



Longfield Solar Farm

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1. Introduction

1.1 Overview

- 1.1.1 This Habitat Regulations Assessment (HRA) has been prepared on behalf of Longfield Solar Farm Ltd (the 'Applicant').
- 1.1.2 The Applicant is seeking development consent for the construction, operation and maintenance, and decommissioning of a solar photovoltaic (PV) electricity generating facility with a total capacity exceeding 50 megawatts (MW), an energy storage facility and an export/import connection to the National Grid, via an extension of the existing Bulls Lodge Substation. Refer to **Chapter 2: The Scheme** of the Environmental Statement (ES) [EN010118/APP/6.1] for full details of the proposal.
- 1.1.3 A Development Consent Order (DCO) is required for the Scheme as it would involve the construction of a generating station which has a capacity greater than 50 megawatts and would be located in England. It therefore falls within the definition and thresholds for a Nationally Significant Infrastructure Project (NSIP) under Sections 14(1)(a) and 15(2) of the PA 2008.
- 1.1.4 The scope and extent of this report has been determined by a combination of professional judgement, the scoping opinions collated by the Planning Inspectorate (PINS) on behalf of the Secretary of State for Business, Energy and Industrial Strategy (SoS), Section 42 responses to the Preliminary Environmental Information Report (PEI Report) and ongoing engagement with consultees including Natural England. Regard has also been given to the Planning Inspectorate's (PINS) Advice Note Ten: Habitats Regulations Assessment relevant to nationally significant infrastructure projects, Version 8 (November 2017).

1.2 Order limits Description

- 1.2.1 The Scheme is located in Essex and the Order limits overlap the administrative areas of Braintree District Council and Chelmsford City Council.
- 1.2.2 The Order limits is approximately centred on Ordnance Survey (OS) National Grid Reference (NGR) TL 74179 14620 and located approximately 1.1 kilometres (km) to the west of the village of Terling.
- 1.2.3 The Order limits area is, in total, approximately 453 hectares (ha) in area and the landscape features within the Order limits consist of agricultural fields mainly under arable production, with some small parcels of pasture, interspersed with individual trees, hedgerows, linear tree belts, small woodland blocks and farm access tracks. The hedgerows within the Order limits range between lengths of dense tall vegetation (shrub and tree species), the dominant hedgerow type in the landscape, and thin lines of vegetation with sporadic trees. The arable fields are of small to moderate size, some of which are of irregular shape.
- 1.2.4 The landscape features immediately surrounding the Order limits comprise a number of villages, including Fuller Street approximately 300 metre (m) to the north, Gamble's Green and Terling 500 metres (m) and 1.1km to the east,

Boreham 500m to the south-west, Hatfield Peverel 1.5km to the south-east and the city of Chelmsford 5.7 kilometres (km) to the south-west. Boreham Road runs north to south along the western edge of the Order limits, with the A12 carriageway abutting and bounding the southern edge of the Order limits boundary.

- 1.2.5 The northern part of the Order limits and surrounding area consists of undulating and relatively elevated landform, as part of the River Ter valley. The landform rises steeply northwards from the river and Terling Spring, between 35m Above Ordnance Datum (AOD) to 50m AOD along parts of Braintree Road. It culminates at a ridgeline at 70m AOD at Rank's Green, in the northern part of the Order limits. To the south of the River Ter, the landform also rises steeply, across Sandy Wood, to a ridgeline at 55m AOD.
- 1.2.6 To the west of the Order limits, the landscape consists of a varied pattern of landform, reflecting past sand and gravel extraction and engineered flat terrain across Boreham airfield, which is situated at 55m AOD approximately 800m to the west of the Order limits. From the airfield, the landform falls very gradually eastwards to the River Ter, which flows southwards between Terling and the northern part of Hatfield Peverel, at approximately 20m AOD.
- 1.2.7 The River Chelmer is present 2.5km to the south of the Order limits. There are several large-scale reservoirs and lakes adjacent to the river. From the river, the landform rises consistently northwards, to form a ridgeline around 40m AOD at Boreham, and southwards, across Little Baddow, to an elevated ridgeline at 100m AOD, approximately 3km from the Order limits boundary.
- 1.2.8 Most of the southern and central part of the Order limits is located across flat and low-lying landform at approximately 45m AOD, between Waltham Road / Boreham Road and Terling Road. The northern part of the Order limits is located within part of the River Ter valley, where there is rising land to the north and south of Terling Spring and adjacent to Braintree Road.

1.3 Description of the Scheme

- 1.3.1 Longfield Solar Farm is a new solar farm scheme that would connect to the national electricity transmission network. The Scheme comprises electricity generating facility with a total capacity exceeding 50 megawatts (MW), an energy storage facility and an export/import connection to the National Grid, via an extension of the existing Bulls Lodge Substation. The Scheme will be located within the Order limits boundary as shown in **Figure 1-2: Order Limits [EN010118/APP/6.3]**.
- 1.3.2 The principal infrastructure will be located within the Order limits and will include:
 - a. Solar Farm Site, comprising PV panels, inverters, transformers and switchgear;
 - b. Battery Energy Storage System (BESS) Compound;
 - c. Longfield Substation;
 - d. Grid Connection Route;
 - e. Bulls Lodge Substation Extension;

- f. Ancillary development which could be located across the Scheme;
 - g. Office, Warehouse and Plant Building; and
 - h. Site Access to the Solar Farm Site and the Bulls Lodge Substation Extension.
- 1.3.3 Additionally, there will be fencing and security measures, access tracks and habitat management areas.
- 1.3.4 The construction phase is estimated to last 24 months (between 2024 and 2026), during which temporary construction compounds will be required for the Solar Farm and the Bulls Lodge Substation Extension as well as temporary roadways to facilitate access to all land within the Order limits. The Battery Energy Storage Systems (BESS), is expected to be constructed over two phases, with the first part built alongside the solar PV and the second phase five years after commencing operation.
- 1.3.5 During the operational phase, activity within the Scheme will be minimal and will be restricted principally to vegetation management, equipment maintenance and servicing, replacement and renew of any components that fail, and monitoring. It is anticipated that maintenance and servicing would include the inspection, removal, reconstruction, refurbishment or replacement of faulty or broken equipment and adjusting and altering the solar panel orientation to ensure the continued effective operation of the Scheme and improve its efficiency.
- 1.3.6 Along the Grid Connection Route, operational activity will consist of routine inspections (schedule to be determined) and any reactive maintenance such as where a cable has been damaged. Bulls Lodge Substation Extension will be managed and maintained by National Grid.
- 1.3.7 It is anticipated that there will be up to 8 permanent staff onsite during the operational phase which equates to a maximum of eight vehicles (or 16 daily two-way vehicle trips) per day, with additional staff attending when required for maintenance and cleaning activities.
- 1.3.8 Decommissioning is expected to take between 12 and 24 months and will be undertaken in phases. A Decommissioning Environmental Management Plan will be prepared prior to decommissioning and will be secured through a DCO Requirement. The Solar PV Array Works Area and related components, Ancillary Infrastructure, Longfield Substation and the BESS Compound will be removed and the underground cable within the Grid Connection Route would be either left in-situ or removed and the ground reinstated.
- 1.3.9 The effects of decommissioning are similar to, or often of a lesser magnitude than construction effects, but for the purposes of this assessment a precautionary approach has been taken and they are considered the same as those arising from construction.
- 1.3.10 Further information on the Scheme is provided in **Chapter 2: The Scheme** of the ES [EN010118/APP/6.1].

