



Mallard Pass

Solar Farm

Mallard Pass Solar Farm

Appendix 7.5: Ecology and Biodiversity - Shadow Habitat Regulations Assessment Deadline 5 - September 2023

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**Mallard Pass Solar Farm – Shadow Habitat Regulations
Assessment (sHRA) Report**

No significant effects report

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1 Introduction

Project

- 1.1 The Proposed Development comprises the construction, operation and maintenance, and decommissioning of a solar photovoltaic (PV) array electricity generating facility with a total capacity exceeding 50 megawatts (MW) and export connection to the National Grid. The Proposed Development will be located within the 'Order limits' (the land shown on the Works Plans (see [EN010127/APP/2.2]) within which the Proposed Development can be carried out).

Order limits description

- 1.2 The Order limits are described in Chapter 3 of the ES but in summary comprises 852 ha of predominantly arable agricultural land north of Stamford, Rutland. The Order limits is adjacent to the village of Essendine and straddles the boundary between Rutland and Lincolnshire. Also included within the Order limits are hedgerows, field margins and other patches of grassland, farm buildings, ditches, ponds and a section of the West Glen River. Woodlands are located adjacent to or surrounded by the Order limit but are not included within the Order limit themselves.
- 1.3 The Order limits is surrounded by predominantly flat or gently undulating agricultural land of similar character. The town of Stamford is approximately 1.1 km to the south west, and two relatively large areas of woodland, Newell Wood and Braceborough Wood are directly adjacent to the north-west and north, respectively. The East Coast main railway line bisects the Order limits in a north-west to south-east direction.

Aims of the Study

- 1.4 As part of the ecological assessment work BSG Ecology have undertaken a shadow Habitats Regulations Assessment (sHRA) aimed at identifying whether the Proposed Development is likely to result in effects on nearby internationally designated sites. It is referred to as a shadow HRA as the HRA is carried out by the Competent Authority and this report is intended to support this assessment only.
- 1.5 This sHRA sets out the baseline concerning the statutory designated sites of international importance with 10 km of the Order limits and within 30 km for internationally important sites designated for bats and assesses whether the proposals can be considered as having a likely significant effect on these designated sites.
- 1.6 This sHRA is intended to support the ES and to be read in conjunction with that document. Full ecological baseline information is presented in **Appendix 7.4** ecological baseline report [EN010127/APP/6.2] supporting the Environmental Statement (ES).

Consultation

- 1.7 As part of the consultation process, Natural England, the statutory consultee with regard to designated sites, was consulted and provided with the Preliminary

Environmental Information Report (PEIR), covering the initial assessments of impacts to, among other things, designated sites.

- 1.8 Their response dated 16 August 2022 does not formally express an opinion of the conclusions presented in the PEIR, that no likely significant effect would occur on the designated sites, but asks for a Habitat Regulations Assessment screening report to be included within the ES to confirm no likelihood of significant effects.

2 Habitats Regulations Assessment

Legislation

- 2.1 The Conservation of Habitats and Species Regulations 2017 (as amended), referred to as the 'Habitats Regulations,' transpose the requirements of the European Birds and Habitats Directives¹ into UK legislation.
- 2.2 The Birds Directive aims to protect rare and vulnerable birds and the habitats that they depend upon. This is achieved in part through the classification of Special Protection Areas (SPAs). The Habitats Directive aims to protect plants, habitats and animals other than birds. This is achieved in part through the creation of Special Areas of Conservation (SACs). Article 6(1) and (2) of the Habitats Directive require that Member States establish management measures for these areas, to avoid deterioration of their ecological interest. SPAs and SACs are collectively referred to as 'European sites.'
- 2.3 The UK is also a contracting party to the Ramsar Convention², which seeks to protect wetlands of international importance. It is UK Government policy (in England this is identified within the National Planning Policy Framework) that all competent authorities should treat Ramsar sites similarly as if they are fully designated European sites.
- 2.4 The amendments to the Conservation of Habitats and Species Regulations 2017 as a result of the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 have been taken account of in this report. In particular reference to sites that were Natura 2000 sites in the UK are now referred to as 'national site network sites'. This national site network however does not include Ramsar sites. Collectively, all formally proposed and fully classified or designated SPAs and SACs formed a pan-European Union network of protected areas known in the UK as 'European sites'. Within this report the term 'European sites' has been used to include Ramsar sites as well as SPAs and SACs as government guidance stipulates that Ramsar sites should be considered in the same way as SPAs or SACs.

