors, including flood risk have been considered by the Applicant in identifying a site for development.

3.5.4 The process that has been followed for the Site Selection assessment to is set out below.

Stage 1 – Identify an Appropriate Area of Search

3.5.5 In order to focus the site selection process, an initial appropriate search area had to be defined. The Applicant identified optimal locations for solar farms of a nationally significant scale based on two key factors: the irradiance and yield; and the availability of grid connection capacity.

Irradiance and yield

3.5.6 Solar irradiance refers to the amount of energy from the sun that reaches the surface of the earth and is measured by the amount of sunlight received per square metre per second (Wh/m2). The amount of solar irradiance impacts on the potential yield of solar farm, affecting the amount of sunlight falling on the PV modules to be converted to energy. The irradiance and subsequent yield of an area is influenced by factors such as its location, climate/weather patterns, altitude and topography. Whilst there are clearly significant differences in such factors globally, there are also national variations leading to some areas of the UK being more suited to solar energy than others.

3.5.7 In comparison to some other areas of the UK, the east of England has a combination of high levels of irradiation and large flat open areas of land. The region also has a significant amount of pre-existing transmission infrastructure, which would reduce the likelihood that any new overhead infrastructure would be required to connect the generator to the transmission system. Therefore, the Applicant was looking for a site in the east of England for a large-scale solar farm.

Grid Connection Capacity

3.5.8 One of the biggest constraints to be considered when developing a renewable energy scheme is securing a viable point of connection to the electricity network.

3.5.9 Following correspondence with National Grid, the Applicant was notified of grid capacity at an existing substation at the West Burton Power Station site. This capacity was available due to the closure of the coal fired elements of the West Burton A Power Station site. Due to the immediate availability of this POC at the existing 400kv substation at West Burton A Power Station site, the Applicant did not consider any further alternative grid connection points. Furthermore, any other grid connections may not be available until into the 2030s or beyond. The Applicant therefore made a grid connection application to National Grid for connection at West Burton A Power Station and an offer was made for 600MW.

3.5.10 The POC therefore formed the centre point of the 'Area of Search' which was used when identifying a suitable site.

3.5.11 In order to minimise potential environmental impacts associated with cable routes, and to minimise the potential for any transmission losses that may occur along longer lengths of cabling, it is preferable to locate a renewable energy development as close as reasonably practicable to the POC.

3.5.12 However, it is also important that when selecting a site, due consideration is given to minimising potential environmental effects that may arise from locating the development in that location.

3.5.13 It was therefore deemed appropriate that the Area of Search around the POC should be at 15km, to ensure that every opportunity had been given to finding a site that was both technically feasible and minimised potential environmental effects. Beyond 15km, it was considered that the technical restrictions and associated environment effects of providing cable routing to the POC would outweigh any potential benefits that a potential site may have.

Stage 2 – Consideration of Environmental Constraints

3.5.14 Stage 2 of the site selection process involved a consideration of potential environmental constraints within the 15km Area of Search. A constraints mapping exercise was undertaken in order to assess potential locations for siting the Proposed Development within the Area of Search. This was undertaken using Geographic Information Systems (GIS) software. A summary of the factors considered is set out in Table 3.2 below.

Table 3.2 – Consideration of Environmental Constraints

Topic	Discussion
Brownfield Land Register/ Agricultural Land Classification	Planning policy seeks to minimise any impacts on the best and most versatile agricultural land (defined as grades 1, 2 and 3a). The preference is therefore for development to be located on land that is grade 3b, 4 or 5 and where possible to utilise previously developed, brownfield land. Solar energy development is comprised mostly of temporary structures which do not lead to any permanent loss of agricultural land. However, it was acknowledged that some land take would be required for ancillary elements of the solar development (e.g. access tracks), plus the footprint associated with the Substation and BESS. An initial search was therefore undertaken of potential brownfield land within the Area of Search, which identified that there were no sites or combinations of sites, that had the necessary footprint to accommodate the Proposed Development. Thereafter, all areas of grades 4 and 5 land were mapped. This again identified that there were no sites or combinations of sites, that had the necessary footprint to accommodate the Proposed Development. The next stage was then to map Grades 1, 2 and 3 land. There is no published data which distinguishes between grade 3a and grade 3b land. Grade 3 land, which covered the majority

