



The Sizewell C Project

9.11 Responses to the ExA's First Written Questions (ExQ1) Volume 3 - Appendices Part 2 of 7

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APPENDIX 7A

1 INTRODUCTION

- 1.1.1 This response has been prepared to provide a summary of the statutory and non-statutory designated sites that are located in proximity to the Sizewell C Project. A summary has been presented on a site by site basis to identify each of the sites, the distance of the site to the Sizewell C Project, a description of the designated features of the site and for statutory sites, a link to the citations. For non-statutory sites, the citations are provided on a site by site basis at the end of each site section.

2 MAIN DEVELOPMENT SITE

2.1 Statutory Designated Sites

- 2.1.1 **Table 1** identified the statutory designated sites within considered with **Volume 2, Chapter 14** [[AS-033](#)] and **22** [[AS-035](#)] and the shadow Habitats Regulations Assessment [[APP-145](#) to [APP-152](#), [AS-173](#) to [AS-178](#) and Doc Ref. 5.10 Ad2]. These sites have been identified as relevant to the Sizewell C Project because of their proximity to the site and the relevant qualifying features. These sites are shown on **Figure 7.1** along with the non-statutory designated sites.

Table 1: Statutory designated sites relevant to the main development site

Site and location	Distance from Site	Description of site features with marine components	Link to citation
SAC			
Minsmere to Walberswick Heaths and Marshes	Adjacent to the site.	<p>Supports the following Annex I habitats as a primary reason for selection:</p> <p>Annual vegetation of drift lines.</p> <p>Occurs on a well-developed beach strandline of mixed sand.</p> <p>Species include those typical of sandy shores, such as Sea Sandwort (<i>Honckenya peploides</i>) and shingle plants such as Sea Beet (<i>Beta vulgaris</i> ssp. <i>Maritima</i>).</p> <p>European dry heaths.</p> <p>This type of vegetation is dominated by Heather (<i>Calluna vulgaris</i>), Western Gorse (<i>Ulex gallii</i>) and Bell Heather (<i>Erica cinerea</i>).</p> <p>Annex I habitats present as qualifying features, but not primary reason for selection:</p> <p>Perennial vegetation of stony banks.</p> <p>This comprises vegetated coastal shingle with plant species Yellow horned-poppy (<i>Glaucium flavum</i>) rare Sea-kale (<i>Crambe maritima</i>) and Sea Pea (<i>Lathyrus japonicus</i>). Where sea spray is blown over the shingle, plant communities with a high frequency of salt-tolerant species such as Thrift (<i>Armeria maritima</i>) and Sea Campion (<i>Silene uniflora</i>) occur. These may exist in a matrix with abundant lichens.</p>	https://jncc.gov.uk/jncc-assets/SAC-N2K/UK0012809.pdf
Alde-Ore and Butley Estuaries	5km	<p>Supports the following Annex I habitats as a primary reason for selection:</p> <p>Estuaries</p>	https://jncc.gov.uk/jncc-assets/SAC-N2K/UK0030076.pdf

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Site and location	Distance from Site	Description of site features with marine components	Link to citation
		<p>The estuary, made up of three rivers, is the only bar-built estuary in the UK with a shingle bar. There is a range of littoral sediment and rock biotopes (the latter on sea defences) that are of high diversity and species richness for estuaries in eastern England. Annex I habitats present as qualifying features, but not primary reason for selection: Mudflats and sandflats not covered by seawater at low tide.</p> <p>Atlantic salt meadows (<i>Glauco-Puccinellietalia maritima</i>).</p>	
Orfordness to Shingle Street	8km	<p>Supports the following Annex I habitats as a primary reason for selection:</p> <p>Coastal lagoons.</p> <p>The percolation lagoons at this site have developed in the shingle bank adjacent to the shore at the mouth of the Ore estuary. The fauna of these lagoons includes typical lagoon species, such as the cockle <i>Cerastoderma glaucum</i>, the ostracod <i>Cyprideis torosa</i> and the gastropods <i>Littorina saxatilis tenebrosa</i> and <i>Hydrobia ventrosa</i>. The nationally rare starlet sea anemone <i>Nematostella vectensis</i> is also found at the site.</p> <p>Annual vegetation of drift lines.</p> <p>Orfordness is an extensive shingle spit, some 15km in length, and is one of two sites representing annual vegetation of drift lines on the east coast of England. Drift-line vegetation occurs on the sheltered, western side of the spit, at the transition from shingle to saltmarsh, as well as on the exposed eastern coast. The drift-line community is widespread on the site and comprises Sea Beet and Orache <i>Atriplex</i> spp.</p>	https://jncc.gov.uk/jncc-assets/SAC-N2K/UK0014780.pdf

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Site and location	Distance from Site	Description of site features with marine components	Link to citation
		Perennial vegetation of stony banks. The 15km spit has been selected as it supports some of the largest and most natural sequences in the UK of shingle vegetation affected by salt spray.	
Southern North Sea SAC	Includes the area of open sea adjacent to the main development site.	The Southern North Sea SAC is designated for the Annex II species harbour porpoise (<i>Phocoena phocoena</i>) for both Winter and Summer seasons. The area supports approximately 17.5% of the UK North Sea Management Unit (MU) population.	https://jncc.gov.uk/jncc-assets/SAC-N2K/UK0030395.pdf
Benacre to Easton Bavents Lagoons SAC	13.6km	Benacre to Easton Bavents Lagoons is a series of percolation lagoons on the east coast of England. The lagoons (the Denes, Benacre Broad, Covehithe Broad and Easton Broad) have formed behind shingle barriers and are a feature of a geomorphologically dynamic system. Sea water enters the lagoons by percolation through the barriers, or by overtopping them during storms and high spring tides. The lagoons show a wide range of salinities, from nearly fully saline in South Pool, the Denes, to extremely low salinity at Easton Broad. This range of salinity has resulted in a series of lagoonal vegetation types, including beds of narrow-leaved eelgrass <i>Zostera angustifolia</i> in fully saline or hypersaline conditions, beds of spiral tasselweed <i>Ruppia cirrhosa</i> in brackish water, and dense beds of common reed <i>Phragmites australis</i> in freshwater. The site supports a number of specialist lagoonal species.	https://jncc.gov.uk/jncc-assets/SAC-N2K/UK0013104.pdf

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Site and location	Distance from Site	Description of site features with marine components	Link to citation
Dew's Pond SAC	8.8km	This site in rural East Suffolk comprises a series of 12 ponds set in an area of formerly predominantly arable land. The ponds range from old field ponds created for agricultural purposes to some constructed in recent years specifically for wildlife. Some of the land has been converted from arable to grassland, with a variety of grassland types present; other habitats include hedges and ditches. Great crested newts <i>Triturus cristatus</i> have been found in all ponds on site, though the presence of fish seems to have affected newt numbers in recent years in two ponds.	https://jncc.gov.uk/jncc-assets/SAC-N2K/UK0030133.pdf
The Wash and Norfolk Coast SAC	86.1km	Supports the following Annex I habitats as a primary reason for selection: Sandbanks which are slightly covered by sea water all the time On this site sandy sediments occupy most of the subtidal area, resulting in one of the largest expanses of sublittoral sandbanks in the UK. It provides a representative example of this habitat type on the more sheltered east coast of England. The subtidal sandbanks vary in composition and include coarse sand through to mixed sediment at the mouth of the embayment. Sublittoral communities present include large dense beds of brittlestars <i>Ophiothrix fragilis</i> . Species include the sand-mason worm <i>Lanice conchilega</i> and the tellin <i>Angulus tenuis</i> . Benthic communities on sandflats in the deeper, central part of the Wash are particularly diverse. The subtidal sandbanks provide important nursery grounds for young commercial fish species, including plaice <i>Pleuronectes platessa</i> , cod <i>Gadus morhua</i> and sole <i>Solea solea</i> . Mudflats and sandflats not covered by seawater at low tide	https://jncc.gov.uk/jncc-assets/SAC-N2K/UK0017075.pdf

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Site and location	Distance from Site	Description of site features with marine components	Link to citation
		<p>The Wash, on the east coast of England, is the second-largest area of intertidal flats in the UK. The sandflats in the embayment of the Wash include extensive fine sands and drying banks of coarse sand, and this diversity of substrates, coupled with variety in degree of exposure, means that there is a high diversity relative to other east coast sites. Sandy intertidal flats predominate, with some soft mudflats in the areas sheltered by barrier beaches and islands along the north Norfolk coast. The biota includes large numbers of polychaetes, bivalves and crustaceans. Salinity ranges from that of the open coast in most of the area (supporting rich invertebrate communities) to estuarine close to the rivers. Smaller, sheltered and diverse areas of intertidal sediment, with a rich variety of communities, including some eelgrass <i>Zostera spp.</i> beds and large shallow pools, are protected by the north Norfolk barrier islands and sand spits.</p> <p>Large shallow inlets and bays The Wash is the largest embayment in the UK, and represents Large shallow inlets and bays on the east coast of England. It is connected via sediment transfer systems to the north Norfolk coast. Together, the Wash and North Norfolk Coast form one of the most important marine areas in the UK and European North Sea coast, and include extensive areas of varying, but predominantly sandy, sediments subject to a range of conditions. Communities in the intertidal include those characterised by large numbers of polychaetes, bivalve and crustaceans. Sublittoral communities cover a diverse range from the shallow to the deeper</p>	

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		<p>parts of the embayments and include dense brittlestar beds and areas of an abundant reef-building worm ('ross worm') <i>Sabellaria spinulosa</i>. The embayment supports a variety of mobile species, including a range of fish and Common seal <i>Phoca vitulina</i>.</p> <p>Reefs</p> <p>The Wash is the largest embayment in the UK with extensive areas of subtidal mixed sediment. In the tide-swept approaches to the Wash, with a high loading of suspended sand, the relatively common tube-dwelling polychaete worm <i>Sabellaria spinulosa</i> forms areas of biogenic reef. These structures are varied in nature, and include reefs which stand up to 30 cm proud of the seabed and which extend for hundreds of metres (Foster-Smith & Sotheran 1999). The reefs are thought to extend into The Wash where super-abundant <i>S. spinulosa</i> occurs and where reef-like structures such as concretions and crusts have been recorded. The site and its surrounding waters is considered particularly important as it is the only currently known location of well-developed stable <i>Sabellaria</i> reef in the UK. The reefs are particularly important components of the sublittoral as they are diverse and productive habitats which support many associated species (including epibenthos and crevice fauna) that would not otherwise be found in predominantly sedimentary areas. As such, the fauna is quite distinct from other biotopes found in the site. Associated motile species include large numbers of polychaetes, mysid shrimps, the pink shrimp <i>Pandalus montagui</i>, and crabs. <i>S. spinulosa</i> is considered to be an important food source for the</p>	