Habitats Regulations Assessment Process

- 2.5 The requirements of the Habitats Regulations with regard to the implications of plans or projects are set out within Regulation 63. It provides under paragraph (1) that: "*A competent authority, before deciding to...give any consent for a plan or project which is likely to have a significant effect on a European site...must make an appropriate assessment of the implications for the plan or project in view of that site's conservation objectives...*". Paragraph (5) states that: "*...the competent authority*

¹ Council Directive on the conservation of natural habitats and of wild fauna and flora of 21st May 1992 (92/43/EEC) and Council Directive on the conservation of wild birds of 2nd April 1979 (70/409/EEC) consolidated by the Birds Directive 2009 (2009/147/EC).

² Convention on wetlands of international importance especially as waterfowl habitat, Ramsar, Iran, 2/2/71 as amended by the Paris protocol of 3/12/92 and the Regina amendments adopted at the extraordinary conference of contracting parties at Regina, Saskatchewan, Canada 28/5 – 3/6/87, most commonly referred to as the 'Ramsar Convention.'

may agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the European site.”

- 2.6 Whilst the HRA decisions must be taken by the competent authority (in the case of the Proposed Development, that will be the Secretary of State), the information needed to undertake the necessary assessments must be provided by the Applicant. The information needed for the competent authority to establish whether there are any likely significant effects from the Proposed Development is therefore provided in this Report.

Assessment Stages

- 2.7 The European Commission has developed guidance in relation to Articles 6(3) and 6(4) of the Habitats Directive and PINS has provided guidance on this process (Advice Note Ten: Habitats Regulations Assessment relevant to nationally significant infrastructure projects. The Planning Inspectorate, August 2022.).

- 2.8 Advice Note 10 states:

HRA is a multi-stage process which identifies Likely Significant Effects (LSE), assesses any Adverse Effects on Integrity (AEol) of a European site, and considers the derogations (as appropriate). The joint Defra, Welsh Government, Natural England and Natural Resources Wales guidance (2021) ‘Habitats regulations assessments: protecting a European site’ (hereafter referred to as the ‘joint guidance’) identifies a three stage process, as set out below. It may not be necessary to complete all stages, depending on what conclusion is reached at each stage. The stages are:

Stage 1. Screening – to check if the proposal is likely to have a significant effect on the European site(s)’s conservation objectives, both alone or in combination with other plans or projects. At this stage, and in accordance with case law (People Over Wind and Sweetman v Coillte Teoranta (Case C-323/17)), mitigation measures proposed for the purpose of avoiding or minimising risk to a European site should not be taken into account. If a conclusion of no LSE is reached for all European sites and their qualifying features considered, it is not necessary to proceed to the next stages of HRA.

Stage 2. Appropriate assessment (AA) – assess the implications of the proposal for the qualifying features of the European site(s), in view of the site(s)’ conservation objectives, and identify ways to avoid or minimise any effects.

Stage 3. Derogation – consider if proposals that would have an AEol of a European site(s) qualify for an exemption. There are three tests to this stage to be followed in order: consider alternative solutions; consider IROPI; and secure compensatory measures. Each test must be passed in sequence for a derogation to be granted.

- 2.9 As stated in the advice note it may not be necessary to complete all stages depending on what conclusion is reached at each stage. In this case only stage 1 of the HRA process has had to be engaged and the assessment methodology set out

below for the first stage has been adopted to meet the requirements of the Habitats Directive. The subsequent stages were not engaged and have not been included below.

Stage 1 - Screening

- 2.10 This stage identifies the likely effects of the proposed development on the qualifying features (species and habitats) of any European site, either alone or in combination with other plans or projects. Specifically this stage considers whether these effects are likely to be significant with regard to the conservation objectives of the European sites. The development will require 'appropriate assessment' (Stage 2) if it is considered that it is likely to have a significant effect on a European site i.e. where any aspect of it risks an effect on any European site which is significant (undermines the site's conservation objectives).