Topic	Discussion
	of the Area of Search, was therefore deemed preferable to any Grade 1 and 2 land for the purpose of site selection.
Ecology	Any designated international and national ecological and geological sites were mapped. This identified several Sites of Special Scientific Interest (SSSIs) which were avoided in the site selection process. Local and regional designations of ecological significance such as a County Wildlife Sites, Local Nature Reserves and Local Wildlife Sites were also considered. Sites which included such areas were not immediately discounted, if there was deemed sufficient scope for the extent of the development within the Site to be appropriately offset from the areas. This was the case with the Site.
Flood Risk	The UK is divided into three separate flood risk categories from 1 to 3, with zone 1 being the lowest risk and zone 3 being the highest risk. Having a solar energy development in a higher flood risk zone is not a major technical constraint, as solar panels are water resistant but some of the associated infrastructure is not compatible, nor is BESS development. The flood risk zones within the 15km Area of Search were mapped and it was considered that any potential site, must have sufficient area of flood zone 1 to accommodate the more vulnerable infrastructure including the substation and BESS.
Access	Appropriate highway infrastructure is an important consideration as there needs to be appropriate provision to allow for vehicles to access the site during the construction process. Sites which did not have appropriate proximity to the highway network were also discounted.

Topic	Discussion
Cultural Heritage	Scheduled Monuments, Listed Buildings and Conservation Areas were mapped within the Area of Search. Sites which included such assets were not immediately discounted if there was deemed sufficient scope for the extent of the development within the site to be appropriately offset from the assets. This was the case with the Site, which originally included the Scheduled Monument 'Segelocum Roman Town', before the Order Limits was revised to remove this asset following feedback during the EIA Scoping stage.
Landscape and Visual	A search was initially undertaken for any National Parks and National Landscapes, but no such landscapes are located within the Area of Search. Any local landscape designations were then identified, the only one of which comprised of the West Lindsey Area of Great Landscape Value. This was not treated as a hard constrain when seeking to find a site, but it was deemed preferable to avoid the area where possible.

Stage 3– Consideration of Consented or Development

3.5.15 It was recognised that across the Area of Search there were already various other renewable energy projects at various stages of development. These were mapped and their locations discounted in the site selection process, along with other areas of existing built development.

Stage 4 – Consideration of Land Size, Shape and Topography

3.5.16 It was important to ensure that any potential site comprised a suitable shape, orientation and size that could appropriately accommodate the Proposed Development. Large open fields reduce the impact that smaller fields can have on the layout design as typically, buffers are left around field edges to offset from vegetation, tree root protection zones and other constraints such as ditches. So significantly less capacity can be sited within a group of smaller fields compared to fewer larger fields.

3.5.17 A site should also be either level or have a gentle sloping topography. The preference is for a site with a southerly aspect to maximise solar gain; however, sites with other primary aspects are still technically viable.

3.5.18 Therefore, to form an effective cluster of PV arrays to generate a similar amount of power as the proposed DCO site, the alternative site search has considered that the following parameters would be required to be an effective comparison to the proposed DCO site area.

- 3 x 3 adjoining land parcels of a minimum of 60.7Ha;
- Then each cluster being within 5km of one another.

3.5.19 Through the analysis undertaken in the previous Stages, the Applicant had identified a refined boundary of land parcels that could be suited to solar development as depicted in **Figure 3.4- Alternative Sites [EN010163/APP/6.4.3]**.

3.5.20 Three sites were identified in this process with potential as alternative site locations. These three sites are labelled as follows

- Site A – land between Worksop and Retford – approximately 1408.3 ha and is located approximately 12.3km from the POC at West Burton A Power Station.
- Site B – land south of Gringley on the Hill - approximately 754.5 ha in size and located 5.6km from the POC at West Burton Power Station.
- Site C – Land around Northorpe - approximately 1159 ha in size and is located 11.5km away from the POC at West Burton Power Station.

Suitability of Alternative Sites Identified

Site A – land between Worksop and Retford

3.5.21 Site A is affected by fluvial flood risk, zones 2 and 3, surface water high chance pockets and reservoir flood risk when river levels are 'normal.' The degree and amount for fluvial and surface water is less than the Proposed Development site subject of this DCO application, but nonetheless, the site area is still at risk from these sources. The Proposed Development site subject of this DCO application not affected by flooding from reservoirs when river levels are 'normal'.