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		<p>commercially important pink shrimp <i>P. montagui</i> (see overview in Holt et al. 1998).</p> <p>Salicornia and other annuals colonizing mud and sand The largest single area of this vegetation in the UK occurs at this site on the east coast of England, which is one of the few areas in the UK where saltmarshes are generally accreting. The proportion of the total saltmarsh vegetation represented by Salicornia and other annuals colonising mud and sand is high because of the extensive enclosure of marsh in this site. The vegetation is also unusual in that it forms a pioneer community with common cord-grass <i>Spartina anglica</i> in which it is an equal component. The inter-relationship with other habitats is significant, forming a transition to important dune, saltmeadow and halophytic scrub communities.</p> <p>Atlantic salt meadows (<i>Glauco-Puccinellietalia maritima</i>) This site on the east coast of England is selected both for the extensive ungrazed saltmarshes of the North Norfolk Coast and for the contrasting, traditionally grazed saltmarshes around the Wash. The Wash saltmarshes represent the largest single area of the habitat type in the UK. The Atlantic salt meadows form part of a sequence of vegetation types that are unparalleled among coastal sites in the UK for their diversity and are amongst the most important in Europe. Saltmarsh swards dominated by sea-lavenders <i>Limonium spp.</i> are particularly well-represented on this site. In addition to typical lower and middle saltmarsh</p>	

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		<p>communities, in North Norfolk there are transitions from upper marsh to freshwater reedswamp, sand dunes, shingle beaches and mud/sandflats.</p> <p>Mediterranean and thermo-Atlantic halophilous scrubs (<i>Sarcocornetea fruticosi</i>)</p> <p>The Wash and North Norfolk Coast, together with the North Norfolk Coast, comprises the only area in the UK where all the more typically Mediterranean species that characterise Mediterranean and thermo-Atlantic halophilous scrubs occur together. The vegetation is dominated by a shrubby cover up to 40 cm high of scattered bushes of shrubby sea-blite <i>Suaeda vera</i> and sea-purslane <i>Atriplex portulacoides</i>, with a patchy cover of herbaceous plants and bryophytes. This scrub vegetation often forms an important feature of the upper saltmarshes, and extensive examples occur where the drift-line slopes gradually and provides a transition to dune, shingle or reclaimed sections of the coast. At a number of locations on this coast perennial glasswort <i>Sarcocornia perennis</i> forms an open mosaic with other species at the lower limit of the sea-purslane community.</p>	
Humber Estuary SAC ¹	220km	<i>The site is designated for the Annex II species grey seal (Halichoerus grypus).</i>	https://jncc.gov.uk/jncc-assets/SAC-N2K/UK0030170.pdf

¹ This site is considered within the Marine Ecology assessment [AS-035] and the Shadow HRA Report [APP-145]. Due to its distance from the main development site, it is not included on Figure 7.1

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Site and location	Distance from Site	Description of site features with marine components	Link to citation
SPA			
Outer Thames Estuary	Within the site and adjacent to SPA.	Supports populations of European importance of the following Annex I species: Overwinter/passage Red-throated diver (<i>Gavia stellata</i>). Protects foraging areas for common tern (<i>Sterna hirundo</i>) and little tern (<i>Sternula albifrons</i>) during the breeding season.	http://publications.naturalengland.org.uk/publication/4927106139029504
Minsmere to Walberswick	Adjacent to the site.	Supports populations of European importance of the following Annex I species: During the breeding season: Avocet (<i>Recurvirostra avosetta</i>), bittern (<i>Botaurus stellaris</i>), little tern, marsh harrier, nightjar (<i>Caprimulgus europaeus</i>) and woodlark (<i>Lullula arborea</i>). Overwinter: Avocet, bittern and hen harrier (<i>Circus cyaneus</i>).	http://publications.naturalengland.org.uk/publication/4528783260385280
Sandlings	0.7km	Supports populations of European importance of the following Annex I species: During the breeding season: Nightjar and woodlark.	http://publications.naturalengland.org.uk/publication/6690828793675776
Alde-Ore Estuary	5km	Supports nationally important numbers of the following Annex 1 species: During the breeding season: Marsh Harrier Avocet Sandwich tern Little tern lesser black-backed gull Overwinter: redshank. Avocet Ruff	http://publications.naturalengland.org.uk/publication/5170168510545920
Benacre to Easton Bavents SPA	12.9km	Supports nationally important numbers of the following Annex 1 species: Bittern Marsh harrier Little tern	http://publications.naturalengland.org.uk/file/6155589163941888

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Site and location	Distance from Site	Description of site features with marine components	Link to citation
Deben Estuary SPA	19.5km	Supports nationally important numbers of the following Annex 1 species: Brent goose	http://publications.naturalengland.org.uk/file/5694891375984640
Stour and Orwell Estuaries SPA	31.4km	The Stour and Orwell Estuaries SPA supports overwintering hen harrier (<i>Circus cyaneus</i>) and the following migratory overwintering species: black-tailed godwit (<i>Limosa limosa islandica</i>); dunlin (<i>Calidris alpina alpina</i>); grey plover (<i>Pluvialis squatarola</i>); pintail (<i>Anas acuta</i>), redshank (<i>Tringa totanus</i>), ringed plover (<i>Charadrius hiaticula</i>), shelduck (<i>Tadorna tadorna</i>) and turnstone (<i>Arenaria interpres</i>). It also regularly supports at least 20,000 waterfowl.	http://publications.naturalengland.org.uk/file/4754887854260224
Ramsar sites			
Minsmere to Walberswick	Adjacent to the site.	The site fulfils the following Ramsar criteria as justification for its selection: Ramsar criterion 1: Contains a mosaic of marine, freshwater, marshland and associated habitats, complete with transition areas in between. Contains the largest continuous stand of reedbeds in England and Wales and a rare transition in grazing marsh ditch plants from brackish to fresh water. Ramsar criterion 2: Supports nine nationally scarce plants and at least 26 Red Data Book (RDB) invertebrates. Supports a population of the mollusc <i>Vertigo angustior</i> (Habitats Directive Annex II; British RDB Endangered), recently discovered on the Blyth estuary river walls, and an important assemblage of	https://jncc.gov.uk/jncc-assets/RIS/UK11044.pdf

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		rare breeding birds associated with marshland and reedbeds, including: Bittern, gadwell (<i>Anas strepera</i>), Eurasian teal (<i>Anas crecca</i>), northern shoveler (<i>Anas clypeata</i>), marsh harrier, avocet, and bearded tit (<i>Panurus biarmicus</i>).	
Alde-Ore Estuary	5km	The site fulfils the following Ramsar criteria as justification for its selection: Ramsar criterion 2: Supports a number of nationally-scarce plant species and British RDB invertebrates. Ramsar criterion 3: Supports a notable assemblage of breeding and wintering wetland birds. Ramsar criterion 6: Supports a number of species/populations occurring at levels of international importance. This includes lesser blackbacked gull (<i>Larus marinus</i>) during the breeding season, and pied avocet (<i>Recurvirostra avosetta</i>) and common redshank (<i>Tringa totanus</i>) during the winter.	https://jncc.gov.uk/jncc-assets/RIS/UK11002.pdf
Deben Estuary Ramsar site	19.5km	The site fulfils the following Ramsar criteria as justification for its selection: Ramsar criterion 2 Supports a population of the mollusc <i>Vertigo angustior</i> (Habitats Directive Annex II (S1014); British Red Data Book Endangered). Martlesham Creek is one of only about fourteen sites in Britain where this species survives Ramsar criterion 6	https://jncc.gov.uk/jncc-assets/RIS/UK11017.pdf

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Site and location	Distance from Site	Description of site features with marine components	Link to citation
Stour and Orwell Estuaries Ramsar site	31.4km	<p>Supports Dark-bellied brent goose, <i>Branta bernicla bernicla</i></p> <p>The site fulfils the following Ramsar criteria as justification for its selection:</p> <p>Ramsar criterion 2</p> <p>Contains seven nationally scarce plants: stiff saltmarsh-grass <i>Puccinellia rupestris</i>; small cord-grass <i>Spartina maritima</i>; perennial glasswort <i>Sarcocornia perennis</i>; lax-flowered sea lavender <i>Limonium humile</i>; and the eelgrasses <i>Zostera angustifolia</i>, <i>Z. marina</i> and <i>Z. noltei</i>.</p> <p>Contains five British Red Data Book invertebrates: the muscid fly <i>Phaonia fusca</i>; the horsefly <i>Haematopota grandis</i>; two spiders, <i>Arctosa fulvolineata</i> and <i>Baryphema duffeyi</i>; and the Endangered swollen spire snail <i>Mercuria confusa</i>.</p> <p>Ramsar criterion 5</p> <p>Supports a notable assemblage of wintering waterfowl.</p> <p>Ramsar criterion 6</p> <p>Supports a number of species/populations occurring at levels of international importance. This includes Dark-bellied brent goose (<i>Branta bernicla bernicla</i>), Northern pintail (<i>Anas acuta</i>), Grey plover (<i>Pluvialis squatarola</i>), Red knot (<i>Calidris canutus islandica</i>), Dunlin (<i>Calidris alpina alpina</i>), Black-tailed godwit (<i>Limosa limosa islandica</i>) and Common redshank (<i>Tringa totanus totanus</i>).</p>	https://rsis Ramsar.org/RI Sapp/files/RI Srep/GB662RIS.pdf
Marine Conservation Zone			
Orford Inshore MCZ	16km	The site is composed of subtidal mixed sediments that form important nursery and spawning grounds for some species of fish, including Dover sole, lemon sole and sandeels. Burrowing anemones, sea cucumbers, urchins, starfish and nationally	https://www.legislation.gov.uk/ukmo/2019/29/pdfs/ukmo_20190029_en.pdf

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Site and location	Distance from Site	Description of site features with marine components	Link to citation
		important shark species are found at the site. The area is an important foraging area for seabirds. Harbour porpoise pass through the site. The protected features at the site are 'subtidal mixed sediments'.	
SSSI			
Alde – Ore Estuary	5km	<p>This site stretches along the coast from Bawdsey to Aldeburgh and inland to Snape. The scientific interests of the site are outstanding and diverse. The shingle structures of Orfordness and Shingle Street are of great physiographic importance whilst the cliff at Gedgrave is of geological interest. The site also contains a number of coastal formations and estuarine features including mud-flats, saltmarsh, vegetated shingle and coastal lagoons which are of special botanical and ornithological value.</p> <p>The cited biological interest features of the site are as follows:</p> <p>Birds:</p> <p>Aggregations of breeding birds - avocet (<i>Recurvirostra avosetta</i>), black headed gull (<i>Larus ridibundus</i>), herring gull (<i>Larus argentatus</i>), lesser black-backed gull (<i>Larus fuscus</i>), little tern (<i>Sterna albifrons</i>), marsh harrier (<i>Circus aeruginosus</i>), sandwich tern (<i>Sterna sandvicensis</i>), shoveler (<i>Anas clypeata</i>).</p> <p>Aggregations of non-breeding birds – avocet, bewick's swan (<i>Cygnus columbianus bewickii</i>), redshank (<i>Tringa tetanus</i>), shelduck (<i>Tadorna tadorna</i>), teal (<i>Anas crecca</i>), wigeon (<i>Anas Penelope</i>).</p> <p>Assemblages of breeding birds - Lowland damp grasslands.</p> <p>Habitats: Estuaries Saline coastal lagoons.</p> <p>SD11 - <i>Rumex crispus</i> - <i>Glaucium flavum</i> shingle community.</p>	https://designatedsites.naturalengland.org.uk/PDFsForWeb/Citation/1003208.pdf