Case Law

- 2.11 This report has been prepared having regard to relevant case law relating to the Habitats Regulations, the Habitats Directive and Birds Directive. This includes a ruling by the Court of Justice of the European Union (People Over Wind and Sweetman, 12 April 2018, C-323/17) which held that:
- 2.12 *"...Article 6(3) of the Habitats Directive must be interpreted as meaning that, in order to determine whether it is necessary to carry out, subsequently, an appropriate assessment of the implications, for a site concerned, of a plan or project, it is not appropriate, at the screening stage, to take account of the measures intended to avoid or reduce the harmful effects of the plan or project on that site".*
- 2.13 This case means that any mitigation measures intended to avoid or reduce harmful effects cannot be taken into account at the screening stage of a Habitats Regulation Assessment, but they can be taken into account as part of an appropriate assessment. This is set out in the Planning Inspectorate's Advice Note at paragraph 3.15 that: *"it is not appropriate at the HRA Stage 1: Screening stage to take account of measures intended to avoid or reduce harmful effects. These mitigation measures need to be considered at HRA Stage 2: AA. Applicants may wish to assert that measures are embedded/ integral/ incorporated within the DCO application. Whilst this position is feasible and open to the Applicant as an approach, Applicant's may instead opt to take a precautionary approach and progress any such measure to the HRA Stage 2. If there is confidence in the efficacy of the measure(s) proposed, considering such measure(s) at HRA Stage 2 should not result in a noticeable additional level of effort, but will reduce the need for scrutiny of the procedure followed."*
- 2.14 In addition, in 2018 the Holohan ruling (Holohan and Others v An Bord Pleanála, 7 November 2018, C-461/17) was handed down by the European Court of Justice. Among other provisions paragraph 40 of the ruling states that *"Article 6(3) of the Habitats Directive must be interpreted as meaning that an 'appropriate assessment' must, on the one hand, catalogue the entirety of habitat types and species for which a site is protected, and, on the other, identify and examine both the implications of*

the proposed project for the species present on that site, and for which that site has not been listed, and the implications for habitat types and species to be found outside the boundaries of that site, provided that those implications are liable to affect the conservation objectives of the site”.

2.15 The sHRA takes into account the relevant case law and advice.

3 Methods and Scope of the Assessment

Desk Study

- 3.1 The Multi-Agency Geographic Information for the Countryside (MAGIC) database (Defra, 2021; accessed most recently 17 November 2021) and Natural England’s designated site information (Natural England, 2021) were consulted to establish the ecological context of the Order limits and to search for information on internationally important designated sites up to 10 km from the Order limits. There is no definitive guidance on the distance from European sites a plan or project should assess likely significant effects as this will vary depending on the scale and nature of a particular project and the sensitivity or interest of particular European sites. However, sites that support highly mobile species such as birds and bats are more likely to rely upon supporting habitat outside of the designated area for the maintenance of species populations and as such consideration of a wider area in determining likely significant effect is usually required.
- 3.2 For example wintering birds may forage or loaf regularly on land outside of a designated site at particular times of the day or season or bats may travel between summer breeding and foraging sites and winter hibernation or autumn mating sites. For some sites local guidance such as supplementary planning guidance does provide a strong steer as to appropriate distances within which likely significant effects should be considered. For example, the SPD for the Upper Nene Gravel Pits SPA between Northampton and Thrapston guides users to consult with Natural England on potential impacts of solar farms between 0 and 10km. As such 10km distance is considered appropriate given the nature of the Proposed Development to assess likely significant effects on European sites designated for birds
- 3.3 A wider search area was applied in consideration of European Sites designated for bats. It is known that Annex II bat species (species for which SAC selection is required) can travel long distances between summer breeding and foraging sites, and winter hibernation sites and swarming mating sites, although this is greatly influenced by habitats within a landscape or a particular site. Annex II bat species have been recorded travelling up to 20 km between winter and summer locations (e.g. barbastelle bats at Mottisfont SAC) and as such a precautionary distance of 30km was selected to ensure confidence that potential interactions between the site and SACs for bats had been considered.

Field survey

- 3.4 As the main designated interest of the Rutland Water Special Protection area (SPA) is its wintering bird community, a suite of wintering birds surveys were carried out

within the Order limits and its surroundings. As wintering birds can move to and utilise habitats outside the protected sites.

3.5 The surveys were used to identify the levels of use of the Order limits by notable species of wintering birds, such as high numbers of farmland passerines, waders or wildfowl. Two visits per month were carried out between November 2021 to March 2022 and on each visit, an experienced ornithologist is surveying all fields within the Order limits and adjoining fields, where possible, and recording the presence of any waders, any wildfowl, and notable passerines if present in significant numbers (e.g. over 30 individuals of a SPI). Each visit is either split over two days or two surveyors are covering approximately half of the survey area each (as on 14 December 2021). All survey visits were carried out in suitable weather conditions (i.e. avoiding high winds, rain or mist which would limit visibility). The Survey Area included the entire Order limits and adjacent fields, which were viewed from within the Order limits or Public Rights of Way.