3.5.22 The southern boundary of Site A adjoins Grade I Registered Park and Garden, Clumber Park; an historic parkland of 'exceptional' national interest. Clumber Park is also an SSSI, supports a diverse breeding bird assemblage of birds typical of

waterbodies, woodland and heathland. Clumber Park is also designated as an Important Bird Area (IBA) by the RSPB.

3.5.23 Additionally, the north-east boundary of Site A adjoins Grade II Registered Park and Garden, Babworth Hall. Babworth Park also contains 6no. Grade II Listed Buildings and the Grade I Listed Church of All Saints.

3.5.24 Cumulatively, with Site A being at risk from 3 sources of flooding instead of just 2, the degree of significance of the heritage constraint to Clumber Park and also the potential harm the development could cause to the immediate surroundings of the Clumber Park SSSI, Site A has been discounted as a suitable alternative site for the proposals.

Site B – land south of Gringley on the Hill

3.5.25 Site B is affected by both fluvial sources and surface water flood risk, however, is not affected by flooding from reservoirs.

3.5.26 Site B is located centrally between three settlements which are all protected with designated Conservation Areas including: Gringley on the Hill (north of the site), Clayworth (south of the site) and Wiseton/Drakeholes (west of the site). All conservation areas have a high concentration of Listed Buildings.

3.5.27 Site B is located approximately 1.9km to the north-east of the Sutton and Lound Gravel Pits SSSI, designated for assemblages of breeding and wintering birds.

3.5.28 This site was also discounted as a suitable alternative to the recently consented West Burton Solar DCO, mainly due to a major landowner confirming they did not wish to see their land developed for a large-scale solar farm.

3.5.29 Cumulatively, with Site B being no better than the Proposed Development site subject of this DCO application for surface water flooding, the heritage constraint with potential to affect the immediate rural setting of all three Conservation Areas and also the potential harm the development could cause to the immediate surroundings of Sutton and Lound Gravel Pits SSSI, Site B has been discounted as a suitable alternative site for the proposals.

Site C – Land around Northorpe

3.5.30 Site C is affected by both fluvial sources and surface water flood risk, however, is not affected by flooding from reservoirs.

3.5.31 Site C is located centrally between three areas which are designated in the Central Lincolnshire Local Plan (adopted April 2023), as being 'Areas of Great Landscape Value.' The northern and eastern boundaries of Site C would abut the designated Great Landscape Value Areas at Laughton Woods and Scotton Common, as well as the Lincolnshire Cliff Scarp Slope (north). There is also a third area of Great Landscape Value located slightly to the southwest of Site C which sites on the north-eastern fringe of Gainsborough. Site C has potential to affect the appearance, character and setting of all three parts of the Great Landscape Character designations.

3.5.32 The north-west boundary of Site C adjoins both the Scotten Beck Fields and Scotton Common SSSI's. There are also two further SSSI designations to the Laughton woodland area, Laughton Common SSSI and Scotton and Laughton Forest Ponds SSSI. These habitats are listed as being important for heathland and the wetland areas. An RSPB Important Bird Area (IBA) designation covers all of the Scotton Common/Laughton Forest woodland, and therefore, the RSPB certainly consider that this area is important habitat to both breeding and migratory birds.

3.5.33 Cumulatively, with Site C being no better than the Proposed Development site subject of this DCO application for surface water flooding, the landscape sensitivity in this area and the potential harm the development could cause to the immediate surroundings of four SSSI, Site C has been discounted as a suitable alternative site for the proposals.

Stage 5 – Discussion with Potential Landowners within the Search Area

3.5.34 It is also advantageous to find a site which has few landowners to minimise the complexity which can arise when dealing with multiple landowners as part of the same project. As discussed above for a project of this nature, an area of at least 60.7 hectares under either single or a couple of landownerships was deemed preferable when looking for a suitable site. In addition, it was considered that any such sites of 60.7 hectares would need to be within 5km of one another (due to the Applicant's experience with developing similar projects) and preferably there would be a minimum of 3 such parcels near to each other for them to reasonably form a potential site option.

3.5.35 It was considered important for any site to be progressed with the support willing landowners, to avoid the use of compulsory purchase. As the closest potential site

to the POC, which had been identified through the stages set out above, the landowner of the Proposed Development Site was approached first, and they confirmed that they would be willing to take on the Proposed Development. No other sites were therefore taken forward at this stage due to the Site having the least environmental impacts associated.