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Site and location	Distance from Site	Description of site features with marine components	Link to citation
		SD2 - <i>Cakile maritima</i> - <i>Honkenya peploides</i> strandline community. Sheltered muddy shores (including estuarine muds). SM14 - <i>Atriplex portulacoides</i> saltmarsh. Vascular Plant Assemblage. Fauna: Invertebrate Assemblage. Population of Schedule 5 sea anemone - <i>Nematostella vectensis</i> , Starlet Sea Anemone.	
Blaxhall Heath	11.6km	Blaxhall Heath is one of the few fragments of the once extensive Sandlings heath of coastal Suffolk. The notified biological interest features of the site are as follows: Habitats: H8 - <i>Calluna vulgaris</i> - <i>Ulex gallii</i> heath. SD11 - <i>Carex arenaria</i> - <i>Cornicularia aculeata</i> dune community. U1 - <i>Festuca Ovina</i> - <i>Agrostis Capillaris</i> - <i>Rumex Acetosella</i> Grassland.	https://designatedsites.naturalengland.org.uk/PDFsForWeb/Citation/1003460.pdf
Cransford Meadow	14.9km	This site consists of two unimproved species-rich meadows which have developed in a shallow valley close to the headwaters of a tributary of the River Alde. The notified biological interest features of the site are as follows: Habitats: MG5 - <i>Cynosurus cristatus</i> - <i>Centaurea nigra</i> grassland.	https://designatedsites.naturalengland.org.uk/PDFsForWeb/Citation/1003356.pdf
Gromford Meadow	10km	Gromford Meadow is a good example of an unimproved base-rich marsh on an alluvial soil with a high organic content. It borders the River Alde and is fed by springs. It is species-rich and contains a variety of characteristic fen meadow and marshland plants. The notified biological interest features of the site are as follows: Habitats: M22 - <i>Juncus subnodulosus</i> - <i>Cirsium palustre</i> fen meadow	https://designatedsites.naturalengland.org.uk/PDFsForWeb/Citation/1004234.pdf

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Site and location	Distance from Site	Description of site features with marine components	Link to citation
Iken Wood	10.8km	Iken Wood lies close to the banks of the River Alde and may well be the only ancient coppice wood on blown sand in Britain. It is the most interesting example of lowland coppice oakwood in Suffolk and has a distinctive flora typical of woods on light soils. The notified biological interest features of the site are as follows: Habitats: W10 - <i>Quercus robur</i> - <i>Pteridium aquilinum</i> - <i>Rubus fruticosus</i> woodland.	https://designatedsites.naturalengland.org.uk/PDFsForWeb/Citation/1002409.pdf
Leiston to Aldeburgh	0.7km	Leiston-Aldeburgh contains a rich mosaic of habitats including acid grassland, heath, scrub, woodland, fen, open water and vegetated shingle. This mix of habitats in close juxtaposition and the associated transition communities between habitats is unusual in the Suffolk Coast and Heaths. The notified interest biological features of the site are as follows: Birds: Aggregations of breeding birds - Gadwall, (<i>Anas strepera</i>), Marsh Harrier (<i>Circus aeruginosus</i>), Woodlark (<i>Lullula arborea</i>). Aggregations of non-breeding birds Gadwall, Shoveler (<i>Anas clypeata</i>), White-fronted Goose (<i>Anser albifrons</i>). Assemblages of breeding birds - Lowland damp grasslands. Assemblages of breeding birds - Lowland open waters and their margins. Variety of breeding bird species (70). Habitats: H1 - <i>Calluna vulgaris</i> - <i>Festuca ovina</i> heath. Lowland ditch systems. S4 - <i>Phragmites australis</i> swamp and reed-beds. SD1 - <i>Rumex crispus</i> - <i>Glaucium flavum</i> shingle community.	https://designatedsites.naturalengland.org.uk/PDFsForWeb/Citation/2000370.pdf

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Site and location	Distance from Site	Description of site features with marine components	Link to citation
		<p>U1 - <i>Festuca Ovina</i> - <i>Agrostis Capillaris</i> - <i>Rumex Acetosella</i> grassland. Vascular Plant Assemblage. W1 - <i>Salix cinerea</i> - <i>Galium palustre</i> woodland. W2 - <i>Salix cinerea</i> - <i>Betula pubescens</i> - <i>Phragmites australis</i> woodland. W6 - <i>Alnus glutinosa</i> - <i>Urtica dioica</i> woodland. Fauna: Outstanding dragonfly assemblage.</p>	
Minsmere to Walberswick Heaths and Marshes	Adjacent to the site.	<p>Contains a complex series of habitats, notably mudflats, shingle beach, reedbeds, heathland and grazing marsh, which combine to create an area of exceptional scientific interest. The tidal mudflats form sheltered feeding grounds for wildfowl and shorebirds. The notified biological features of the site are as follows: Birds: Aggregations of breeding birds – Avocet (<i>Recurvirostra avosetta</i>), Bearded Tit (<i>Panurus biarmicus</i>) Bittern (<i>Botaurus stellaris</i>), Cetti's Warbler (<i>Cettia cetti</i>), Garganey (<i>Anas querquedula</i>) and Marsh Harrier (<i>Circus aeruginosus</i>). Assemblages of breeding birds - Lowland damp grasslands. Variety of breeding bird species (70). Variety of wintering bird species (90). Plants and Habitats: Vascular Plant Assemblage . W6 - <i>Alnus glutinosa</i> - <i>Urtica dioica</i> woodland H1 - <i>Calluna vulgaris</i> - <i>Festuca ovina</i> heath. H8 - <i>Calluna vulgaris</i> - <i>Ulex gallii</i> heath.</p>	https://designatedsites.naturalengland.org.uk/PDFsForWeb/Citation/1000721.pdf

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Site and location	Distance from Site	Description of site features with marine components	Link to citation
		<p>Lowland ditch systems.</p> <p>M22 - <i>Juncus subnodulosus</i> - <i>Cirsium palustre</i> fen meadow.</p> <p>M23 - <i>Juncus effusus/ acutiflorus</i> - <i>Galium palustre</i> rush pasture.</p> <p>M27 - <i>Filipendula ulmaria</i> - <i>Angelica sylvestris</i> mire.</p> <p>Population of Schedule 8 plant –</p> <p>Red-tipped Cudweed (<i>Filago lutescens</i>).</p> <p>S2 - <i>Cladium mariscus</i> swamp and sedge-beds.</p> <p>S26 - <i>Phragmites australis</i> - <i>Urtica dioica</i> tall-herb fen.</p> <p>S4 - <i>Phragmites australis</i> swamp and reed-beds. Saline coastal lagoons.</p> <p>SD1 - <i>Rumex crispus</i> - <i>Glaucium flavum</i> shingle community.</p> <p>SD11 - <i>Carex arenaria</i> - <i>Cornicularia aculeata</i> dune community.</p> <p>SD12 - <i>Carex arenaria</i> - <i>Festuca ovina</i> - <i>Agrostis capillaris</i> dune grassland.</p> <p>SD2 - <i>Cakile maritima</i>-<i>Honkenya peploides</i> strandline community.</p> <p>SD6 - <i>Ammophila arenaria</i> mobile dune community Sheltered muddy shores (including estuarine muds).</p> <p>SM14 - <i>Atriplex portulacoides</i> saltmarsh.</p> <p>SM24 - <i>Elytrigia atherica</i> saltmarsh.</p> <p>U1 - <i>Festuca Ovina</i> - <i>Agrostis Capillaris</i> - <i>Rumex Acetosella</i> grassland.</p> <p>Fauna:</p> <p>Invertebrate assemblage.</p>	
Potton Hall Fields	6.5km	Potton Hall Fields are of special interest for their populations of the nationally rare Red-tipped Cudweed, several thousand of which have been recorded there. The plant occurs in only two other	https://designatedsites.naturalengland.org.uk/PDFsForWeb/Citation/1006426.pdf

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Site and location	Distance from Site	Description of site features with marine components	Link to citation
		counties in Britain and, being listed on Schedule 8 of the Wildlife and Countryside Act 1981. The notified biological features of the site are as follows: Population of Schedule 8 plant – Red-tipped Cudweed.	
Sandlings Forest	17.8km	This site is notified for its coniferous woodland. The notified biological features of the site are as follows: Aggregations of breeding birds – Nightjar (<i>Caprimulgus europaeus</i>), Woodlark (<i>Lullula arborea</i>).	https://designatedsites.naturalengland.org.uk/PDFsForWeb/Citation/2000433.pdf
Sizewell Marshes	Within the site.	Contains a large area of lowland, unimproved wet meadows which support outstanding assemblages of invertebrates and breeding birds. Several nationally scarce plants are also present. The notified biological features of the site are as follows: Fauna: Assemblages of breeding birds - Lowland damp grasslands. Invertebrate Assemblage. Habitats: Lowland ditch systems. M22 - <i>Juncus subnodulosus</i> - <i>Cirsium palustre</i> fen meadow. M23 - <i>Juncus effusus/acutiflorus</i> - <i>Galium palustre</i> rush pasture. S26 - <i>Phragmites australis</i> - <i>Urtica dioica</i> tall-herb fen. Vascular plant assemblage.	https://designatedsites.naturalengland.org.uk/PDFsForWeb/Citation/1003416.pdf
Snape Warren	8.2km	Snape Warren is an important remnant of the once extensive "Sandlings" heaths of coastal Suffolk. The notified biological features of the site are as follows: H8 - <i>Calluna vulgaris</i> - <i>Ulex gallii</i> heath. U1 - <i>Festuca Ovina</i> - <i>Agrostis Capillaris</i> - <i>Rumex Acetosella</i> grassland.	https://designatedsites.naturalengland.org.uk/PDFsForWeb/Citation/1000928.pdf

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Site and location	Distance from Site	Description of site features with marine components	Link to citation
		U4 - <i>Festuca ovina</i> - <i>Agrostis capillaris</i> - <i>Galium saxatile</i> grassland.	
Tunstall Common	10.8km	Tunstall Common is a fragment of the once extensive 'sandlings' heath of coastal Suffolk and is a good example of this dry lowland heath type. The notified biological features of the site are as follows: H1 - <i>Calluna vulgaris</i> - <i>Festuca ovina</i> heath. U1 - <i>Festuca Ovina</i> - <i>Agrostis Capillaris</i> - <i>Rumex Acetosella</i> Grassland.	https://designatedsites.naturalengland.org.uk/PDFsForWeb/Citation/1001812.pdf
Valley Farm Pit	9.6km	This quarry is of geological interest for its exposure of Coralline Crag.	https://designatedsites.naturalengland.org.uk/PDFsForWeb/Citation/1001527.pdf
Sudbourne Park Pit	12.1km	This site is of geological importance for the study of the formation of Coralline Crag deposited in the Pliocene age.	https://designatedsites.naturalengland.org.uk/PDFsForWeb/Citation/1001649.pdf
Richmond Farm Pit. Gedgrave	13.9km	This site is of geological importance for the study of the formation and stratigraphy of Coralline Crag deposited in the Pliocene age.	https://designatedsites.naturalengland.org.uk/PDFsForWeb/Citation/1001569.pdf
Gedgrave Hall Pit	14.8km	This site consists of two pits of geological importance for the study of the development and stratigraphy of Coralline Crag deposited in the Pliocene age.	https://designatedsites.naturalengland.org.uk/PDFsForWeb/Citation/1004178.pdf
Staverton Park and The Hethick, Wantiseden	14.6km	Staverton Park is an ancient park with a well documented medieval history. It is composed of three main areas of woodland on an unpodsolized sandy soil.	https://designatedsites.naturalengland.org.uk/PDFsForWeb/Citation/1001023.pdf