1.4 Legislative Context

- 1.4.1 As part of the assessment of a proposed scheme it is necessary to consider whether the scheme is likely to have a significant effect on areas that have

been internationally designated for nature conservation purposes (i.e. 'European Sites'). European sites are protected under the Conservation of Habitats and Species Regulations 2017 (as amended; relevant to England and Wales) "the Habitats Regulations" (Ref 1) as part of the "national site network" in the UK. The UK left the EU on 31 January 2020 under the terms set out in the European Union (Withdrawal Agreement) Act 2020 and the related amendments to the Habitats Regulations via the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 (Ref 2) have been considered in this report, e.g. references to the Natura 2000 network should now be read as references to the national site network. This 'first stage' of screening for Likely Significant Effects (LSE) is the assessment that has been conducted and reported in this document.

- 1.4.2 Following screening, should it be found that significant effects are likely, an 'Appropriate Assessment' should then be carried out in order to further assess those effects. **Plate 1-1** sets out the legislative basis for an Appropriate Assessment. Consent may only be given for the proposed scheme if, following assessment, it is established that it will not adversely affect the integrity of the designated site.
- 1.4.3 If adverse effects are identified, alternatives should be considered to avoid those effects. However, where no alternative solution exists and so an adverse effect remains, the competent authority must be satisfied that the scheme is required for imperative reasons of overriding public interest (IROPI). If the scheme meets that IROPI test, the competent authority must secure that any necessary compensatory measures are taken to ensure the overall coherence of the national site network.
- 1.4.4 Over the years, the phrase 'Habitats Regulations Assessment' (HRA) has come into wide currency to describe the overall process set out in the Habitats Regulations, from the screening for Likely Significant Effects through to identification of IROPI. This has arisen in order to distinguish the overall process from the individual stage of "Appropriate Assessment". Throughout this Report the term HRA is used for the overall process and restricts the use of Appropriate Assessment to the specific stage of that name.

Conservation of Habitats and Species Regulations 2017 (as amended)

Regulation 63 of the 2017 Regulations states 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... The competent authority may agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the European site."

Plate 1-1: The legislative basis for Appropriate Assessment

- 1.4.5 As the Habitats Regulations derive from EU-law, the precautionary principle¹ applies when considering potential impacts to European sites.

¹ The Precautionary Principle, which is referenced in Article 191 of the Treaty on the Functioning of the European Union, has been defined by the United Nations Educational, Scientific and Cultural Organisation (UNESCO, 2005) as: "When human activities may lead to morally unacceptable harm [to the environment] that is scientifically plausible but uncertain, actions shall be taken to avoid or diminish that harm. The judgement of plausibility should be grounded in scientific analysis".

1.4.6 Although Ramsar sites are not part of the network of designated sites, paragraph 181 of the National Planning Policy Framework (NPPF) in England extends Ramsar sites the same level of protection as SPAs and SACs. As such, any reference to the European Sites below should be considered to also include such sites (Ref 3).

1.5 Consultation

1.5.1 Consultation undertaken to date with Natural England (the relevant Statutory Nature Conservation Body (SNCB) in England) in relation to ecology and nature conservation is outlined in the **Consultation Report [EN010118/APP/5.1]** submitted with the DCO application.

1.5.2 **Table 1-1** outlines the matters raised to date and how these have been addressed in relation to the HRA. The Scheme has incorporated Natural England's requirements as detailed below, but agreement with Natural England on the conclusions from this HRA report is ongoing.

Table 1-1: Consultation with SNCB

Consultee	Main matter raised	How has the concern been addressed and location of the response
Natural England	<i>We welcome that a Habitats Regulations Assessment (HRA) screening exercise is being carried out due to the presence of European sites and their relationship to the scheme.</i>	A HRA accompanies the DCO application [EN010118/APP/6.7].

2. Methods

2.1 Approach

- 2.1.1 The HRA has been carried out with reference to the general EC guidance on HRA (Ref 4), general guidance on HRA published by the UK government in July 2019 (Ref 5) and Planning Inspectorate (PINS) Advice Note 10 (Ref 6).
- 2.1.2 The UK left the EU on 31 January 2020 under the terms set out in the European Union (Withdrawal Agreement) Act 2020 (“the Withdrawal Act”). The Withdrawal Act retains the body of existing EU-derived law within our domestic law. As such this assessment of LSEs takes account of relevant EU case law (for instance, the Holohan (Ref 7) and People over Wind cases (Ref 8), discussed below).
- 2.1.3 **Plate 2-1** below outlines the stages of HRA according to PINS Advice Note 10. Note that while **Plate 2-1** shows all the stages of the HRA process, this document only discusses stage 1 in further detail (see below).

Whilst the HRA decisions must be taken by the competent authority (in the case of the Scheme, that will be the SoS), 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 LSEs from the Scheme is therefore provided in this Report.