3.5.36 Stage 1-5 of the site selection process established that within the Area of Search, there was sufficient available land, secured via agreement, located outside of major environmental and planning constraints. This was considered to fulfil the requirement to deliver a viable solar farm, and the process progressed to developing an initial layout design for the Proposed Development.

Summary

3.5.37 A thorough site selection process was undertaken before it was decided to proceed with the Proposed Development Site. The Area of Search was centred on the available grid capacity at the existing substation at the West Burton A Power Station site and extended to 15km to allow the best opportunity for an appropriate location to be identified.

3.5.38 The chosen location benefits in particular from its very close proximity to the POC, its single land ownership with a willing landowner and its generally large, open flat fields, allowing sufficient space for key infrastructure to be located outside the areas of highest flood risk. It is therefore considered that the Site represents the most appropriate location to take advantage of the availably capacity POC at West Burton A Power Station.

3.6 Iterative Design Process

3.6.1 The layout of the Proposed Development has evolved iteratively taking into account environmental effects, the planning and environmental policy objectives and functionality of the Proposed Development. From the outset, the Applicant and project team set several design objective's as follows:

- Delivery of significant amounts of affordable renewable energy to support policy objectives and national targets for reducing carbon emissions to net zero by 2050;
- Delivery of improved energy resilience, affordability and security by diversifying energy production and stored energy;

- Contribution towards strategy improvements to local ecology and biodiversity;
- Develop a Proposed Development sensitive to surrounding landscape, limiting impact on views for key landscape receptors, residential properties and recreational routes;
- Develop a Proposed Development sensitive to heritage assets and settings;
- Safeguard surrounding hydrological systems and resilience to flooding without increasing flood risk elsewhere taking into account impacts of climate change;
- Develop a Proposed Development sensitive to existing land quality; and
- Provide safe access, minimise impact on the local highway network; and protect and enhance existing Public Rights of Way ensuring continued safe use.

3.6.2 The Applicant has carried out statutory consultation as described in the **Consultation Report [EN010163/APP/5.1]** submitted as part of the application for development consent. The Consultation Report provides a detailed account of the feedback received in response to statutory consultation and how the Applicant had due regard to the matters raised. It also reports on the design changes that were implemented as a result of the feedback.

3.6.3 The Applicant has continued to engage with relevant stakeholders in finalising the design and assessment of the Proposed Development ahead of the submission of the DCO application

Design iteration: EIA Scoping to Preliminary Environmental Information Report (PEIR)

3.6.4 Whilst not exhaustive, a list of the key changes made to the layout from the EIA Scoping stage to the PEIR is provided below:

- At the EIA Scoping stage, the area under consideration comprised an area of 943.4 ha to ensure that maximum potential area for the Proposed Development was considered. The design was refined ahead of the statutory consultation and preparation of the Preliminary Environmental Information Report (PEIR) to support statutory consultation. The area of the Order limits was reduced to 898 ha through technical surveys, site visits and assessments, design development and having regard to feedback received during statutory consultation.

- The northern extent of the eastern ecological mitigation area was removed prior to statutory consultation as it was established that its baseline condition was already so high that no further enhancement was considered necessary. The southern extent of the eastern ecological mitigation area has extended to the south and west as a result;
- The Scheduled Monument 'Segelocum Roman Town' was excluded from the Site during the EIA Scoping Stage;
- The area for the Substation, BESS and associated infrastructure reduced in size (resulting in more of the Site being used for solar panels and associated infrastructure maximising energy generation and renewable energy benefits);
- The area in proximity to the settlement of North Leverton with Habblesthorpe that was provisionally intended to include solar panels and associated development has reduced. The PEIR presented a reserve access corridor in this area; however, this area is no longer needed as part of the Proposed Development and has now been discounted;
- An area of biodiversity mitigation and cable infrastructure was introduced to the approximate centre of the Site at the statutory consultation stage (to the north of the settlement of North Leverton with Habblesthorpe);
- Buffers applied to key environmental receptors as identified through surveys and environmental assessment:
    - 30m buffer to badger setts.
    - 5m buffer to trees with potential for bats.
    - 15m buffer applied to ancient and veteran trees, as well as root protection area for all other trees.
    - 8m buffer applied to watercourses and flood zone; and
- Two 'triangular' parcels of land are discounted from the eastern half of the Site, so as to represent the historic field boundaries within those areas.