3.6 The surveys have been undertaken on the following dates:

- 24 and 25 November 2021.
- 29 and 30 November 2021
- 6 and 7 December 2021.
- 14 December 2021.
- 10 and 11 January 2022.
- 8 and 9 February 2022.
- 22 and 23 February 2022.
- 3 and 4 March 2022.
- 21 and 22 March 2022

Scope of the Assessment

3.7 There are no standard criteria for determining the spatial scope of an HRA. The decision to include or exclude European sites from an assessment needs to be supported by application of the source-pathway-receptor model, which highlights whether there is any potential pathway that connects development to any European sites. In this case the spatial scope of the assessment has been informed and refined by identifying the impacts that could potentially arise as a result of the development, assessing the spatial and temporal scope of these impacts and understanding the effects on sensitive receptors that might arise. There is no specific guidance on the distance an impact assessment of potential effects should consider in relation to the internationally designated sites closest to the Mallards Pass Solar Farm project. A data search distance of 10 Km therefore has been selected based on consideration of what has been applied to other similar internationally designated sites (a consultation zone of 10 km is used for the Nene Valley Gravel Pits SPA for example) and the potential of the project to affect directly or indirectly the features of interest of the internationally designated sites. A search zone of 30 km was applied

for internationally designated sites for bats on a precautionary basis as bats can travel long distances between breeding and wintering sites and as requested by PINS in the Scoping Opinion.

Potential Impact Mechanisms

3.8 The following are examples of pathways for impacts to European sites during the construction, decommissioning and operational phases of a typical solar farm development.

- Visual presence and noise from personnel and plant during the construction phase.
- Landscaping of the site, resulting in more trees / points of local elevation.
- Loss of functionally linked land through addition of solar arrays.
- Contamination of or changes to hydrological features.

4 Baseline

Desk Study

- 4.1 No internationally important designated sites for bats are present within 30km of the Order limits. The closest is Eversden and Wimpole Woods Special Areas of Conservation (SAC), located over 60km to the south. This is designated for its population of barbastelle bat *Barbastella barbastellus*.
- 4.2 Four international designated sites are present within 10km of the Order limits. Table 1 sets out the distance between these and the Order limits, the reasons for their designation and qualifying features. Table 2 sets out the conservation objectives for each site and the known threats and pressures to their integrity.

Table 1 – European Sites Scoped into Stage 1

Site	Distance from Order limits	Qualifying interest
Rutland Water Special Protection Area (SPA)	Approximately 5.6 km to the west of the Order limits but approximately 8.65 km from the Solar PV	<p>This site is a large freshwater reservoir fringed by a mosaic of wetland habitats.</p> <p>It qualifies as an SPA under Article 4.2 by supporting over winter:</p> <ul style="list-style-type: none"> • Shoveler <i>Anas clypeata</i> (North-western/Central Europe) 1.3% of the population 5 year peak mean 1991/92-1995/96. • Teal <i>Anas crecca</i> (North-western Europe) 1% of the population in Great Britain 5 year peak mean 1991/92-1995/96. • Wigeon <i>Anas penelope</i> (Western Siberia/North-western/North-eastern Europe) 1.5% of the population in Great Britain 5 year peak mean 1991/92-1995/96 • Gadwall <i>Anas strepera</i> (North-western Europe) 3.9% of the population 5 year peak mean 1991/92-1995/96. • Tufted duck <i>Aythya fuligula</i> (North-western Europe) 3.8% of the population in Great Britain 5 year peak mean 1991/92-1995/96. • Common goldeneye <i>Bucephala clangula</i> (North-western/Central Europe) 2.3% of the population in Great Britain 5 year peak mean 1991/92-1995/96 • Mute swan <i>Cygnus olor</i> (Britain) 1.1% of the population in Great Britain 5 year peak mean 1991/92-1995/96 • Coot <i>Fulica atra</i> (North-western Europe - wintering) 3.5% of the population in Great Britain 5 year peak mean 1991/92-1995/96 • Merganser <i>Mergus merganser</i> (North-western/Central Europe) 0.5% of the population in Great Britain 5 year peak mean 1991/92-1995/96 • Great crested grebe <i>Podiceps cristatus</i> (North-western Europe - wintering) 7.8% of the population in Great Britain 5 year peak mean 1991/92-1995/96