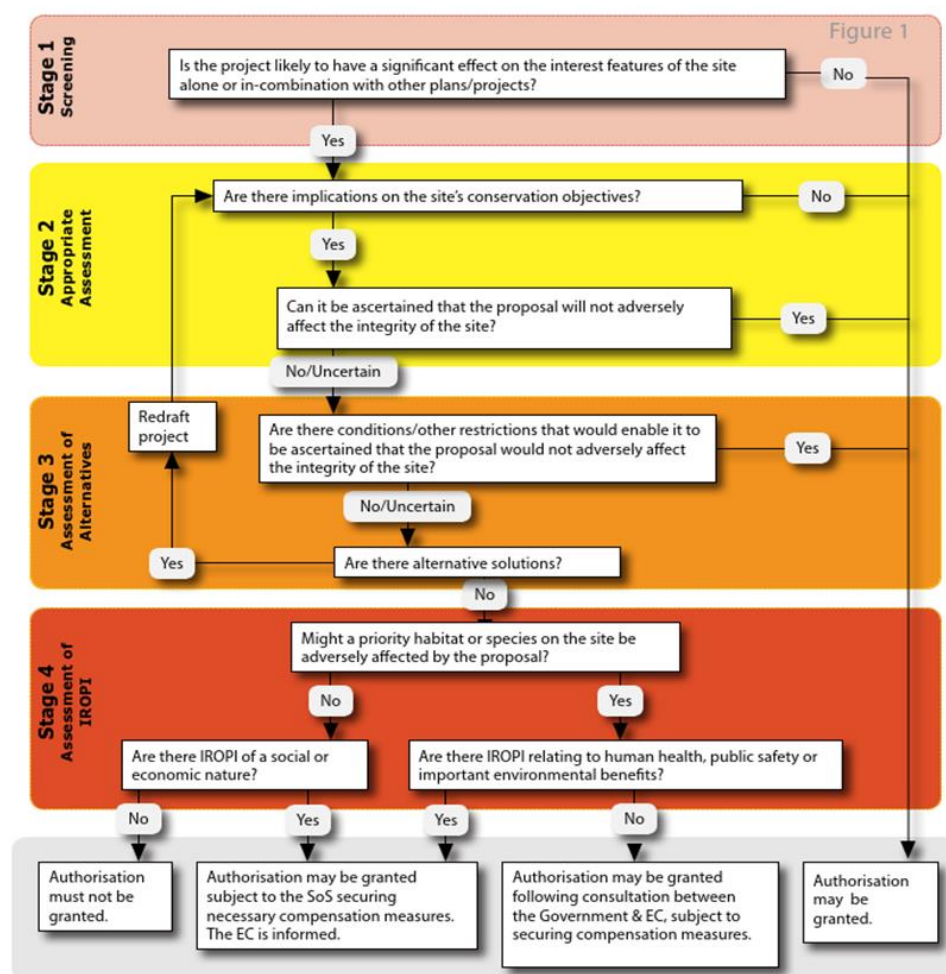


Plate 2-1: Four Stage Approach to Habitats Regulations Assessments of Projects

2.2 HRA Stage 1: Screening for Likely Significant Effects

- 2.2.1 The objective at stage 1 is to 'screen out' those aspects of a project and / or the European sites that can, without any detailed appraisal, be said to be unlikely to result in significant adverse effects upon European sites, usually because there is no mechanism for an adverse interaction (i.e. a pathway) with European sites or which are directly connected with or necessary to the management of the site. The remaining aspects are then taken forward to Appropriate Assessment. The assessment must consider the potential for effects either alone or 'in combination' with other plans and projects.
- 2.2.2 This report has been prepared having regard to all relevant case law relating to the Habitats Regulations, the Habitats Directive and Birds Directive. This includes the ruling by the Court of Justice of the European Union (CJEU) in the case of *People Over Wind, Peter Sweetman v Coillte Teoranta (C-323/17)* (Ref 8).
- 2.2.3 This case held that; *"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"* (paragraph 40). This establishes that 'mitigation

measures' cannot be taken into account at the screening stage, but they can be taken into account in an Appropriate Assessment.

- 2.2.4 In 2018 the Holohan ruling² 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*’ [emphasis added].

² Case C-461/17

3. Baseline Evidence Gathering

3.1 Overview

- 3.1.1 There is no guidance that dictates the general physical scope of an HRA document. Therefore, in considering the physical scope of the assessment, we were guided primarily by the identified impact pathways (called the source-pathway-receptor model).
- 3.1.2 Briefly defined, impact pathways are routes by which the implementation of a project can lead to an effect upon a European designated site. For some impact pathways (notably air pollution) there is guidance that sets out distance-based zones required for assessment. For others, a professional judgment must be made based on the best available evidence.

3.2 Designated Sites Scoped into HRA

- 3.2.1 Guidance published by the Environment Agency (Ref 9) recommends that for large power generation developments greater than 50 MW, a search radius of 15 km should be used when identifying relevant European designated sites which may be affected by the development. The ES and this HRA have considered a distance of 10km as appropriate based on likely impacts during construction, operation and decommissioning of a solar farm, compared with other large power generation developments, such as coal and gas fired power stations, that are potential sources of air pollution over a greater distance.
- 3.2.2 The following European Sites are considered within this assessment:
- Essex Estuaries Special Area of Conservation (SAC);
 - Blackwater Estuary (Mid-Essex Coast Phase 4) Special Protection Area (SPA); and
 - Blackwater Estuary (Mid-Essex Coast Phase 4) Ramsar.
- 3.2.3 No additional SACs designated for bats are within 30 km³ of the Order limits.
- 3.2.4 Paragraph 4.9 of PINS Advice Note Ten, as well as guidance from the Department for Business, Energy and Industrial Strategy⁴ requires an evaluation of the potential for the Scheme to require other consents which could also require Habitats Regulations Assessment by different competent authorities, and a statement as to whether the Order limits overlaps with devolved administrations or other European Economic Area (EEA) States (Ref 10). It is confirmed that the Order limits does not overlap with areas of devolved administrations or with those of other EEA States. It is also the case that no parallel consents are required for the Scheme which would require additional Habitats Regulations Assessment to be carried out. The entirety of the Scheme is within eastern England and there are no pathways arising from the Scheme that could results in significant effects to European sites in devolved administrations or other EEA States.

³ Guidance on assessing impacts on bats is taken from Collins, J. (ed.) (2016) Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd edn.) The Bat Conservation Trust, London.

⁴ Guidelines on the assessment of transboundary impacts of energy developments on Natura 2000 sites outside the UK (online source)

3.2.5 A summary of the qualifying features for each of the European Sites and their distance from the Scheme is summarised in **Table 3-1** below.

Table 3-1: European Sites Scoped into HRA Screening

Site	Approx. distance from Order limits	Summary of Primary Reasons for Site Selection	Summary of Qualifying Features
Essex Estuaries SAC	<p>Approx. 9.3 km to the south-east of the Order limits. Also hydrologically connected via the River Ter, which flows approximately 17.5km from the Order limits into the SAC.</p>	<p>This is a typical, undeveloped, coastal plain estuarine system with associated open coast mudflats and sandbanks. The site comprises the major estuaries of the Colne, Blackwater, Crouch and Roach rivers. Essex Estuaries contains a very wide range of characteristic marine and estuarine sediment communities and some diverse and unusual marine communities in the lower reaches, including rich sponge communities on mixed, tide-swept substrates. Subtidal areas have a very rich invertebrate fauna, including the reef-building worm <i>Sabellaria spinulosa</i>, the brittlestar <i>Ophiothrix fragilis</i>, crustaceans and ascidians.</p> <p>There are extensive intertidal mudflats and sandflats in estuaries and at Dengie Flats and Maplin Sands. The area includes a wide range of sediment flat communities, from estuarine muds, sands and muddy sands to fully saline, sandy mudflats with extensive growths of eelgrass <i>Zostera</i> spp. on the open coast. Glasswort <i>Salicornia</i> spp. saltmarsh forms an integral part of the transition from the extensive and varied intertidal mud and sandflats through to upper salt meadows. The area of pioneer marsh includes gradation into extensive cord-grass <i>Spartina</i> spp. swards, including the most extensive remaining stand of the native small cordgrass <i>Spartina maritima</i> in the UK and possibly in Europe at Foulness Point. Other smaller stands are found elsewhere in the estuary complex, notably in the Colne estuary, where it forms a major component of the upper marsh areas.</p> <p>Extensive upper saltmarshes remain, including Atlantic salt meadows with floristic features typical of this part of</p>	<p>Annex I habitats that are a primary reason for selection of this site:</p> <ul style="list-style-type: none"> • Estuaries; • Mudflats and sandflats not covered by seawater at low tide; • Atlantic salt meadows (<i>Glaucopuccinellietalia maritima</i>); • Salicornia and other annuals colonising mud and sand; • <i>Spartina</i> swards (<i>Spartinion maritimae</i>); • Mediterranean and thermo-Atlantic halophilous scrubs (<i>Sarcocornetea fruticosi</i>); <p>Annex I habitats present as a qualifying feature, but not a primary reason for selection of this site:</p> <ul style="list-style-type: none"> • Sandbanks which are slightly covered by sea water all the time.