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Site and location	Distance from Site	Description of site features with marine components	Link to citation
Neutral Farm Pit, Butley	13.9km	This pit is of geological importance as a classic site in the study of the Early Pleistocene history of East Anglia.	https://designatedsites.naturalengland.org.uk/PDFsForWeb/Citation/1000781.pdf
Chillesford Church Pit	12.3km	Chillesford Church Pit is a classic geological site showing Early Pleistocene crag deposits. Only here can the superimposition of the Norwich Crag (Chillesford Crag and Chillesford Clay) on the Red Crag be seen.	https://designatedsites.naturalengland.org.uk/PDFsForWeb/Citation/1003257.pdf
Tunstall Common	10km	<p>Tunstall Common is a fragment of the once extensive 'sandlings' heath of coastal Suffolk and is a good example of this dry lowland heath type.</p> <p>Most of the site is dominated by Heather <i>Calluna vulgaris</i> but Bell Heather <i>Erica cinerea</i> occurs locally especially in stands of young heather and on heather to grassland margins. Mature and degenerating stands of heather support a variety of heathland, lichens and mosses. Impoverished acid grassland characterised by Common Bent and Sheep's Fescue grasses occurs to the north, west and south but is subject to invasion by gorse and bracken which now occupies substantial areas. Pine scrub originating from adjacent plantations has invaded part of the eastern boundary.</p>	https://designatedsites.naturalengland.org.uk/PDFsForWeb/Citation/1001812.pdf
Round hill Pit, Aldeburgh	5.2km	This small pit is of geological interest because of the exposure of Coralline Crag deposited in the Pliocene age.	https://designatedsites.naturalengland.org.uk/PDFsForWeb/Citation/1001513.pdf

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Site and location	Distance from Site	Description of site features with marine components	Link to citation
Holton Pit	12.6km	Holton Pit is of geological interest because the exposures north of Blyford Lane show around 5m of Westleton Beds overlain by Kesgrave Gravels and till.	https://designatedsites.naturalengland.org.uk/PDFsForWeb/Citation/1002048.pdf
Pakefield to Easton Bavents	12.3km	Pakefield to Easton Bavents is nationally important for the geological exposures of the Lower Pleistocene Norwich Crag Formations and associated Pleistocene vertebrate assemblages, and the coastal geomorphology of Benacre Ness. The site is also nationally important for its vegetated shingle features, saline lagoons, flood-plain fens, an assemblage of nationally rare and nationally scarce vascular plants, scarce breeding birds, four breeding bird assemblages in four different habitats and wintering bitterns Botaurus stellaris.	https://designatedsites.naturalengland.org.uk/PDFsForWeb/Citation/2000508.pdf

2.2 Non-Statutory Designated Sites

2.2.1 **Table 2** identified the non-statutory sites that are located within 2km of the main development site. The boundaries of these sites are shown on **Figure 7.1** and the citations for each are provided in **Annex A** of this appendix.

Table 2 Non-statutory designated sites within 2km of the main development site

Site and location	Distance from Site	Description of site features with marine components
Sizewell Levels and Associated Areas	Within the site.	An area of wet meadow, sallow scrub and birch/alder considered to be of regional importance for the following reasons: The area contains a number of uncommon plants, for example Ragged Robin (<i>Silene flos-cuculi</i>) and Purple Loosestrife (<i>Lythrum salicaria</i>). The waterlogged grazing marsh provides cover for large numbers of swan, teal, mallard (<i>Anas platyrhynchos</i>) and moorhen throughout the winter. Also, of note are the plantations to the north of Sizewell belts; Goose Hill, Nursery Covert and Kenton Hills all support breeding populations of a number of nationally rare birds.
Southern Minsmere Levels	Within the site.	This site contains all the marshes east of Eastbridge to the sea, south of Minsmere New Cut. It abutts the internationally important Minsmere-Walberswick SSSI, which contains the Minsmere RSPB reserve. The entire valley is of great importance for wildlife forming perhaps the last unspoilt and least improved of Suffolk's larger marshland river valleys. This eastern portion of the valley is of interest principally for breeding wader and wildfowl and for overwintering birds. The extensive area of open marsh, managed in the traditional manner with cattle grazing and high water levels provides ideal conditions for feeding birds. Botanically the marshes are not of the same quality as those further up the valley. Many of them are improved, although some of the dykes retain a reasonable flora with plants such as broad- leaved pondweed, frogbit and water violet. Additional interest is given by a few small areas of scrub and woodland on the site. In 1994 a large proportion of this County Wildlife Site was confirmed as part of the extended Minsmere-Walberswick SSSI.
Suffolk Shingle Beaches	Within the site.	The site is part of a stretch of shingle beach along the Suffolk coast which supports a range of shingle plants, including the nationally scarce plant, sea pea. Other typical shingle flora includes Sea Kale, Sea Spurge (<i>Euphorbia paralias</i>), Sea Sandwort and Sea Bindweed (<i>Calystegia soldanella</i>).

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Site and location	Distance from Site	Description of site features with marine components
Aldringham to Aldeburgh Disused Railway Line	0.23km	The site supports a species-rich flora both on the line of the old track and on the gently sloping embankments. Plants typical of lightly trampled conditions have been recorded on the footpath itself, and these include the nationally rare species Mossy Stonecrop (<i>Sedum acre</i>) and an unusual species of clover, Suffocated Clover (<i>Trifolium suffocatum</i>).
Sizewell Rigs	0.4km	The two rigs off-shore from the A and B stations support a growing breeding colony of kittiwakes (<i>Rissa tridactyla</i>), which is the most southerly colony in the North Sea.
Leiston Common	0.6km	Leiston Common is a small but important site for wildlife conservation in Suffolk. Bell heather, a rare plant in Suffolk, grows here, together with more widespread plants such as Harebell (<i>Campanula rotundifolia</i>), Heath Bedstraw (<i>Galium saxatile</i>) and Tormenitil (<i>Potentilla erecta</i>). Another notable and uncommon feature of the site is the presence of an extensive and diverse lichen flora.
Dower House	1km	Grassland on the cliff top of the Dower House is a valuable example of unimproved dry acid/dry maritime grassland. The sward includes species typically associated with acid grasslands and heaths, such as Heath Violet (<i>Viola canina</i>) and Heath Speedwell (<i>Veronica officinalis</i>). In addition to the site's botanical interest, it is also important for reptiles. The surrounding Blackthorn scrub is also important for birds, particularly as feeding stations for migrants

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3 NORTHERN PARK & RIDE

3.1 Statutory Designated Sites

3.1.1 **Table 3** identified the statutory designated sites within 5km of the northern park and ride site. These sites have been identified as relevant to the Sizewell C Project because of their proximity to the site and the relevant qualifying features. These sites are shown on Figure 7.2 along with the non-statutory designated sites. Table 3 Statutory sites located within 5km of the northern park and ride

Site name	Distance from site	Reason for designation	Link to citation
Dew's Ponds SAC and SSSI	1.7km north-west	This site comprises a series of 12 ponds set in an area of formerly predominantly arable land. The Annex II species that is the primary reason for the selection of the SAC is great crested newts which has been found in all ponds on site, though the presence of fish seems to have affected newt numbers in recent years in two ponds.	SAC: https://jncc.gov.uk/jncc-assets/SAC-N2K/UK0030133.pdf SSSI: https://designatedsites.naturalengland.org.uk/PDFsForWeb/Citation/2000434.pdf
Minsmere - Walberswick Heath and Marshes SAC, SPA, Ramsar and SSSI (includes Westleton Heath NNR)	3.2km east (at its closest point)	Annex I habitats that are the primary reason for selection of the SAC include: annual vegetation of drift lines, which occurs on a well-developed beach strandline of mixed sand and shingle and supports species such as Sea Sandwort (<i>Honckenya peploides</i>) and Sea Beet (<i>Beta vulgaris ssp. maritima</i>); and	SSSI: https://designatedsites.naturalengland.org.uk/PDFsForWeb/Citation/1000721.pdf

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Site name	Distance from site	Reason for designation	Link to citation
		<p>European dry heaths dominated by Heather (<i>Calluna vulgaris</i>), western gorse (<i>Ulex gallii</i>) and Bell Heather (<i>Erica cinerea</i>). The presence of perennial vegetation of stony banks is an Annex I habitat present as a qualifying feature of the SAC.</p> <p>The SPA qualifies by supporting populations of European importance of the following species listed on Annex I of the Directive: avocet (<i>Recurvirostra avosetta</i>), bittern (<i>Botaurus stellaris</i>), little tern (<i>Sterna albifrons</i>), marsh harrier (<i>Circus aeruginosus</i>), nightjar (<i>Caprimulgus europaeus</i>) and woodlark (<i>Lullula arborea</i>) during the breeding season; and avocet, bittern and hen harrier (<i>Circus cyaneus</i>) over Winter. The site is also a wetland of international importance and is therefore also designated as a Ramsar site under the Ramsar Convention.</p> <p>The SSSI contains a complex series of habitats, notably mudflats, shingle beach, reedbeds, heathland and grazing marsh, which combine to create an area of exceptional scientific interest.</p>	<p>SAC: https://jncc.gov.uk/jncc-assets/SAC-N2K/UK0012809.pdf</p> <p>SPA: http://publications.naturalengland.org.uk/publication/4528783260385280</p> <p>Ramsar: https://jncc.gov.uk/jncc-assets/RIS/UK11044.pdf</p>

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Site name	Distance from site	Reason for designation	Link to citation
Potton Hall Fields SSSI	4.1km east	A site of special interest due to the presence of nationally rare arable weed Red-tipped Cudweed (<i>Filago lutescens</i>).	https://designatedsites.naturalengland.org.uk/PDFsForWeb/Citation/1006426.pdf

3.2 Non-Statutory Designated Sites

3.2.1 **Table 4** identified the non-statutory sites that are located within 2km of the northern park and ride site. The boundaries of these sites are shown on **Figure 7.2** and the citations for each are provided in **Annex B** of this appendix.

Table 4: Non-statutory designated site within 2km of the northern park and ride

Site name	Distance from site	Reason for designation
Sillet's Wood Also an Ancient and Semi-Natural Woodland (ASNW) and on the Ancient Woodland Inventory (AWI)	300m north	Site is designated as a CWS for its ancient woodland characteristics. It also contains a number of wet hollows and internal ditches which add habitat diversity to the area.
Yoxford Wood Also an ASNW and on the AWI	900m to the west	Designated for its ancient coppice, mainly hornbeam. Yoxford also contains a number of ponds which support their own flora and add to the variety of habitats present.

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Site name	Distance from site	Reason for designation
Willowmarsh Wood Also an Ancient Replanted Woodland (ARW) and on the AWI	1.2km to the west	This CWS is designated for its diverse and abundant ground flora.
Minsmere Valley	1km south-east	The site includes an extensive area of unimproved marsh, small areas of scrub, mature woodland and fen, the Minsmere River, several ponds and a man-made lake. Regionally rare species such as Bogbean (<i>Menyanthes trifoliata</i>) and Bog Pimpernel (<i>Anagallis tenella</i>) are found within the marsh areas, as well as various other uncommon plants. The site also supports a number of productive barn owl (<i>Tyto alba</i>) nest sites, and European otter (<i>Lutra lutra</i>) are often seen throughout the valley.
Darsham Marshes (also a SWT reserve)	1.5km south-east	This extensive area of marsh and fen supports a diverse assemblage of species-rich flora including Yellow-rattle (<i>Rhinanthus minor</i>), Bog Pimpernel, Southern Marsh-orchid (<i>Dactylorhiza praetermissa</i>) and Marsh-marigold (<i>Caltha palustris</i>). Aquatic insects and breeding amphibians are found within a restored pond area, and numerous raptor species such as kestrel (<i>Falco tinnunculus</i>), marsh and hen harrier frequently hunt in the area.
Big, Common, and Haw Woods Also an ARW and on the AWI	1.3km north-east	Area of ancient woodland that includes Common Wood, Big Wood and the remnants of Haw and Sixteen Acre Woods.