Site	Distance from Order limits	Qualifying interest
		<p>It also qualifies under Article 4.2 for its internationally important assemblage of birds in winter: 25037 waterfowl (5 year peak mean 1991/92-1995/96) Including: great crested grebe, wigeon, teal, gadwall, tufted duck, shoveler, goldeneye, merganser and a coot.</p>
<p>Rutland Water Ramsar</p>	<p>Approximately 5.6 km to the west of the Order limits but approximately 8.65 km from the Solar PV</p>	<p>Rutland Water is a large eutrophic man-made pump storage reservoir created by the damming of the Gwash Valley in 1975. The reservoir is in a lowland setting receiving the majority of its water from the Nene (90%) and Welland (10%). In general the reservoir is drawn down in the summer and filled during the autumn and winter months when river levels are high.</p> <p>It qualifies as a Ramsar site under Criteria 5 and 6.</p> <p>Criterion 5 - Assemblages of international importance: Species with peak counts in winter: 19,274 waterfowl (5 year peak mean 1998/99-2002/2003)</p> <p>Criterion 6 – species/populations occurring at levels of international importance.</p> <p>Species with peak counts in spring/autumn:</p> <ul style="list-style-type: none"> • Gadwall <i>Anas strepera strepera</i>, NW Europe 1014 individuals, representing an average of 1.6% of the population (5 year peak mean 1998/9-2002/3). • Northern shoveler <i>Anas clypeata</i>, NW & C Europe 619 individuals, representing an average of 1.5% of the population (5 year peak mean 1998/9- 2002/3) <p>Species/populations identified subsequent to designation for possible future consideration under criterion 6.</p> <p>Species with peak counts in spring/autumn:</p> <p>Mute swan , <i>Cygnus olor</i>, Britain 563 individuals, representing an average of 1.5% of the population (5 year peak mean 1998/9-2002/3).</p>

Site	Distance from Order limits	Qualifying interest
Baston Fen Special Area for Conservation (SAC)	Approximately 4.4 <u>4.6.1 km</u> north east of the Order limits	Baston Fen SAC is a waterway which qualifies as an SAC due to the presence of Spined loach <i>Cobitis taenia</i> , an Annex II species. The Counterdrain, a large drainage channel running alongside Baston Fen, contains high densities of spined loach. It is an example of spined loach populations in the Welland catchment. The patchy cover from submerged plants provides excellent habitat for the species.
Grimsthorpe SAC	Approximately 4.6 km north of the Order limits	<p>The primary reason for the selection of this site Annex II species:</p> <ul style="list-style-type: none"> • 1654 - Early gentian <i>Gentianella anglica</i> - Grimsthorpe is the most northerly outpost for early gentian <i>Gentianella anglica</i>, with 2–3 colonies totalling several hundred plants in old oolitic limestone quarries. <p>This site support an Annex I habitat which is present as a qualifying feature, but not a primary reason for selection of this site:</p> <ul style="list-style-type: none"> • 6210 - Semi-natural dry grasslands and scrubland facies on calcareous substrates (<i>Festuco-Brometalia</i>) (* important orchid sites)
Barnack Hills and Holes SAC	Approximately 6.8 km south of the Order limits	<p>This site is primarily designated for the following Annex I habitat:</p> <ul style="list-style-type: none"> • 6210 - Semi-natural dry grasslands and scrubland facies on calcareous substrates (<i>Festuco-Brometalia</i>) (* important orchid sites). This site hosts the priority habitat type "orchid rich sites". his habitat at Barnack Hills and Holes consists largely of CG5 <i>Bromus erectus</i> – <i>Brachypodium pinnatum</i> grassland. It supports what is considered to be the largest UK population of the nationally scarce man orchid <i>Aceras anthropophorum</i>. It also supports a rich assemblage of other orchid species, such as fragrant orchid <i>Gymnadenia conopsea</i>, pyramidal orchid <i>Anacamptis pyramidalis</i> and bee orchid <i>Ophrys apifera</i>. The site represents orchid-rich grassland in the northern part of its range, on limestone rather than on chalk.