Site	Approx. distance from Order limits	Summary of Primary Reasons for Site Selection	Summary of Qualifying Features
		<p>the UK. Golden samphire <i>Inula crithmoides</i> is a characteristic species of these marshes, occurring both on the lower marsh and on the drift-line. Mediterranean saltmarsh scrub occurs principally as a strandline community or at the foot of sea-walls. The local variant of this vegetation, which features sea-lavenders <i>Limonium</i> spp. and sea-heath <i>Frankenia laevis</i>, occurs at one location, Colne Point.</p>	
<p>Blackwater Estuary (Mid-Essex Coast Phase 4) SPA</p>	<p>Approx. 9.3 km to the south-east of the Order limits. Also hydrologically connected via the River Ter, which flows approximately 17.5km from the Order limits into the SPA.</p>	<p>The Blackwater Estuary supports nationally important breeding populations of an Annex 1 species, the little tern <i>Sterna albifrons</i>.</p> <p>The Blackwater Estuary regularly supports nationally important wintering populations of an Annex 1 species, the hen harrier <i>Circus cyaneus</i>.</p> <p>The Blackwater Estuary qualifies by supporting, in summer, nationally important populations of two regularly occurring migratory species: pochard <i>Aythya ferina</i> and ringed plover <i>Charadrius hiaticula</i>.</p> <p>The estuary also qualifies as a wetland of international importance by regularly supporting, in winter over, 20,000 waterfowl.</p> <p>The Blackwater Estuary regularly supports in winter internationally important numbers of the following four species of migratory waterfowl: dark-bellied brent geese <i>Branta bernicla bernicla</i>, Grey plover <i>Pluvialis squatarola</i>, dunlin <i>Calidris alpina</i> and black-tailed godwit <i>Limosa limosa</i>.</p> <p>The Blackwater Estuary also supports nationally important wintering populations of a further</p>	<p>Qualifies under Article 4.1 by supporting, in summer, nationally important breeding populations of the following Annex 1 species:</p> <ul style="list-style-type: none"> • Little tern <i>Sterna albifrons</i>. 73 pairs (3% of British breeding population). <p>Qualifies under Article 4.1 by regularly supporting nationally important wintering populations of the following: Annex 1 species:</p> <ul style="list-style-type: none"> • Hen harrier <i>Circus cyaneus</i> 19 individuals (2% of the British total). <p>Qualifies under Article 4.2 by supporting, in summer, nationally important populations of the following regularly occurring migratory species:</p> <ul style="list-style-type: none"> • Pochard <i>Aythya farina</i> 15 pairs (7% of British population); • Ringed Plover <i>Charadrius hiaticula</i> 135 pairs (1% of British population). <p>Qualifies under Article 4.2 as a wetland of international importance by regularly supporting, in winter over, 20,000 waterfowl.</p>

Site	Approx. distance from Order limits	Summary of Primary Reasons for Site Selection	Summary of Qualifying Features
		<p>eight species: cormorant <i>Phalacrocorax carbo</i>, shelduck <i>Tadorna tadorna</i>, gadwall <i>Anas strepera</i>, teal <i>Anas crecca</i>, goldeneye <i>Bucephala clangula</i>, ringed plover <i>Charadrius hiaticula</i>, curlew <i>Numenius arquata</i>, redshank <i>Tringa totanus</i>.</p>	<p>Qualifies under Article 4.2 by regularly supporting, in winter, internationally important numbers of the following migratory waterfowl:</p> <ul style="list-style-type: none"> • Dark-bellied brent geese <i>Branta bernicla bernicla</i> 8,761 (5.1% of total world population, 9.7% of British population); • Grey Plover <i>Pluvialis squatarola</i> 2,172 (1.2% of East Atlantic Flyway (EAF) population 10.2% of British); • Dunlin <i>Calidris alpina</i> 17,743 (1.2% EAF, 4% of British); • Black-tailed godwit <i>Limosa limosa</i> 755 (1.1% EAF, 15.8% of British).
<p>Blackwater Estuary (Mid-Essex Coast Phase 4) Ramsar</p>	<p>Approx. 9.3 km to the south-east of the Order limits. Also hydrologically connected via the River Ter, which flows approximately 17.5km from the Order limits into the Ramsar site.</p>	<p>The Blackwater Estuary is the largest estuary in Essex north of the Thames and, is one of the largest estuarine complexes in East Anglia. Its mudflats, fringed by saltmarsh on the upper shores, support internationally and nationally important numbers of overwintering waterfowl. Shingle and shell banks and offshore islands are also a feature of the tidal flats. The surrounding terrestrial habitats; the sea wall, ancient grazing marsh and its associated fleet and ditch systems, plus semi-improved grassland are also of high conservation interest. This rich mosaic of habitats supports an outstanding assemblage of nationally scarce plants and a nationally important assemblage of rare invertebrates.</p> <p>There are 16 British Red Data Book species and 94 notable and local species.</p>	<p>The Site qualifies for:</p> <ul style="list-style-type: none"> • Ramsar Criterion 1 - Qualifies by virtue of the extent and diversity of saltmarsh habitat present. This site, and the four others in the Mid-Essex Coast complex, includes a total of 3,237 ha that represent 70% of the saltmarsh habitat in Essex and 7% of the total area of saltmarsh in Britain; • Ramsar criterion 2 - The invertebrate fauna is well represented and includes at least 16 British Red Data Book species. In descending order of rarity these are: Endangered: a water beetle <i>Paracymus aeneus</i>; Vulnerable: a damselfly <i>Lestes dryas</i>, the flies <i>Aedes flavescens</i>, <i>Erioptera</i>