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4 SOUTHERN PARK & RIDE

4.1 Statutory Designated Sites

4.1.1 There are no statutory designated sites of nature conservation importance within 5km of the southern park and ride site boundary.

4.2 Non-Statutory Designated Sites

4.2.1 **Table 5** identified the non-statutory sites that are located within 2km of the southern park and ride site. The boundaries of these sites are shown on **Figure 7.3** and the citations for each are provided in **Annex C** of this appendix.

Table 5: Non-statutory designated site within 2km of the southern park and ride

Site name	Distance from site	Reason for designation
Catt's Wood Also an Ancient and Semi-Natural Woodland (ASNW) and on the Ancient Woodland Inventory (AWI)	750m west	The site is designated as ancient coppice woodland and mainly comprises Ash (<i>Fraxinus excelsior</i>), Field Maple (<i>Acer campestre</i>), Hazel (<i>Corylus avellana</i>) and Horse-chestnut (<i>Aesculus hippocastanum</i>) coppice with a varied ground flora containing ancient woodland indicator plants such as Remote Sedge (<i>Carex remota</i>) and Primrose (<i>Primula vulgaris</i>).
Great Wood, Glevering Hall Also an ASNW and on the AWI	1.4km west	A large ancient woodland with mixed broadleaved trees and a large herb-rich glade, located approximately 1km from the Site. The woodland comprises mainly Hazel, Field Maple and Hornbeam (<i>Carpinus betulus</i>) coppice with sparse Ash. A diverse and abundant ground flora is found within the area, with 103 species recorded

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Site name	Distance from site	Reason for designation
		including Moschatel (<i>Adoxa moschatellina</i>), Common Spotted-orchid (<i>Dactylorhiza fuchsia</i>) and Hairy St John's-wort (<i>Hypericum hirsutum</i>).
Lower Hacheston Meadow	430m west on the other side of the A12	This CWS contains a diverse wetland habitat with locally rare species such as Ragged-Robin (<i>Lychnis flos-cuculi</i>) and Marsh-marigold (<i>Caltha palustris</i>).
The Oaks Also an ASNW and on the AWI	1.2km south on the other side of the A12	An area of ancient woodland with a wide range of ground flora including ancient woodland indicators such as Orpine (<i>Sedum telephium</i>), Bluebell (<i>Hyacinthoides non-scripta</i>) and Remote Sedge.
Copperas Wood	1.8km south west on the other side of the A12	Copperas Wood is divided into two parts, to the south-west and to the north-east, separated by an area of unimproved meadow. The south-west portion was a pine (<i>Pinus</i> sp.)/Sweet Chestnut (<i>Castanea sativa</i>) plantation which has recently been felled. Old Hazel and Field Maple coppice with Oak (<i>Quercus</i> sp.) and Ash standards survives, and ground flora here includes Bluebell and Primrose. The north-east part of the wood is Hazel and Ash coppice with Oak standards. The ground flora in this part of the wood includes Primrose and Remote Sedge.
Ashe Abby Decoy Pond	1.7km south on the other side of the A12	Woodland surrounding a large, man-made lake fed by the River Deben. The lake supports a good population of both Yellow Water-lily (<i>Nuphar lutea</i>) and White Water-lily (<i>Nymphaea alba</i>).
River Deben	1.6km west	Water quality is particularly good and the area supports a wide range of aquatic and emergent species such as the regionally scarce River Water-dropwort (<i>Oenanthe fluviatilis</i>).

5 TWO VILLAGE BYPASS:

5.1 Statutory Designated Sites

5.1.1 **Table 6** identified the statutory designated sites within 5km of the two village bypass site. These sites have been identified as relevant to the Sizewell C Project because of their proximity to the site and the relevant qualifying features. These sites are shown on **Figure 7.4** along with the non-statutory designated sites.

Table 6: Statutory designated sites within 5km of the two village bypass

Site name	Distance from site	Reason for designation	Link to citation
Gromford Meadow SSSI	1.3km south-east	Gromford Meadow is a good example of an unimproved base-rich marsh on an alluvial soil with a high organic content. The sward is species-rich with Meadowsweet (<i>Filipendula ulmaria</i>) dominant.	https://designatedsites.naturalengland.org.uk/PDFsForWeb/Citation/1004234.pdf
Blaxhall Heath SSSI	2.4km south	Blaxhall Heath is one of the few fragments of the once extensive 'Sandlings' heath of coastal Suffolk. Of additional interest is a broad anti-glider ditch whose exposed sandy sides provide an excellent habitat for lizards and solitary bees. A number of heathland birds on the site including nightjar and tree pipit (<i>Anthus trivialis</i>).	https://designatedsites.naturalengland.org.uk/PDFsForWeb/Citation/1003460.pdf
Sandlings SPA	2.4km south	The SPA qualifies by supporting populations of European importance of the following species listed on Annex I of the Directive: nightjar	http://publications.naturalengland.org.uk/publication/6690828793675776

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Site name	Distance from site	Reason for designation	Link to citation
		(<i>Caprimulgus europaeus</i>) and woodlark (<i>Lullula arborea</i>).	
Sandlings Forest SSSI	2.4km south	The main conservation interest of the forest lies in the open areas such as young plantations and rotational clear-fell which provide suitable habitat for breeding woodlark and nightjar (both included on Annex 1 of the European Directive 79/409/EEC Directive on the Conservation of Wild Birds).	https://designatedsites.naturalengland.org.uk/PDFsForWeb/Citation/2000433.pdf
Alde-Ore Estuary SPA, SAC, Ramsar site and SSSI	2.8km south-east	<p>This site stretches along the coast from Bawdsey to Aldeburgh and inland to Snape. The SAC is designated for Annex I habitats including estuaries, mudflats and sandflats not covered by seawater at low tide, and Atlantic salt meadows. The SPA qualifies by supporting populations of European importance of the following species listed on Annex I of the Directive: avocet (<i>Recurvirostra avosetta</i>), little tern (<i>Sterna albifrons</i>), ruff (<i>Calidris pugnax</i>), sandwich tern (<i>Thalasseus sandvicensis</i>), Lesser black-backed gull (<i>Larus fuscus</i>), Little tern (<i>Sternula albifrons</i>), Marsh harrier (<i>Circus aeruginosus</i>) and redshank (<i>Tringa totanus</i>).</p> <p>The Ramsar site is designated for supporting a number of nationally-scarce plant species and British RDB invertebrates, supporting a notable</p>	<p>SPA: http://publications.naturalengland.org.uk/publication/5170168510545920</p> <p>Ramsar: https://jncc.gov.uk/jncc-assets/RIS/UK11002.pdf</p> <p>SAC: https://jncc.gov.uk/jncc-assets/SAC-N2K/UK0030076.pdf</p> <p>SSSI: https://designatedsites.naturalengland.org.uk/PDFsForWeb/Citation/1003208.pdf</p>

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Site name	Distance from site	Reason for designation	Link to citation
		<p>assemblage of breeding and wintering wetland birds and supporting a number of species/populations occurring at levels of international importance. This includes lesser black-backed gull during the breeding season, and pied avocet (<i>Recurvirostra avosetta</i>) and redshank during the winter.</p> <p>The SSSI is designated for supporting estuary and saline coastal lagoon habitats, SD1¹ - <i>Rumex crispus</i> - <i>Glaucium flavum</i> shingle communities, SD2 - <i>Cakile maritima</i>-<i>Honkenya peploides</i> strandline community</p> <p>Sheltered muddy shores (including estuarine muds) , SM14 - <i>Atriplex portulacoides</i> saltmarsh , vascular plant assemblage, fauna and invertebrate assemblages.</p>	
Iken Wood SSSI	3.5km south-east	<p>An interesting example of lowland coppice oakwood in Suffolk and has a distinctive flora typical of woods on light soils. The wood is almost entirely of the lowland Hazel (<i>Corylus avellana</i>)-Pedunculate Oak (<i>Quercus robur</i>) stand-type. Pedunculate Oak standards are dominant with scattered Silver Birch (<i>Betula pendula</i>), Holly (<i>Ilex aquifolium</i>) and Rowan (<i>Sorbus aucuparia</i>).</p>	https://designatedsites.naturalengland.org.uk/PDFsForWeb/Citation/1002409.pdf

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Site name	Distance from site	Reason for designation	Link to citation
Snape Warren SSSI	3.2km south-east	Snape Warren is an important remnant of the once extensive 'Sandlings' heaths of coastal Suffolk. The site is a fine example of the lowland heathland of eastern England, which has been subject to considerable loss in the last 40 years. The vegetation is characterised by extensive areas of Calluna heath interspersed with acid grassland dominated by Common Bent (<i>Agrostis capillaris</i>). Trackways across the site support populations of the uncommon Mossy Stonecrop (<i>Crassula tillaea</i>). The site supports a number of reptile and bird species characteristic of heathland, including common lizard (<i>Zootoca vivipara</i>), adder (<i>Vipera berus</i>) and nightjar.	https://designatedsites.naturalengland.org.uk/PDFsForWeb/Citation/1000928.pdf
Tunstall Common SSSI	4.2km south	Tunstall Common is a fragment of the once extensive 'sandlings' heath of coastal Suffolk and is a good example of this dry lowland heath type. Most of the site is dominated by Heather (<i>Calluna vulgaris</i>), but Bell Heather (<i>Erica cinerea</i>) occurs locally especially in stands of young heather and on heather to grassland margins.	https://designatedsites.naturalengland.org.uk/PDFsForWeb/Citation/1001812.pdf
Cransford Meadow SSSI	4.9km north-west	This site consists of two unimproved species-rich meadows which have developed in a shallow valley close to the headwaters of a tributary of the River Alde. The site is notable	https://designatedsites.naturalengland.org.uk/PDFsForWeb/Citation/1003356.pdf

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Site name	Distance from site	Reason for designation	Link to citation
		for Sulphur Clover (<i>Trifolium ochroleucon</i>) and Lady's Mantle (<i>Alchemilla filicaulis vestita</i>) and is one of only two known sites in East Anglia for the latter species.	

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5.2 Non-Statutory Designated Sites

5.2.1 **Table 7** identified the non-statutory sites that are located within 2km of the two village bypass site. The boundaries of these sites are shown on **Figure 7.4** and the citations for each are provided in **Annex D** of this appendix.