Table 2 – Conservation objectives and threats to the European Sites

Site	Conservation objectives	Threats and pressure to site integrity ³
<p>Rutland Water Special Protection Area (SPA)</p>	<p><i>“Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring;</i></p> <ul style="list-style-type: none"> • <i>The extent and distribution of the habitats of the qualifying features</i> • <i>The structure and function of the habitats of the qualifying features</i> • <i>The supporting processes on which the habitats of the qualifying features rely</i> • <i>The population of each of the qualifying features, and,</i> • <i>The distribution of the qualifying features within the site.”</i> 	<p>The following are listed as the known threats to this site:</p> <ul style="list-style-type: none"> • Other human intrusions and disturbances • Invasive non-native species • Human induced changes in hydraulic conditions • Pollution to groundwater (point sources and diffuse sources)

³ As set out in the relevant Natura 2000 Standard Data Form for each site.

Site	Conservation objectives	Threats and pressure to site integrity ³
<p>Baston Fen Special Area for Conservation (SAC)</p>	<p>Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring;</p> <ul style="list-style-type: none"> • The extent and distribution of the habitats of qualifying species • The structure and function of the habitats of qualifying species • The supporting processes on which the habitats of qualifying species rely • The populations of qualifying species, and, • The distribution of qualifying species within the site. 	<p>The following are listed as the known threats to this site:</p> <ul style="list-style-type: none"> • Human induced changes in hydraulic conditions • Changes in biotic conditions

Site	Conservation objectives	Threats and pressure to site integrity ³
Grimsthorpe SAC	<p>Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring;</p> <ul style="list-style-type: none"> • The extent and distribution of qualifying natural habitats and habitats of qualifying species • The structure and function (including typical species) of qualifying natural habitats • The structure and function of the habitats of qualifying species • The supporting processes on which qualifying natural habitats and habitats of qualifying species rely • The populations of qualifying species, and, • The distribution of qualifying species within the site. 	None listed.
Barnack Hills and Holes SAC	<p>Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring;</p> <ul style="list-style-type: none"> • The extent and distribution of qualifying natural habitats 	<p>The following are listed as the known threats to this site:</p> <ul style="list-style-type: none"> • Outdoor sports and leisure activities, recreational activities • Air pollution, air-borne pollutants

Site	Conservation objectives	Threats and pressure to site integrity ³
	<ul style="list-style-type: none"> • The structure and function (including typical species) of qualifying natural habitats, and • The supporting processes on which qualifying natural habitats rely 	<ul style="list-style-type: none"> • Changes in biotic conditions

5 Field survey results

- 5.1 During the initial assessments of the Order limits, it was considered highly unlikely that this would be supporting habitat or functionally linked land for the Rutland SPA, given that the species for which it is designated are largely aquatic and normally require large water bodies, though they may use grassland habitat adjacent to these or at least flooded grassland habitats in the absence of large water bodies. However, to confirm this wintering bird surveys were carried out.
- 5.2 During these surveys wildfowl generally were noted very infrequently. One more sizeable flock of mallard *Anas platyrhynchos* was noted on 14 December 2021 with 60 individuals present in an arable field (field 47) near the centre of the Order limits., but very low numbers of this species were recorded at three other times with nine or fewer individuals. A small field (field 24) at the centre of the Order limits. immediately south of the West Glen River supported wigeon (six individuals), gadwall (two individuals) and tufted duck (three individuals) on one occasion each. These individuals are likely to have been opportunistically using a small wet area and were not recorded here at other times. Mute swan was recorded very infrequently as well (one observation of two individuals).
- 5.3 Therefore, the species listed in the qualifying interest of the Rutland Water SPA have been recorded very infrequently and in low numbers.
- 5.4 During the surveys, waders have been observed very infrequently. Lapwing *Vanellus vanellus* was recorded on four occasions, with a peak of 90 individuals on 27 January 2022 in field 89, which is offsite to the north-east. The remaining three occasions the birds were onsite, but these involved one and two birds only. Golden plover *Pluvialis apricaria* were recorded on one occasion (11 individuals) on 10 January 2022 in an arable field (field 38) in the northern part of the Order limits. These are very low levels of use, and the species are not part of the qualifying interest of the Rutland SPA.
- 5.5 These surveys have also recorded small flocks of passerines but as with the waders, these are not however listed in the ornithological interest of the Rutland Water SPA.

6 Stage 1 - Screening for Likely Significant Effects

- 6.1 This section sets out an assessment of potential likely significant effects, with a supporting rationale as to the pathways of these effects. This is based on an assessment of the nature of the Proposed Development, on its location with reference to the European sites and is based on professional judgement used to identify and assess pathways of effects. Table 3 below sets out the rationale behind the Stage 1 screening assessment with a summary of the assessment is included in the screen matrices in Annex 1 and Annex 2.
- 6.2 In the assessment below construction and decommissioning are considered together as they are likely to result in similar impacts to features.