Site	Approx. distance from Order limits	Summary of Primary Reasons for Site Selection	Summary of Qualifying Features
			<p><i>bivittata</i>, <i>Hybomitra expollicata</i> and the spiders <i>Heliophanus auratus</i> and <i>Trichopterna cito</i>; Rare: the beetles <i>Baris scolopacea</i>, <i>Philonthus punctus</i>, <i>Graptodytes bilineatus</i> and <i>Malachius vulneratus</i>, the flies <i>Campsicemus magius</i> and <i>Myopites eximia</i>, the moths <i>Idaea ochrata</i> and <i>Malacosoma castrensis</i> and the spider <i>Euophrys</i>;</p> <ul style="list-style-type: none"> • Ramsar criterion 3 - This site supports a full and representative sequences of saltmarsh plant communities covering the range of variation in Britain; • Ramsar criterion 5 - Assemblages of international importance: <ul style="list-style-type: none"> - Species with peak counts in winter: 105,061 waterfowl (5 year peak mean 1998/99-2002/2003) • Ramsar criterion 6 – species/populations occurring at levels of international importance. Qualifying Species/populations (as identified at designation): <ul style="list-style-type: none"> - Species with peak counts in winter: Dark-bellied brent goose, <i>Branta bernicla bernicla</i>, 8,689 individuals, representing an average of 4% of the population (5 year peak mean 1998/9-2002/3) Grey plover, <i>Pluvialis squatarola</i>, E Atlantic/W Africa -wintering 4,215

Site	Approx. distance from Order limits	Summary of Primary Reasons for Site Selection	Summary of Qualifying Features
			<p>individuals, representing an average of 1.7% of the population (5 year peak mean 1998/9-2002/3)</p> <p>Dunlin, <i>Calidris alpina alpina</i>, W Siberia/W Europe 27,655 individuals, representing an average of 2% of the population (5 year peak mean 1998/9-2002/3)</p> <p>Black-tailed godwit, <i>Limosa limosa islandica</i>, Iceland/W Europe 2,174 individuals, representing an average of 6.2% of the population (5 year peak mean 1998/9-2002/3)</p> <ul style="list-style-type: none"> • Species/populations identified subsequent to designation for possible future consideration under criterion 6. <ul style="list-style-type: none"> - Species with peak counts in winter: <p>Common shelduck, <i>Tadorna tadorna</i>, NW Europe 3,141 individuals, representing an average of 1% of the population (5 year peak mean 1998/9-2002/3)</p> <p>European golden plover, <i>Pluvialis apricaria apricaria</i>, <i>P. a. altifrons</i> Iceland & Faroes/E Atlantic 16,083 individuals, representing an average of 1.7% of the population (5 year peak mean 1998/9-2002/3)</p> <p>Common redshank, <i>Tringa totanus totanus</i>, 4,169 individuals, representing</p>

Site	Approx. distance from Order limits	Summary of Primary Reasons for Site Selection	Summary of Qualifying Features
			an average of 1.6% of the population (5 year peak mean 1998/9-2002/3)

3.2.6 The conservation objectives for each relevant European Site are summarised in **Table 3-2**.

Table 3-2: Conservation Objectives for Relevant European Sites

Site	Conservation Objectives	Threats / Pressures to Site Integrity
<p>Essex Estuaries 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 qualifying natural habitats; • The structure and function (including typical species) of qualifying natural habitats; and • The supporting processes on which qualifying natural habitats rely. 	<p>The following threats / pressures to the site integrity of Essex Estuaries SAC have been identified in Natural England's Site Improvement Plan:</p> <ul style="list-style-type: none"> • Coastal squeeze; • Public Access/Disturbance; • Fisheries: Commercial marine and estuarine; • Planning Permission: general; • Changes in species distributions; • Invasive species; • Fisheries: Recreational marine and estuarine; and • Air Pollution: risk of atmospheric nitrogen deposition.
<p>Blackwater Estuary (Mid-Essex Coast Phase 4) SPA</p>	<p>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;</p> <ul style="list-style-type: none"> • The extent and distribution of the habitats of the qualifying features; • The structure and function of the habitats of the qualifying features; • The supporting processes on which the habitats of the qualifying features rely; • The population of each of the qualifying features; and • The distribution of the qualifying features within the site. 	<p>The following threats / pressures to the site integrity of Blackwater Estuary (Mid-Essex Coast Phase 4) SPA have been identified in Natural England's Site Improvement Plan:</p> <ul style="list-style-type: none"> • Coastal squeeze; • Public Access/Disturbance; • Fisheries: Commercial marine and estuarine; • Planning Permission: general; • Changes in species distributions; • Invasive species; • Fisheries: Recreational marine and estuarine; and • Air Pollution: risk of atmospheric nitrogen deposition.
<p>Blackwater Estuary (Mid-Essex Coast Phase 4) Ramsar</p>	<p>There are no specific conservation objectives for the Ramsar site but those set out for Essex Estuaries SAC and Blackwater Estuary (Mid-Essex</p>	<p>The threats / pressures to the Ramsar site are considered the same as for Essex Estuaries SAC and Blackwater Estuary (Mid-Essex Coast Phase 4) SPA.</p>

Site	Conservation Objectives	Threats / Pressures to Site Integrity
	Coast Phase 4) SPA are considered relevant.	

3.3 Existing Baseline Conditions

3.3.1 Following a Phase 1 habitat survey, extensive ecological surveys have been undertaken of the Order limits and appropriate zones of influence. These surveys have included:

- a. Surveys of terrestrial habitats and flora (including hedgerows);
- b. Aquatic ecology surveys;
- c. Great Crested Newt *Triturus cristatus* surveys;
- d. Surveys for reptiles;
- e. Surveys for wintering and breeding birds;
- f. Surveys for bats (including bat activity);
- g. Badger *Meles meles* surveys; and
- h. Surveys for riparian mammals (Water Vole *Arvicola amphibius* and Otter *Lutra lutra*).

3.3.2 The results of these surveys are presented in **Appendix 8B-8K** of the ES [EN010118/APP/6.2]. Data relevant to this assessment are summarised below.

Aquatic Ecology

3.3.3 The River Ter is a river in Essex that rises near the village of Stebbing Green before flowing 31.4 km in a south easterly direction and joining the River Chelmer. The River Ter was classified as Moderate for ecological elements and Moderate overall in the 2019 classification cycle, it has not been designated artificial or heavily modified. The reasons for not achieving good was due to elevated phosphorus from livestock farming and wastewater discharge from a sewage treatment works.

3.3.4 The fish assemblage recorded within the River Ter adjacent to the Scheme area by the Environment Agency (EA) in 2005 and 2012 identified four protected/notable fish species: Brown Trout *Salmo trutta*, Bullhead *Cottus gobio*, European Eel *Anguilla anguilla* and Brook Lamprey ammocetes *Lampetra planeri*. Further surveys of the aquatic communities in the River Ter were undertaken in 2020. The results of these surveys are presented in **Appendix 8D: Aquatic Ecology Report** of the ES [EN010118/APP/6.2].

3.3.5 The River Ter flows for approximately 17.5 km from the Scheme along the river network to the Essex Estuaries SAC and Blackwater Estuary (Mid-Essex Coast Phase 4) SPA/Ramsar. This possible hydrological link along the river network offers a potential impact pathway between the Scheme and European Sites.