Table 7: Non-statutory designated sites within 2km of the two village bypass

Site name	Distance from site	Reason for designation
Foxburrow Wood CWS Also, an Ancient and Semi-Natural Woodland (ASNW) on the Ancient Woodland Inventory (AWI)	Adjacent to the site boundary	Foxburrow Wood is an ancient wood on sandy soils with a variety of tree species including oak (<i>Quercus</i> spp.), Ash (<i>Fraxinus excelsior</i>) and Beech (<i>Fagus sylvatica</i>) (some of which are very mature) in the canopy and also Hazel, Field Maple (<i>Acer campestre</i>), Hawthorn (<i>Crataegus monogyna</i>) and Hornbeam (<i>Carpinus betulus</i>) coppice. In the shrub layer, Elder (<i>Sambucus nigra</i>) and Holly (<i>Ilex aquifolium</i>) are also present. The perimeter of the wood is marked by a ditch and bank boundary with one very old oak pollard on the northern edge. The ground flora includes ferns and carpets of Bluebell (<i>Hyacinthoides non-scripta</i>), with Dog's-mercury (<i>Mercurialis perennis</i>) dominant in parts.
Farnham Churchyard CWS	0.2km west	Farnham Churchyard provides a valuable refuge for wildlife in an intensively farmed landscape. In addition to many fairly common wildflowers the site also supports a number of scarce Suffolk plants. Orpine (<i>Sedum telephium</i>), which grows here in abundance is a declining species throughout Suffolk. Grass Vetchling (<i>Lathyrus nissolia</i>) which is scattered throughout the churchyard is also uncommon in Suffolk and is mainly restricted to a few sites on the coast.
Great Glemham Wood CWS Also an Ancient & Semi-Natural Woodland	1.3km north-west	Great Glemham Wood is a large woodland appearing in English Nature's Ancient Woodland Inventory. The composition of the tree species is typically ash, Field Maple (<i>Acer campestre</i>), and Hazel, although there are good areas of hornbeam in the western areas, with coppice stools up to six feet across. Despite this treatment much

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Site name	Distance from site	Reason for designation
on the Ancient Woodland Inventory		of the wood remains intact and there is an excellent ground flora. There are a number of ancient woodland indicator plants, such as Remote Sedge (<i>Carex remota</i>) and Wood-sedge (<i>Carex sylvatica</i>), Wood Spurge (<i>Euphorbia amygdaloides</i>) and Barren Strawberry (<i>Potentilla sterilis</i>).
Denney's Grove CWS	1.6km north-west	Denney's Grove is one of a number of small ancient woodlands situated in the Great Glemham area. The tree layer consists of oak (both Pedunculate Oak and Turkey Oak (<i>Quercus cerris</i>)), Ash, Field Maple and Hornbeam. Beneath the canopy is dense understorey composed mainly of Hazel and Hawthorn, with occasional Dogwood (<i>Cornus sanguinea</i>), Bramble (<i>Rubus fruticosus agg.</i>) and Elder. A Dog's-mercury woodland, the ground flora also contains a number of other plants including violet (<i>Viola spp.</i>), male fern (<i>Dryopteris spp.</i>), Selfheal (<i>Prunella vulgaris</i>) and wood sedge. The damp conditions of the woodland floor and numerous fallen trees provide suitable conditions for bryophytes and fungi to grow.
Great Wood CWS Also, an Ancient & Semi-Natural Woodland on the Ancient Woodland Inventory	1.1km west	Great Wood is an ancient woodland surrounded by a ditch and bank and includes internal ditches and banks. The structure is one of abandoned coppice with standards. The oak and Ash standards have grown very large and are shading the undergrowth; which is principally Hazel and Ash but with some Hornbeam, maple (<i>Acer spp.</i>) and willow (<i>Salix spp.</i>) also present. The rides have become overgrown, and no recent management has taken place. The ground flora is rich and a total of 87 species have been recorded. This includes Early-purple Orchid (<i>Orchis mascula</i>), twayblade (<i>Neottia spp.</i>) and Common Spotted-orchid (<i>Dactylorhiza fuchsii</i>), and a range of ancient woodland indicators.
Benhall Churchyard CWS	1.2km north	Benhall Churchyard provides a valuable refuge for plants and animals in an intensively farmed landscape. It is a good example of unimproved grassland (biodiversity priority habitat) supporting species such as Pignut (<i>Conopodium majus</i>), Bugle (<i>Ajuga reptans</i>), Lady's Bedstraw (<i>Galium verum</i>), Oxeye Daisy (<i>Leucanthemum vulgare</i>), Field Wood-rush (<i>Luzula campestris</i>), Pepper Saxifrage

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Site name	Distance from site	Reason for designation
		(<i>Silvaum silaus</i>), Cowslip (<i>Primula veris</i>) and Primrose (<i>Primula vulgaris</i>). Slow-worms (<i>Anguis fragilis</i>) (biodiversity priority) have been seen.
Manor Farm Meadows CWS	600m east	These small wet meadows support a good wet grassland flora typical of lowland grazing meadows (biodiversity priority habitat). They are similar in composition to the larger Benhall Green Meadows to the north. With the latter, they form the only remaining areas of unimproved marsh in the Fromus Valley. Between the two meadows lies the sewage works. The southern meadow contains a richer flora with good colonies of Southern Marsh-orchids (<i>Dactylorhiza praetermissa</i>) and a greater diversity of marsh flowers. Typical wetland species include Brown Sedge (<i>Carex disticha</i>) and Hairy sedge (<i>Carex hirta</i>), Meadowsweet (<i>Filipendula ulmaria</i>), Ragged-Robin (<i>Silene flos-cuculi</i>) and Water Mint (<i>Mentha aquatica</i>). The floristic diversity has been maintained in the past by traditional grazing. Without such management it will become rank and overgrown and the diversity will decline. The wettest areas near the drains are fen with Common Reed (<i>Phragmites australis</i>), Reed Canary-grass (<i>Phalaris arundinacea</i>) and pond sedge (<i>Carex</i> spp.). They support good numbers of reed warbler (<i>Acrocephalus scirpaceus</i>) and sedge warbler (<i>Acrocephalus schoenobaenus</i>).
River Fromus Marshes CWS	1km south-east	River Fromus Marshes consists of a complex of different habitats bordering the River Fromus at Gromford. The west side of the river is generally drier and is composed of open areas dominated with Bracken (<i>Pteridium aquilinum</i>) and scattered oak standards. The banks of the watercourse are characterised by dense clumps of sallow and old overhanging willows some of which require repollarding. The area is managed to promote wildlife conservation. The eastern side of the river in contrast is composed of wet marshland, old willows and willow/alder carr. One area of wet meadow adjacent to this site is Gromford meadow, which has been scheduled as a SSSI. The meadow situated to the south of the SSSI supports a similar species-rich

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Site name	Distance from site	Reason for designation
		flora. Amongst the many wildflowers growing here are Yellow-rattle (<i>Rhinanthus minor</i>), Ragged-Robin and Purple-loosestrife (<i>Lythrum salicaria</i>).
Benhall Green Meadows CWS	1.2km north-east	This series of meadows forms one of the largest remaining areas of flower-rich marsh in the Alde catchment. They are bordered by the River Fromus and contain a wide range of wet meadow plants. Wild Angelica (<i>Angelica sylvestris</i>), Brown sedge, Cuckooflower (<i>Cardamine pratensis</i>), Marsh Thistle (<i>Cirsium palustre</i>) and Ragged-Robin are abundant whilst Southern Marsh orchids and Greater Bird's-foot-trefoil (<i>Lotus pedunculatus</i>) are common. The ditches are not botanically rich, with Greater Pond-sedge (<i>Carex riparia</i>), Fool's-water-cress (<i>Apium nodiflorum</i>) and Lesser Water-parsnip (<i>Berula erecta</i>) dominating. Old records suggest there was a more diverse flora here in the past with species such as Bogbean (<i>Menyanthes trifoliata</i>) found in the pond on the green. The floristic diversity has been maintained in the past by traditional grazing.

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6 SIZEWELL LINK ROAD

6.1 Statutory Designated Sites

6.1.1 **Table 8** identified the statutory designated sites within 5km of the Sizewell link road site. These sites have been identified as relevant to the Sizewell C Project because of their proximity to the site and the relevant qualifying features. These sites are shown on **Figure 7.5** along with the non-statutory designated sites.

Table 8: Statutory sites located within 5km of the Sizewell link road

Site name	Distance from site	Reason for designation	Link to citation
Minsmere - Walberswick Heaths and Marshes SAC, SPA, Ramsar site and SSSI (includes Westleton Heath NNR)	525m (SSSI) 1.5km north- east (SPA, SAC Ramsar)	Annex I habitats that are the primary reason for selection of the SAC include: annual vegetation of drift lines, which occurs on a well-developed beach strandline of mixed sand and shingle and supports species such as Sea Sandwort (<i>Honckenya peploides</i>) and Sea Beet (<i>Beta vulgaris</i> ssp. <i>maritima</i>); and European dry heaths dominated by Heather (<i>Calluna vulgaris</i>), Western Gorse (<i>Ulex gallii</i>) and Bell Heather (<i>Erica cinerea</i>). The presence of perennial vegetation of stony banks is an Annex I habitat present as a qualifying feature of the SAC. The SPA qualifies by supporting populations of European importance of the following species listed on Annex I of the Directive: avocet (<i>Recurvirostra avosetta</i>), bittern (<i>Botaurus stellaris</i>), little tern (<i>Sterna albifrons</i>), marsh	SSSI: https://designatedsites.naturalengland.org.uk/PDFsForWeb/Citation/1000721.pdf SAC: https://jncc.gov.uk/jncc-assets/SAC-N2K/UK0012809.pdf SPA: http://publications.naturalengland.org.uk/publication/4528783260385280

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Site name	Distance from site	Reason for designation	Link to citation
		harrier (<i>Circus aeruginosus</i>), nightjar (<i>Caprimulgus europaeus</i>) and woodlark (<i>Lullula arborea</i>) during the breeding season; and avocet, bittern and hen harrier (<i>Circus cyaneus</i>) over Winter. The site is also a wetland of international importance and is therefore also designated as a Ramsar site under the Ramsar Convention.	Ramsar: https://jncc.gov.uk/jncc-assets/RIS/UK11044.pdf
Sizewell Marshes SSSI	2km south-east	Sizewell Marshes SSSI is important for its large area of lowland, unimproved wet meadows which support assemblages of invertebrates and breeding birds. Several nationally scarce plants are also present.	https://designatedsites.naturalengland.org.uk/PDFsForWeb/Citation/1003416.pdf
Leiston-Aldeburgh SSSI	3.5km south	Leiston-Aldeburgh contains a rich mosaic of habitats including acid grassland, heath, scrub, woodland, fen, open water and vegetated shingle. This mix of habitats in close juxtaposition and the associated transition communities between habitats is unusual in the Suffolk Coast and Heaths. The variety of habitats support a diverse and abundant community of breeding and overwintering birds, a high number of dragonfly species and many scarce plants.	https://designatedsites.naturalengland.org.uk/PDFsForWeb/Citation/2000370.pdf
Sandlings SPA	3.5km south-east	Supports populations of European importance of the following Annex I species: Nightjar and woodlark.	http://publications.naturalengland.org.uk/publication/6690828793675776

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Site name	Distance from site	Reason for designation	Link to citation
Southern North Sea SAC	3.5km south-east	This site lies along the east coast of England, predominantly in the offshore waters of the central and southern North Sea, from north of Dogger Bank to the Straits of Dover in the south. The Annex II species that is the primary reason for the selection of the SAC is the Harbour porpoise (<i>Phocoena phocoena</i>).	https://jncc.gov.uk/jncc-assets/SAC-N2K/UK0030395.pdf
Outer Thames SPA	3.5km south-east	The site is designated for non-breeding red-throated diver (<i>Gavia stellata</i>), breeding common tern (<i>Sterna hirundo</i>) and little tern (<i>Sternula albifrons</i>).	http://publications.naturalengland.org.uk/publication/4927106139029504
Dew's Ponds SAC and SSSI	4.4km north	This site comprises a series of 12 ponds set in an area of formerly predominantly arable land. The Annex II species that is the primary reason for the selection of the SAC is great crested newts which has been found in all ponds on site, though the presence of fish seems to have affected newt numbers in recent years in two ponds.	SAC: https://jncc.gov.uk/jncc-assets/SAC-N2K/UK0030133.pdf SSSI: https://designatedsites.naturalengland.org.uk/PDFsForWeb/Citation/2000434.pdf
Potton Hall Fields SSSI	4.4km east	A site of special interest due to the presence of nationally rare arable weed Red-tipped Cudweed (<i>Filago lutescens</i>).	https://designatedsites.naturalengland.org.uk/PDFsForWeb/Citation/1006426.pdf

6.2 Non-Statutory Designated Sites

6.2.1 **Table 9** identified the non-statutory sites that are located within 2km of the Sizewell link road site. The boundaries of these sites are shown on **Figure 7.5** and the citations for each are provided in **Annex E** of this appendix.