Design iteration: Preliminary Environmental Information Report (PEIR) to ES and DCO Application

3.6.5 The design of the Proposed Development submitted for development consent includes a number of changes made since the PEIR and statutory consultation. The

design development since January 2025, resulting in the final DCO application design, has been informed by three key factors: statutory consultation feedback), landowner engagement, and further technical assessment.

3.6.6 In addition to statutory consultation, the Applicant continued to engage with local landowners regarding voluntary agreements for land to be used for the Proposed Development. The overall land take was also reviewed to ensure that only the land necessary to deliver the Proposed Development was to be included. As a result, some areas of land were removed from the red line boundary on which the PEIR was based and a smaller extent of land was defined as the Order Limits, approximately 888.3 ha (see **Figure 1.1 – Site Location Plan [EN010163/APP/6.4.1]**). This discounting an area adjacent to the north of North Leverton with Habblesthorpe from the Order Limits.

3.6.7 Finally, the Applicant continued to progress technical assessment of the Proposed Development, both in relation to EIA and its potential effects on the environment and in relation to its operational function through modelling and viability testing. The technical assessment remained iterative throughout the preparation of the DCO Application, with regular reviews of any potential design changes arising as an outcome of such assessment.

3.6.8 The key design changes made to the Proposed Development between PEIR publication and DCO application are summarised in below;

- Micro-siting of existing entrance points, including removal of entrance points from Thornhill Lane to project southeast and Off Main Street to project southwest;
- Design of site entrances from / across public rights of way within the Site, designed to minimise traffic exposure to PRoWs;
- Amendments to the Site boundary:
    - Removal of reserve site access corridor to south of western parcel
    - Removal of 2no triangular areas of biodiversity mitigation land within east of eastern half of the Site
- Design and siting of Onsite Substation within field adjacent to West Burton A Power Station;
- Design and siting of BESS Compound within a northern field of eastern half of the Site;

- Removal of solar pV panels and inverters from central corridor through eastern half of the Site, to accommodate existing / proposed utilities and provide permissive path;
- Removal of solar pV panels and inverters from corridor between 2no existing 400kV overhead lines that cross the west of the eastern half of the Site;
- Removal of all infrastructure from area within western half of the Site and smaller area within eastern half of the Site to protect potential archaeologically significant assets as indicated by the geophysical survey;
- Removal of all solar pV panels and inverters from within:
    - 20m of jet fuel pipeline
    - 6m of water main
    - 5m of foul sewers / rising mains
    - Electrical overhead lines: 5m of <132kV OHL, 10m of >=132kV OHL and Inverters and HV electrical components within 20m of all electrical OHLs
    - Watercourses: 9m of IDB owned watercourses and 5m of other watercourses
    - 10m of public rights of way;
- Removal of infrastructure from 40-55m corridor along east of western half of the Site to reduce visual impact of development upon edge of settlement;
- Design of rainwater attenuation basins:
    - 2no serving Onsite Substation and BESS due to associated hardstanding areas
    - 2no within east of western half of the Site to reduce existing flooding within Sturton le Steeple village ;
- Design of other drainage infrastructure serving all development areas;
- Addition of permissive path connecting PRoW off Mill Lane south of western parcel, to PRoW on Dog Holes Lane across centre of western half of the Site;
- Amendments to construction compound locations:
    - Micro-siting of existing proposed compounds; and
    - Addition of compound area adjacent to south of Onsite Substation.

3.6.9 Proposed mitigation and enhancement measures were developed in more detail following the above design changes and are reflected in the landscape design proposed under the DCO application(see **Figure 6.9 – Landscape and Ecological Design Strategy [EN010163/APP/6.4.6]**).

Summary

3.6.10 There are some aspects of the Proposed Development which are required to remain flexible into the detailed design and construction phases, following the grant of development consent. As set out in **Chapter 2- EIA Methodology and Public Consultation [EN010163/APP/6.2.2]** this flexibility has been accounted for in the EIA process through application of the Rochdale Envelope and the use of design principles and specified parameters for the Proposed Development. The **Outline Design Principles [EN010163/APP/6.3.4]** document defines the design principles and parameters which will be certified by the DCO. This will ensure that any changes or further development of the design of the Proposed Development remains within the parameters assessed within this ES and delivers a high quality development in accordance with those principles.

3.6.11 In accordance with the EIA Regulations, this chapter has set out reasonable alternatives studied by the Applicant in both the site selection process and in the design iteration process carried out in preparing this DCO Application. It has set out the main reasons for selecting the chosen option and how the effects of the development on the environment have been taken into account.