Terrestrial Ecology and European Sites special features

- 3.3.6 A wintering bird survey was undertaken between January and March 2020, and October and December 2020, with six monthly survey visits taking place. A total of 76 species were recorded within the Order limits and within 50m of the Order limits (the survey area). The results of these surveys are presented in **Appendix 8G: Wintering Bird Survey Report** of the ES [EN010118/APP/6.2].
- 3.3.7 One species; Golden Plover, cited as an interest feature on the Blackwater Estuary (Mid-Essex Coast Phase 4) Ramsar, was recorded within the Scheme during the wintering bird survey. The peak (and only) count of 35 individuals in January 2020, does not represent a significant proportion, i.e. 1%, of the designated site population (16,083 individuals)⁵. When taking into account the number of individuals and occurrence recorded within the Order limits, the distance (approximately 9.3 km between the Order limits and the European site) and the availability of similar agricultural habitat in the intervening lands between the Order limits and the European sites, the Order limits are not deemed to be functionally linked, nor functionally important, to the designated sites.
- 3.3.8 No other flora and fauna cited as interest features of the designated sites where recorded within the Scheme or relevant survey area.

3.4 Atmospheric Pollution

- 3.4.1 The main pollutants of concern for European Sites are oxides of nitrogen (NO_x), ammonia (NH₃) and sulphur dioxide (SO₂) and are summarised in Table 3-2. Ammonia can have a directly toxic effect upon vegetation, particularly at close distances to the source such as near road verges. NO_x can also be toxic at very high concentrations (far above the annual average critical level). However, in particular, high levels of NO_x and NH₃ are likely to increase the total nitrogen deposition to soils, potentially leading to deleterious knock-on effects in resident ecosystems. For example, an increase in the total nitrogen deposition from the atmosphere is widely known to enhance soil fertility and to lead to eutrophication. This often has adverse effects on the community composition and quality of semi-natural, nitrogen-limited terrestrial and aquatic habitats (Ref 11; Ref 12). The total nitrogen deposition resulting from a plan or project is therefore often assessed as the overarching parameter determining atmospheric pollution.
- 3.4.2 Sulphur dioxide emissions overwhelmingly derive from coal and oil power stations and industrial processes that require the combustion of coal and oil, as well as (particularly on a local scale) shipping (Ref 13).

⁵ Wetlands are considered to be internationally or nationally important if they regularly support at least 1% of the individuals in a population of one species or subspecies of waterbird. Supporting habitat in areas beyond the boundary of a SPA which are connected with or 'functionally linked' to the life and reproduction of a population for which a site has been designated or classified should be taken into account in a Habitats Regulations Assessment. However, the assessment needs to determine how critical (functionally important) the area may be to the population of the qualifying species and whether the area is necessary to maintain or restore the favourable conservation status of the species. The 1% threshold (i.e. 1% of the cited population) is widely used to determine whether a piece of land is functionally important to waterbirds associated with a designated site, e.g. SPA/Ramsar site. This criteria is used in this assessment to establish the relative importance of areas of the site for qualifying waterbird species.

- 3.4.3 The only pollutant likely to be associated with construction of the Scheme is NO_x which will be primarily determined by the associated traffic movements, including HGVs.
- 3.4.4 The Air Pollution Information System (APIS) forms the major source of information regarding the air quality impact pathway. It specifies a critical NO_x concentration (critical threshold) for the protection of vegetation of 30 µg/m³. In addition, ecological studies have determined 'critical loads' of atmospheric nitrogen deposition (that is, NO_x combined with ammonia NH₃). Air quality is considered further in **Chapter 14: Air Quality** of the of the ES [EN010118/APP/6.1].
- 3.4.5 According to the Department of Transport's Guidance (Ref 14), beyond 200 m, the contribution of vehicle emissions from the roadside to local pollution levels is not significant (**Plate 3-1**). This is therefore the distance that has been used throughout this HRA to determine whether European Sites are likely to be significantly affected by site traffic associated with the construction and operation of the Proposed Development.

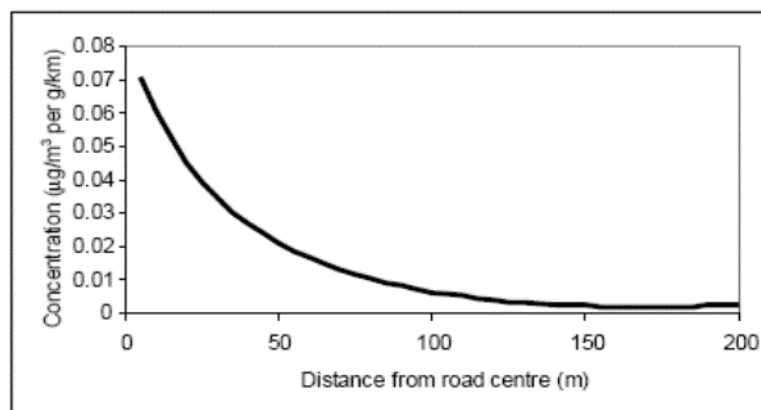


Plate 3-1: Traffic contribution to concentrations of pollutants at different distances from a road (Department for Transport, 2016)

- 3.4.6 The greatest number of vehicle movements will occur in the construction phase of the development. Further details of vehicle movements and traffic is presented in **Chapter 13: Transport and Access** of the ES [EN010118/APP/6.1].

3.5 Water Pollution

- 3.5.1 The quality of the water that feeds European Sites is an important determinant of the nature of their habitats and the species they support, and therefore integral to meeting a site's conservation objectives. Poor water quality can have a range of environmental impacts. At high concentrations, toxic chemicals and heavy metals can result in the immediate death of aquatic life (both flora and fauna). At lower concentrations, negative impacts may be more subtle and could increase vulnerability to disease or change the behaviour of wildlife. These substances, especially Polychlorinated Biphenyls (PCBs), accumulate in minuscule organisms and then biomagnify as they are passed up the food chain. Furthermore, they are not easily biodegraded over time. Overall, there are two broad types of toxic compounds in aquatic

environments, namely synthetic and non-synthetic (i.e. naturally occurring) substances.

- 3.5.2 Toxic contamination may arise from synthetic toxic compounds, such as pesticides, PCBs and biocides. Some of these substances are endocrine disrupting chemicals, which have the capacity to mimic animal hormones, prevent their production or breakdown. As discussed above, many of the synthetic compounds tend to accumulate over time and are likely to be present in animal tissue or substrate for long periods of time. Another factor in determining the magnitude of water pollution is the amount of hydrological mixing that a site receives. Non-synthetic compounds, such as fuel oils and heavy metals, occur in the environment naturally at relatively low concentrations, but become toxic at higher concentrations. Water quality is discussed further in **Chapter 9: Water Environment** of the of the ES [EN010118/APP/6.1].

4. Stage 1 – Screening for Likely Significant Effects

4.1 Overview

4.1.1 This section examines the Likely Significant Effects of the Scheme. It is structured by development phase (i.e. first by construction period, then by operational period). Decommissioning activities are outlined in Section 1.3 and detailed further in **Chapter 2: The Scheme** of the ES. Due to the likely similarities with the defined construction activities (see **Chapter 2: The Scheme**), for the purpose of the decommissioning period, Likely Significant Effects are considered to be the same as those arising in the construction period and are therefore, not screened separately.