Table 9: Non-statutory designated sites within 2km of the Sizewell link road

Site name	Distance from site	Reason for designation
Kiln Grove and Meadow CWS	0.5km south-west	Kiln Grove is an example of a coppice-with-standards ancient woodland (biodiversity priority habitat). The standards are mainly oak (<i>Quercus</i> sp.) and Ash (<i>Fraxinus excelsior</i>) with occasional Hornbeam (<i>Carpinus betulus</i>). The boundaries have a ditch and bank system typical of ancient woodland along with some veteran pollards. The ground flora is typical of ancient woodland and includes Primrose (<i>Primula vulgaris</i>), Wood Sedge (<i>Carex sylvatica</i>), Sanicle (<i>Sanicula europaea</i>), Bugle (<i>Ajuga reptans</i>) and Common Spotted-orchid (<i>Dactylorhiza fuchsii</i>). There are two woodland ponds and a number of internal earthworks which provide additional habitat diversity
England Covert CWS	0.5km north-east	Within Minsmere Valley: Eastbridge to Reckford Bridge. No additional citation provided in Annex E , please see CWS citation for Minsmere Valley: Eastbridge to Reckford Bridge.

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Site name	Distance from site	Reason for designation
Minsmere Valley, Reckford Bridge to Beveriche Manor CWS	0.5km north	The site includes an extensive area of unimproved marsh, small areas of scrub, mature woodland and fen, the Minsmere River, several ponds and a man-made lake. Regionally rare species such as Bogbean (<i>Menyanthes trifoliata</i>) and Bog Pimpernel (<i>Anagallis tenella</i>) are found within the marsh areas, as well as various other uncommon plants. The site also supports a number of productive barn owl (<i>Tyto alba</i>) nest sites, and otter are often seen throughout the valley.
Theberton Woods CWS	0.5km south-west	Theberton Woods is an important example of a semi-natural boulder clay woodland that supports a diverse woodland flora including butterfly (<i>Platanthera bifolia</i>) and bird's nest orchids (<i>Neottia nidus-avis</i>). Although the woodland is not included in the ancient woodland inventory, it is shown on the 1st series of Ordinance Survey (OS) maps and there are some earthworks that suggest it may be ancient. The woodland contains a large number of ponds supporting a significant population of great crested newts. Since 2000 a small, introduced population of purple emperor butterfly (<i>Apature iris</i>) has been established, feeding on the abundant willows (<i>Salix</i> sp.) .
Simpsons Fromus Valley CWS	570m north	Simpson's Fromus Valley is a preserved wildlife site with meadows, woodland, ancient trees and ponds. Foremost amongst the highlights is the river Fromus, which runs through a wooded gulley cutting a deep gorge out into the meadows, through the length of the Reserve. The 27

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Site name	Distance from site	Reason for designation
		acres at Fromus Valley now support over 50 bird species including endangered species such as bullfinch (<i>Pyrrhula pyrrhula</i>), yellowhammer (<i>Emberiza citrinella</i>) and skylark (<i>Alauda arvensis</i>). The site provides a wildlife haven amid intensively farmed arable land attracting high numbers of passing migrant birds in the winter, including fieldfare (<i>Turdus pilaris</i>) and redwing (<i>Turdus iliacus</i>) and acting as a refuge for resident bird species. A stagnant pond has been de-silted back to its clay base and scrub and trees cleared or coppiced to allow more light into the pond. Interesting emergent and marginal plants such as Thread-leaved Water-crowfoot (<i>Ranunculus trichophyllus</i>), Branched Bur-reed (<i>Sparganium erectum</i>) and Pink Water-speedwell (<i>Veronica catenata</i>) are expected to re-colonise. Insect life completes the ecosystem; beetles, flies, four species of dragonfly, bees and butterflies abound. A citation is not provided within Annex E as this is a private CWS as it is not available.
Leiston Airfield CWS	1km south-west	This site consists of a mosaic of species-rich grassland and scrub. It is situated on the site of Leiston disused airfield. Although a small area, it supports many plants characteristic of unimproved grassland, for example Pepper Saxifrage (<i>Silene silaus</i>), Common Centaury (<i>Centaurea erythraea</i>), Primrose (<i>Primula vulgaris</i>), Bugle (<i>Ajuga reptans</i>) and Common Spotted-orchid (<i>Dactylorhiza fuchsii</i>). Of particular interest is a population of Yellow-wort (<i>Blackstonia perfoliata</i>) which

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Site name	Distance from site	Reason for designation
		grows on the public footpath which runs along the western edge of the site.
Stonehill Covert CWS	1km north-east	Within Minsmere Valley: Eastbridge to Reckford Bridge. No additional citation provided in Annex E , please see CWS citation for Minsmere Valley: Eastbridge to Reckford Bridge.
Minsmere Valley Eastbridge to Reckford Bridge CWS	1km north	The entire valley is of extreme importance for wildlife, forming the last unspoilt and least improved of Suffolk's larger marshland river valleys. Part of the valley forms the internationally important Minsmere/Walberswick SSSI. The marshes which form the central portion of the valley are botanically the richest marshes of the whole of the valley. This site provides valuable areas for breeding birds and invertebrates. Part of this site is owned by Royal Society for the Protection of Birds (RSPB) and is part of their Minsmere reserve. Otters are known to use the valley.
Westleton common and adjacent habitats CWS	1km north	Westleton Common, which is situated to the north west of Minsmere nature reserve is of great importance for wildlife conservation. It supports a good diversity of acid grassland plants including heath bedstraw and a number of rare clover species.. Another unusual feature of Westleton Common is its extensive and diverse lichen flora. This site is also important for invertebrate conservation. The silver studded blue butterfly (<i>Plebejus argus</i>), a Schedule 5 W&CA species, closely associated with heathland and restricted to a few localities in Suffolk

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Site name	Distance from site	Reason for designation
		has been reintroduced to this site as part of a conservation programme. Furthermore, the exposed sand banks of a number of disused sand pits provides ideal conditions for a number of invertebrates restricted to this type of habitat. Reptiles are also well represented on the Common; common lizard (<i>Zootoca vivipara</i>), adders (<i>Vipera berus</i>) and slow-worm (<i>Anguis fragilis</i>) have been recorded here. In addition, nightjar an uncommon heathland bird has been recorded on this site.
Darsham Marshes CWS	1km north-east	This extensive area of marsh and fen supports a diverse assemblage of species-rich flora including Yellow-rattle (<i>Rhinanthus minor</i>), Bog Pimpernel, Southern Marsh-orchid (<i>Dactylorhiza praetermissa</i>) and Marsh-marigold (<i>Caltha palustris</i>). Aquatic insects and breeding amphibians are found within a restored pond area, and numerous raptor species such as kestrel (<i>Falco tinnunculus</i>), marsh and hen harrier (<i>Circus aeruginosus</i> and <i>Circus cyaneus</i>) frequently hunt in the area.
Suffolk Coastal 102 CWS (RNR)	1km south-west	Sulphur Clover (<i>Trifolium ochroleucon</i>) and Dyer's Greenwood (<i>Genista tinctoria</i>). This site is also a RNR.
Buckle's Wood CWS Also an Ancient and Semi-Natural Woodland (ASNW) on the Ancient Woodland Inventory (AWI)	1.2km south	The site contains numerous old coppice stools mainly comprising Hazel (<i>Corylus avellana</i>), with Ash, Field Maple (<i>Acer campestre</i>) and Hornbeam. Standard trees include mainly oak. There is a good ditch and bank boundary with a mixed-species hedge which, together with the old coppice stools, indicates woodland of some

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Site name	Distance from site	Reason for designation
		considerable age. Buckle's Wood is also listed on the Ancient Woodland Inventory for Suffolk
Sizewell Levels and Associated Areas CWS	1.9km south-east	A large area of land, consisting of woodland, plantation, wet meadow, osier (<i>Salix</i> spp.) beds and scrub situated behind Sizewell power station is considered to be of both regional and national importance for wildlife conservation. The main importance of the grazing marshes lies in the diversity and abundance of the birds which inhabit the area. The ground remains waterlogged through the winter and numerous dykes provide good cover for high numbers of mute swan (<i>Cygnus olor</i>), teal (<i>Anas crecca</i>), mallard (<i>Anas platyrhynchos</i>) and moorhen (<i>Gallinula chloropus</i>). Goose Hill, Nursery Covert and Kenton Hills support breeding populations of a number of nationally rare birds which are specially protected (Schedule 1 of W&CA). Good numbers of migrant birds also frequent the area
The Spring Wood CWS Also an Ancient and Semi-Natural Woodland (ASNW) on the Ancient Woodland Inventory (AWI)	1.9km north-west	A ditch and bank of ancient origin encloses this small woodland. Another feature of historical value, is an internal bank which divides the wood into two sections. The tree layer consists mainly of oak and Ash with frequent Horse-chestnut (<i>Aesculus hippocastanum</i>), Field Maple, lime (<i>Tilia</i> spp.) and Sycamore (<i>Acer pseudoplatanus</i>). Below the tree layer is a dense understorey composed of Field Maple, Elm (<i>Ulmus</i> spp.), Hawthorn (<i>Crataegus monogyna</i>) and Hornbeam coppice. Of particular botanical interest and a strong

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Site name	Distance from site	Reason for designation
		indicator of ancient woodland is the presence of a wild service tree, a rare species in Suffolk. In addition, woodcock (<i>Scolopax rusticola</i>) has been recorded in this wood.
Coe Wood CWS Also an Ancient and Semi-Natural Woodland (ASNW) on the Ancient Woodland Inventory (AWI)	2km north-west	Ancient woodland almost entirely dominated by Hornbeam and Ash, with scattered oak. Goat Willow (<i>Salix caprea</i>) is abundant on the wetter ground; Hazel, Field Maple and Aspen (<i>Populus tremula</i>) occur infrequently. To the south, on the edge of a stream there are stands of mostly Wych Elm (<i>Ulmus glabra</i>) with some Ash. Ground flora includes Wood Anemone (<i>Anemone nemorosa</i>), Wood-sorrel (<i>Oxalis acetosella</i>), Sanicle, Orpine (<i>Sedum telephium</i>) and Ramsons (<i>Allium ursinum</i>). There are a series of ditches and banks in and around the wood and a number of rides and pathways, most of which are rather damp and overgrown. There are a few ponds in the wood; however, these obtain little or no light and do not support aquatic vegetation. The wood receives little active management.