Identification of impacts at construction and decommissioning

Pathways of impacts to receptors which have been scoped into this assessment

- 6.3 The pathways through which the Proposed Development might have an impact on the European sites which are scoped into this Stage 1 assessment and considered in Table 1 below are listed here:
- Loss of land used by species which form part of the designated ornithological interest of the Rutland Water SPA and Ramsar site at construction).
 - Changes in hydrology or degradation (e.g. water levels, nutrient levels or pollutants) of the Baston Fen SAC (at construction and decommissioning).

Pathways of impacts to receptors which have been scoped out of this assessment

- 6.4 Pathways which have been scoped out of this assessment include:
- direct impacts as a result of habitat losses or damage to any site due to the distance from the Order limits.
 - displacement or disturbance of birds (e.g. through construction activities) which form the ornithological interest of the SPA and Ramsar sites within the European site due to the distance from the Order limits (though see impact pathway relating to use of the Order limits by bird constituting the designated interest of the SPA and Ramsar site above).
 - Adverse impacts to the structure and diversity of the grasslands (e.g. through nutrient deposition, air quality, dust) within the Grimsthorpe SAC and Barnack Hills and Holes SAC due to distance (over 4.6 km and 6.8 km respectively) and the nature of the Proposed Development.

Identification of impacts during operation

- 6.5 Due to the nature of the Proposed Development as set out in **Chapter 5: Project Description** of the ES and the distances to the European sites discussed above, no impacts (direct or indirect) are considered likely at the operational phase as no pathways for impacts exist.

Table 3 – Summary of Likely Significant Effects – Construction and decommissioning

Designated Site	Potential Impacts	Source	Pathway	Likely Significant Effect
Rutland Water SPA and Ramsar	Loss of Functionally Linked Land	Solar PV installed as part of Proposed Development result in loss of areas used by species which form part of the designated interest within Order limit (Functionally Linked Land)	<p>The installation of Solar PVs will result in the loss of large areas of arable land. However these habitats are unsuitable to support the species for which the SPA and Ramsar site are designated. Given the distance to the SPA and Ramsar site, even if suitable habitat were present, it is highly unlikely that the Order limits would support individuals from the SPA and Ramsar population. The results of the winter bird survey support this with very few observations of these species and only in very low numbers⁴.</p> <p>Therefore it is highly unlikely that any significant effects on the European sites would occur.</p>	None
Baston Fen SAC	Degradation of SAC	<p>Hydrological changes</p> <p>Contamination from pollutants or silt run off</p>	<p>There is a possible pathway of effect on this site due to hydrological connectivity from the Order limits through the West Glen River. This would result in adverse effects due to siltation or pollution from the Order limits entering a waterway which is connected to Baston Fen SAC.</p> <p>By its very nature, the Proposed Development will not be expected to use chemicals, or create additional run off as construction activities are very limited. The construction will be set back from the West Glen River and its tributaries as part of the normal design of the proposals and the works in the vicinity will include significant planting of more natural habitats in the place of arable land resulting in increased permanent vegetation cover compared to the seasonally exposed bare soils of arable farmland.</p>	None

⁴ The impact on the low numbers of wintering birds present is assessed in the Ecology Chapter of the ES.

Designated Site	Potential Impacts	Source	Pathway	Likely Significant Effect
			<p>Given the length of the connective waterways to the SAC, which is over 10km via the course of the water bodies, and the amount of other tributaries in the area feeding the SAC, any small amounts of changes to hydrology or any pollutants entering the water course would not result in a likely significant effect on the SAC due to the distance to the SAC and a result of dilution over the 10km between the SAC and the Order limits.</p> <p>This pathway is assessed in Chapter 11 of the ES (Water Resources and Ground Conditions) which, concludes that with the implementation of embedded mitigation (included in the design as standard practice rather than mitigation to avoid specific impacts) no residual effects of water quality of resources would occur.</p> <p>Therefore it is considered that no likely significant effects to this European site will occur.</p>	

7 In Combination Assessment

- 7.1 The Proposed Development will not have any likely significant effects on any European Sites. Moreover, it will have no effect at all on these sites, therefore it cannot add to any effects resulting from any other development on the European sites identified in this assessment.

8 Conclusions

- 8.1 It is concluded that there will be no likely significant effect arising from the Proposed Development on any European sites either alone or in combination with other plans or projects.