4.1.2 Within each development phase each potential impact pathway is considered separately, covering all European sites to which that impact pathway applies. Each European site to which an impact pathway potentially applies is considered in **Table 4-1**. The analysis is summarised in the screening matrices in Appendices B1 to B3. The impact pathways scoped in for assessment have been determined through responses from statutory consultees, the impact assessments presented in the Environmental Statement and professional judgement.

4.2 Identification of Potential Construction Impacts

Source-Receptor Pathways Scoped in to Screening

4.2.1 The potential source-receptor pathways by which the Scheme could impact the qualifying features of each European Site during construction are summarised and screened for potential likely significant effects in **Table 4-1**. The potential source-receptor pathways screened are as follows:

- Changes in surface water quality – resulting in pollution of surface water entering the designated sites via the surface water drainage network and River Ter.

Source-Receptor Pathways Scoped out of Screening

4.2.2 There are no pathways that could result in direct habitat loss or direct physical damage to any of the designated habitats. Given, the absence of functionally linked land within the Order limits or survey area and the distance, >9 km, to the European sites and, there are no pathways that could result in the displacement or disturbance (construction or decommissioning noise and visual, e.g. plant and workforce movements) of SPA/ Ramsar birds occurring within or outside the designated site.

4.2.3 Similarly, there are no pathways for changes in air quality, through construction or decommissioning related air borne dust⁶ or groundwater⁷ pathways over

⁶ Institute of Air Quality Management guidance typically considers assessment of dust from demolition and construction on habitats up to 200 m from the source. IAQM (2014). Guidance on the assessment of dust from demolition and construction. Institute of Air Quality Management.

⁷ With reference to **Chapter 9: Water Environment** of the Environmental Statement [EN010118/APP/6.1] construction works will not impact the water table and ground water sources.

this distance through which the Scheme could give rise to any effects on the groundwater dependent terrestrial ecosystems (GWTEs) of the internationally important sites. These pathways are therefore scoped out.

4.3 Identification of Potential Operational Impacts

Source-Receptor Pathways

- 4.3.1 With reference to Section 1.3 and **Chapter 2: The Scheme** of the ES which provide details of the operational activities, there are no source-receptor pathways by which the Scheme could impact the qualifying features of each European Site during operation of the solar farm.

Table 4-1: Summary of Likely Significant Effects – Construction and Decommissioning

Qualifying Feature	Potential Impact	Source	Pathway	Likely Significant Effect
Essex Estuaries SAC – All Features	Changes in surface water quality and habitat contamination	Contamination from surface water pollution entering the River Ter and river network. Effects may result during construction or decommissioning activities from operating heavy machinery, increased traffic to the construction/decommissioning site and accidental spills in storage areas.	There is a possible hydrological connectivity between the designated site and watercourses within the Order limits, consequently there is potential for pollutants to reach watercourses within the designated site. However, impacts are unlikely as no development will occur within 50m of the River Ter and the distance along the river network from the Scheme to the designated site is approximately 17.5 km. At this distance dilution factors will be so great that any pollution is likely to be well below the limits of detection.	No
Blackwater Estuary (Mid-Essex Coast Phase 4) SPA – all Features	Changes in surface water quality and habitat contamination	Contamination from surface water pollution entering the River Ter and river network. Effects may result during construction or decommissioning activities from operating heavy machinery, increased traffic to the construction/decommissioning site and accidental spills in storage areas.	There is a possible hydrological connectivity between the designated site and watercourses within the Order limits, consequently there is potential for pollutants to reach watercourses within the designated site. However, impacts are unlikely as no development will occur within 50m of the River Ter and the distance along the river network from the Scheme to the designated site is approximately 17.5 km. At this distance dilution factors will be so great that any pollution is likely to be well below the limits of detection.	No

Qualifying Feature	Potential Impact	Source	Pathway	Likely Significant Effect
Blackwater Estuary (Mid-Essex Coast Phase 4) Ramsar – All Features	Changes in surface water quality and habitat contamination	Contamination from surface water pollution entering the River Ter and river network. Effects may result during construction or decommissioning activities from operating heavy machinery, increased traffic to the construction/decommissioning site and accidental spills in storage areas.	There is a possible hydrological connectivity between the designated site and watercourses within the Order limits, consequently there is potential for pollutants to reach watercourses within the designated site. However, impacts are unlikely as no development will occur within 50m of the River Ter and the distance along the river network from the Scheme to the designated site is approximately 17.5 km. At this distance dilution factors will be so great that any pollution is likely to be well below the limits of detection.	No

4.3.2 These statutory designated sites are all located over 9.3 kilometres from the Order limits and there are no ecological connections between these designated sites and the Scheme. Whilst there is a possible hydrological connection to these designated sites, impacts are unlikely given there will be no development of infrastructure within 50m of the River Ter and the distance along the river network from the Scheme to the designated sites is approximately 17.5 km and so any pollution would likely to be below the levels of detection.

4.4 In Combination effects with other Plans or Projects

4.4.1 PINS Advice Note Ten: Habitat Regulations Assessment relevant to Nationally Significant Infrastructure Projects (Ref 6) states that in assessing in-combination effects the following projects should be considered:

- a. Projects that are under construction;
- b. Permitted application(s) not yet implemented;
- c. Submitted application(s) not yet determined;
- d. All refusals subject to appeal procedures not yet determined;
- e. Projects on the National Infrastructure's programme of projects; and
- f. Projects identified in emerging development plans, recognising that much information on relevant proposals will be limited and the degree of uncertainty which may be present.

4.4.2 In order to inform fully the appropriate assessment process, a number of surrounding plans and projects have been consulted to determine likely significant effects that could arise from the Scheme in combination with these other plans and projects. In practice, such an 'in-combination' assessment is of greatest relevance when an impact pathway relating to a project would otherwise be screened out not because there is no impact pathway but because its individual contribution is considered to be inconsequential. With reference to **Appendix 5A: Long List of Cumulative Schemes** of the ES [EN010118/APP/6.2], these have been selected because they were the main land use plans and projects that are located within 10km, of the Scheme, and may interact with the European Sites discussed in this report. All projects were considered, but in particular those that:

- a. Had similar components that may lead to similar impact pathways, e.g. other solar schemes;
- b. Were of a scale and extent which may lead to significant changes in land use and therefore, similar impact pathways, e.g. residential development and urban expansion; and
- c. Were of a geographical extent similar to that of the Scheme, whereby features associated with designated sites may interact with both the Scheme and one or more of the screened projects.

4.4.3 As no impact pathways with the potential for LSE have been identified (**Table 4-1**), similarly, no in combination effects on European sites have been identified due to the distances from the designated sites to the Schemes identified in **Appendix 5A** of the ES [EN010118/APP/6.2].

5. Conclusions

- 5.1.1 This report has concluded that the Scheme will not result in a likely significant effect on any European Sites either alone or in combination with other plans or projects.