9 References

European Commission (2001). *Assessment of plans and projects significantly affecting Natura 2000 site. Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC. Published November 2001.*

Holohan and Others v An Bord Pleanála, 7 November 2018, C-461/17

Natural England (2018). *European Site Conservation Objectives for Barnack Hills and Holes Special Area of Conservation Site Code: UK0030031*

Natural England (2019). *European Site Conservation Objectives for Rutland Water Special Protection Area Site Code: UK9008051.*

People Over Wind and Sweetman, 12 April 2018, C-323/17

10 Annex 1 – Pathways of potential impacts

Relevant Impact Pathways

The European sites included in this assessment are:

- Rutland Water SPA and Ramsar Site.
- Baston Fen SAC.
- Grimethorpe SAC.
- Barnack Hills and Holes SAC.

Table 4 below summarises the potential effects considered as part of this assessment. This does not consider the impacts and pathway which have been scoped out.

Table 4 -Effects considered in screening matrices

Designated Site	Effects set out in submission document	Presented in screening matrices as
Rutland Water SPA and Ramsar	Loss of distant habitats used by SPA or Ramsar species	Loss of habitats used by SPA or Ramsar species
Baston Fen SAC	Hydrological changes Contamination from pollutants or silt run off	Hydrological changes and contamination

11 Annex 2 – Screening matrices

Annex 2-1 Detailed screening matrix assessing the qualifying features of the Rutland Water SPA and Ramsar site against the pathways identified above. These refer to the Construction and Decommissioning phases.

Matrix Key:

✓ = Likely significant effect cannot be excluded

X = Likely significant effect can be excluded

C = construction and decommissioning

O = operation

Name of European Site: Rutland Water SPA

Site Code: UK9008051			
Distance from NSIP: 5.6 km from Order limits			
Qualifying feature	Likely effect of NSIP		
	Loss of habitats used by SPA species		In Combination effects
Stage of Scheme	C	O	
All features	X*		X*

Name of European Site: Rutland Water Ramsar			
Site number: 533			
Distance from NSIP: 5.6 km from Order limits			
Qualifying feature	Likely effects of NSIP		
	Loss of habitats used by Ramsar species		In Combination effects
Stage of Scheme	C	O	
All features	X*		X*

* The assessment set out in Table 3 above states how the installation of Solar PVs will result in the loss of large areas of arable land. However, these habitats are unsuitable to support the species for which the SPA and Ramsar site are designated. Given the distance to the SPA and Ramsar site, even if suitable habitat were present, it is highly unlikely that the Order limits would support individuals from the SPA and Ramsar population. The results of the winter bird survey support this with very few observations of these species and only in very low numbers. Therefore it is highly unlikely that any significant effects on the European sites would occur.

Annex 2-1 Detailed screening matrix assessing the qualifying features of the Baston Fen SAC site against the pathways identified above. These refer to the Construction and Decommissioning phases.

Matrix Key:

- ✓ = Likely significant effect cannot be excluded
- X = Likely significant effect can be excluded
- C = construction and decommissioning
- O = operation

Name of European Site: Baston Fen SAC			
Site code: UK0030085			
Distance from NSIP: 4.4 km from Order limits			
	Likely effects of NSIP		
Qualifying feature	Hydrological changes and contamination		In Combination effects
Stage of Scheme	C	O	
All features	X**		X**

** The assessment set out in Table 3 sets out how there is a possible pathway of effect on this site due to hydrological connectivity from the Order limits through the West Glen River. This would result in adverse effects due to siltation or pollution from the Order limits entering a waterway which is connected to Baston Fen SAC. By its very nature, the Proposed Development will not be expected to use chemicals, or create additional run off as construction activities are very limited. The construction will be stood off as part of the design of the proposals and the works in the vicinity will include significant planting of more natural habitats in the place of arable land.

Given the length of the connective waterways to the SAC, which is over 10km via the course of the water bodies, and the amount of other tributaries in the area feeding the SAC, any small amounts of changes to hydrology or any pollutants entering the water course would be likely significant effect on the SAC due to the distance to the SAC and a result of dilution.

This pathway is assessed in Chapter 11 of the ES (Water Resources and Ground Conditions) which, concludes that with the implementation of embedded mitigation

(included in the design as standard practice rather than mitigation to avoid specific impacts) no residual effects of water quality of resources would occur.

Therefore it is considered that no likely significant effects to this European site will occur.