6. References

- Ref 1 Anon. 2018. Conservation of Habitats and Species Regulations 2017 (as amended). HMSO, London.
- Ref 2 HMSO (2019) The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019. HMSO, London
- Ref 3 National Planning Policy Framework. Department for Communities and Local Government.
- Ref 4 European Commission (2001): Assessment of plans and projects significantly affecting Natura 2000 Sites: Methodological Guidance on the Provisions of Article 6(3) and 6(4) of the Habitats Directive.
- Ref 5 Ministry of Housing, Communities & Local Government (2019). Appropriate Assessment.
- Ref 6 The Planning Inspectorate (2017). Habitats Regulations Assessment.
- Ref 7 Holohan ruling (C-461/17)
- Ref 8 People Over Wind and Sweetman v Coillte Teoranta (C-323/17)
- Ref 9 Environment Agency (2016). Air emissions risk assessment for your environmental permit.
- Ref 10 Department for Business, Energy and Industrial Strategy (2021) Guidelines on the assessment of transboundary impacts of energy developments on Natura 2000 sites outside the UK
- Ref 11 Wolseley, P. A.; James, P. W.; Theobald, M. R.; Sutton, M. A. (2006). Detecting changes in epiphytic lichen communities at sites affected by atmospheric ammonia from agricultural sources. *Lichenologist* 38: 161-176
- Ref 12 Dijk, N. (2011) Dry deposition of ammonia gas drives species change faster than wet deposition of ammonium ions: evidence from a long-term field manipulation. *Global Change Biology* 17: 3589-3607
- Ref 13 UK Centre for Ecology and Hydrology (CEH) (2016c). Sulphur Dioxide.
- Ref 14 Department for Transport (DfT) (2016). Standards for Highways online resources.

7. Annexes

7.1 Annex A: Relevant Impact Pathways

The European sites included within this screening assessment are:

- Essex Estuaries SAC;
- Blackwater Estuary (Mid-Essex Coast Phase 4) SPA; and
- Blackwater Estuary (Mid-Essex Coast Phase 4) Ramsar.

Potential effects upon European Sites which are considered within the **Habitats Regulations Assessment [EN010118/APP/6.7]** are provided in the table below:

Annex A-1: Effects considered in the screening matrices

<i>Designation</i>	<i>Effects described in the submission document</i>	<i>Presented in screening matrices as</i>
Essex Estuaries SAC	<ul style="list-style-type: none"> • changes in surface water quality • habitat contamination 	<ul style="list-style-type: none"> • Changes in surface water quality and habitat contamination
Blackwater Estuary (Mid-Essex Coast Phase 4) SPA;	<ul style="list-style-type: none"> • changes in surface water quality • habitat contamination 	<ul style="list-style-type: none"> • Changes in surface water quality and habitat contamination
Blackwater Estuary (Mid-Essex Coast Phase 4) Ramsar	<ul style="list-style-type: none"> • changes in surface water quality • habitat contamination 	<ul style="list-style-type: none"> • Changes in surface water quality and habitat contamination

7.2 Annex B: Screening Matrices

Annex B-1: Detailed screening matrix assessing the qualifying features of the Essex Estuaries SAC against the identified impact pathways during construction (C columns) and operation (O columns). The matrix key is provided below.

General matrix key:

✓ = Likely significant effect **cannot** be excluded

✗ = Likely significant effect **can** be excluded

C = Construction

O = Operation

Name of European Site and designation: Essex Estuaries SAC

EU Code: UK0013690

Distance from NSIP: 9.3 km

European Site	Qualifying Features	Effect	
		Changes in surface water quality and habitat contamination	In combination effects
	Stage of Scheme	C	C
Essex Estuaries SAC	All Features	✗ a	✗ a

- a. The assessment in **Table 4-1** highlights that the possible hydrological connection between the Scheme and the European site is a distance of approximately 17.5 km and so dilution of any pollutants to an insignificant level will have occurred before entrance to the European site. In combination with this there is no development of infrastructure or construction related activity within 50 m of the potential source watercourse (the River Ter), which further means that pollutants cannot enter the watercourse during construction. Even if construction traffic were to enter this area, they will still be at a sufficient distance to avoid pollution events. Therefore, no pollution will actually arise. It is therefore considered that no likely significant effects from this impact pathway would arise; and thus it is screened out from Appropriate Assessment.

Annex B-2: Detailed screening matrix assessing the qualifying features of the Blackwater Estuary (Mid-Essex Coast Phase 4) SPA against the identified impact pathways during construction (C columns) and operation (O columns). The matrix key is provided below.

Name of European Site and designation: Blackwater Estuary (Mid-Essex coast Phase 4) SPA

EU Code: UK9009245

Distance from NSIP: 9.3 km

<i>European Site</i>	<i>Qualifying Features</i>		
	<i>Effect</i>	<i>Changes in surface water quality and habitat contamination</i>	<i>In combination effects</i>
	<i>Stage of Scheme</i>	C	C
Blackwater Estuary (Mid-Essex Coast Phase 4) SPA	All Features	x a	x a

- b. The assessment in **Table 4-1** highlights that the possible hydrological connection between the Scheme and the European site is a distance of approximately 17.5 km and so dilution of any pollutants to an insignificant level will have occurred before entrance to the European site. In combination with this there is no development of infrastructure or construction related activity within 50 m of the potential source watercourse (the River Ter), which further means that pollutants cannot enter the watercourse during construction. Even if construction traffic were to enter this area, they will still be at a sufficient distance to avoid pollution events. Therefore, no pollution will actually arise. It is therefore considered that no likely significant effects from this impact pathway would arise; and thus it is screened out from Appropriate Assessment.

Annex B-3: Detailed screening matrix assessing the qualifying features of the Blackwater Estuary (Mid-Essex Coast Phase 4) Ramsar against the identified impact pathways during construction (C columns) and operation (O columns). The matrix key is provided below.

Name of European Site and designation: Blackwater Estuary (Mid-Essex coast Phase 4) Ramsar

EU Code: UK11007

Distance from NSIP: 9.3 km

<i>European Site</i>	<i>Qualifying Features</i>		
	<i>Effect</i>	<i>Changes in surface water quality and habitat contamination</i>	<i>In combination effects</i>
	<i>Stage of Scheme</i>	<i>C</i>	<i>C</i>
Blackwater Estuary (Mid-Essex Coast Phase 4) Ramsar	All Features	x a	x a

- c. The assessment in **Table 4-1** highlights that the possible hydrological connection between the Scheme and the European site is a distance of approximately 17.5 km and so dilution of any pollutants to an insignificant level will have occurred before entrance to the European site. In combination with this there is no development of infrastructure or construction related activity within 50 m of the potential source watercourse (the River Ter), which further means that pollutants cannot enter the watercourse during construction. Even if construction traffic were to enter this area, they will still be at a sufficient distance to avoid pollution events. Therefore, no pollution will actually arise. It is therefore considered that no likely significant effects from this impact pathway would arise; and thus it is screened out from Appropriate Assessment.