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7 YOXFORD

7.1 Statutory Designated Sites

7.1.1 **Table 10** identified the statutory designated sites within 5km of the Yoxford roundabout and other highway improvements site. These sites have been identified as relevant to the Sizewell C Project because of their proximity to the site and the relevant qualifying features. These sites are shown on **Figure 7.6** along with the non-statutory designated sites.

Table 10: Statutory designated sites located within 5km of the Yoxford roundabout

Site name	Distance from Site	Reason for designation	Link to citation
Dew's Ponds SAC and SSSI	3km north	<p>This site has been selected as an SAC under the EC Habitats Directive as it supports the following Annex II species that are the primary reason for selection of this site: great crested newt.</p> <p>The site supports one of the largest known breeding populations of great crested newt in the UK and this is also the reason for its notification as a SSSI under Section 28 of the W&CA.</p>	<p>SAC: https://jncc.gov.uk/jncc-assets/SAC-N2K/UK0030133.pdf</p> <p>SSSI: https://designatedsites.naturalengland.org.uk/PDFsForWeb/Citation/2000434.pdf</p>

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<p>Minsmere to Walberswick Heaths and Marshes SPA, SAC, Ramsar Site, and SSSI</p>	<p>4km east</p>	<p>This site has been selected as an SAC under the EC Habitats Directive as it supports the following Annex I habitats that are the primary reason for selection of this site: 'annual vegetation of drift lines', and 'European dry heaths'. It also supports the habitat 'perennial vegetation of stony banks', which are present as a qualifying feature.</p> <p>This site qualifies as an SPA under Article 4.1 of the EC Birds Directive by supporting populations of European importance of the following species listed on Annex I of the Directive during the breeding season: avocet (<i>Recurvirostra avosetta</i>), bittern (<i>Botaurus stellaris</i>), little tern (<i>Sterna albifrons</i>), marsh harrier (<i>Circus aeruginosus</i>), nightjar (<i>Caprimulgus europaeus</i>), and woodlark (<i>Lullula arborea</i>); and over winter: avocet and hen harrier (<i>Circus cyaneus</i>).</p> <p>The site is a wetland of international importance and is therefore also designated as a Ramsar Site under the Ramsar Convention.</p> <p>Finally, the composite site is also a SSSI notified under Section 28 of the W&CA for its complex series of habitats, notably mudflats, shingle beach, reedbeds, heathland and grazing marsh, which combine to create an area of exceptional scientific interest.</p>	<p>SSSI: https://designatedsites.naturalengland.org.uk/PDFsForWeb/Citation/1000721.pdf</p> <p>SAC: https://jncc.gov.uk/jncc-assets/SAC-N2K/UK0012809.pdf</p> <p>SPA: http://publications.naturalengland.org.uk/publication/4528783260385280</p> <p>Ramsar: https://jncc.gov.uk/jncc-assets/RIS/UK11044.pd</p>
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7.2 Non-Statutory Designated Sites

7.2.1 **Table 11** identified the non-statutory sites that are located within 2km of the Yoxford roundabout and other highway improvements site. The boundaries of these sites are shown on **Figure 7.6** and the citations for each are provided in **Annex F** of this appendix.

Table 11: Non-statutory designated sites located within 2km of the Yoxford roundabout

Site name	Distance from the nearest point of the site (km)	Reason for designation
RNR 197	Adjacent to the site boundary	This site has been designated due to the presence of the Sandy Stilt Puffball fungus (<i>Battarraea phalloides</i>), which is listed on Schedule 8 of the W&CA and are included on the Suffolk Priority habitats and species list.
Minsmere Valley Reckford Bridge to Beveriche Manor CWS	320m east	This area of marsh represents the western third of the Minsmere Valley. The entire valley is of great importance for wildlife; forming unspoilt and least improved of Suffolk's large marshland river valleys. Habitats include unimproved marsh, open water, scrub, mature woodland, and fen. The area is also important for barn owl (<i>Tyto alba</i>) and otter (<i>Lutra lutra</i>).

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Site name	Distance from the nearest point of the site (km)	Reason for designation
Yoxford Wood CWS Also an Ancient and Semi-Natural Woodland (ASNW) and on the Ancient Woodland Inventory (AWI)	1.35km north-west	This wood is marked on all sides by a ditch and bank boundary system and contains ancient coppice, mainly Hornbeam (<i>Carpinus betulus</i>). The wood still retains an interesting flora including ancient woodland indicator species. There are also a few ponds which add to the variety of habitats present and support their own flora.
Darsham Marshes CWS (and SWT reserve)	1.76km east	An extensive area of marsh and fen and an important refuge for wetland wildlife in the Minsmere valley. A main dyke feeds water from the valley side through the reserve to the river. Management work on the neglected marshes has restored the species-rich flora. An old horse pond has been restored and now provides habitat for aquatic insects and breeding amphibians. A small reedbed on the northern edge of the reserve provides nesting sites for warblers. Many different raptor and owl species hunt over the marshes.

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Site name	Distance from the nearest point of the site (km)	Reason for designation
Suffolk Coastal 212 CWS and RNR 102	1.96km south	Sulphur Clover (<i>Trifolium ochroleucon</i>) and Dyer's Greenweed (<i>Genista tinctoria</i>) can be found on this CWS and RNR.

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8 FREIGHT MANAGEMENT FACILITY

8.1 Statutory Designated Sites

8.1.1 **Table 12** identified the statutory designated sites within 5km of the freight management facility site. These sites have been identified as relevant to the Sizewell C Project because of their proximity to the site and the relevant qualifying features. These sites are shown on **Figure 7.7** along with the non-statutory designated sites.

Table 12: Statutory designated sites located within 5km of the freight management facility.

Site name	Distance from Site	Reason for designation	Link to citations
Nacton Meadows SSSI	0.90km south-west	Nacton Meadows are of special interest for their areas of fen-meadow. In addition, this site supports a relatively species-rich version of the vegetation community type compared to the other sites in the County.	https://designatedsites.naturalengland.org.uk/PDFsForWeb/Citation/1006266.pdf

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Site name	Distance from Site	Reason for designation	Link to citations
Stour and Orwell Estuaries SPA and Ramsar site	1.60km south	<p>This site qualifies under Article 4.1 of the EC Birds Directive by supporting populations of European importance of the following species listed on Annex I of the Directive over winter: hen harrier (<i>Circus cyaneus</i>). This site also qualifies under Article 4.2 of the EC Birds Directive by supporting populations of European importance of the following migratory species over winter: black-tailed godwit (<i>Limosa limosa</i>), dunlin (<i>Calidris alpina alpina</i>), grey plover (<i>Pluvialis squatarola</i>), pintail (<i>Anas acuta</i>), redshank (<i>Tringa totanus</i>), ringed plover (<i>Charadrius hiaticula</i>), shelduck (<i>Tadorna tadorna</i>), turnstone (<i>Arenaria interpres</i>).</p> <p>The site is also a wetland of international importance and is therefore also designated as a Ramsar site under the Ramsar Convention.</p>	<p>SPA: http://publications.naturalengland.org.uk/publication/6069687402102784</p> <p>Ramsar: https://rsis.ramsar.org/RISapp/files/RISrep/GB662RIS.pdf</p>
Orwell Estuary SSSI	1.60km south	<p>The Orwell Estuary is of national importance for breeding avocet (<i>Recurvirostra avosetta</i>), its breeding bird assemblage of open waters and their margins, nine species of wintering waterfowl (including black-tailed godwit), an assemblage of vascular plants, and intertidal mud habitats.</p>	https://designatedsites.naturalengland.org.uk/PDFsForWeb/Citation/1002511.pdf

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Site name	Distance from Site	Reason for designation	Link to citations
Ipswich Heaths SSSI	3.30km north-west	These sites contains the best remnants of a formerly extensive tract of heathland which formed the southern limit of the 'sandlings' heaths of East Suffolk. Both sites contain substantial areas of Heather (<i>Calluna vulgaris</i>) heath and acid grassland, together with stands of Bracken (<i>Pteridium aquilinum</i>) and gorse (<i>Ulex europaeus</i>) scrub, which form a mosaic of habitats of particular value for butterflies. Martlesham Heath is notable for supporting the largest colony of the silver-studded blue butterfly (<i>Plebejus argus</i>) in East Anglia, as well as a number of other species.	https://designatedsites.naturalengland.org.uk/PDFsForWeb/Citation/1002440.pdf
Newbourn Springs SSSI	4.10km north	Newbourn Springs is a relatively small site which contains a variety of habitats in close juxtaposition. The major part of the site comprises a narrow spring-flushed valley occupied by a fast flowing stream with Alder (<i>Alnus glutinosa</i>) carr and small areas of fen on peat overlying London Clay. Drier more acidic soils further west and above the stream valley support broad-leaved woodland, scrub, grassland communities and Bracken dominated heath. Active management has led to the maintenance of a rich and varied flora and the subsequent diversity of habitats attracts good populations of breeding and migratory birds.	https://designatedsites.naturalengland.org.uk/PDFsForWeb/Citation/1000791.pdf
Bixley Heaths SSSI	4.20km north-west	Bixley Heath is important for its heathland, which occurs here in association with a scarce swamp vegetation. The presence of these two habitat types within a single site is a particularly rare feature in the Suffolk Sandlings.	https://designatedsites.naturalengland.org.uk/PDFsForWeb/Citation/1006085.pdf

Site name	Distance from Site	Reason for designation	Link to citations
Waldringfield Pit SSSI	4.50km north	Waldringfield Pit is a Quaternary geological locality important for a sequence of Middle Pleistocene deposits.	https://designatedsites.naturalengland.org.uk/PDFsForWeb/Citation/1002231.pdf
Deben Estuary SPA and Ramsar site	4.90km north-east	This site qualifies under Article 4.1 the EC Birds Directive by supporting populations of European importance of the following species listed on Annex I of the Directive over winter: avocet. The site is also a wetland of international importance and is therefore also designated as a Ramsar site under the Ramsar Convention.	SPA: http://publications.naturalengland.org.uk/publication/5749484436848640 Ramsar: https://jncc.gov.uk/jncc-assets/RIS/UK11017.pdf
Deben Estuary SSSI	4.90km north-east	The Deben Estuary is important for its populations of overwintering waders and wildfowl and also for its extensive and diverse saltmarsh communities. Several estuarine plants and invertebrates with a nationally restricted distribution are also present.	https://designatedsites.naturalengland.org.uk/PDFsForWeb/Citation/1006262.pdf

8.2 Non-Statutory Designated Sites

8.2.1 **Table 13** identified the non-statutory sites that are located within 2km of the freight management facility site. The boundaries of these sites are shown on **Figure 7.7** and the citations for each are provided in **Annex G** of this appendix.

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Table 13: Non-statutory designated sites located within 2km of the freight management facility.

Site name	Distance from Site	Reason for designation
Nacton Meadows CWS	0.59km south-west	An unimproved wet meadow supporting a good range of wetland and emergent plants, as well as acid grassland species in drier areas.
Levington Cut CWS	1.66km south-west	Comprises a mosaic of semi-natural habitats, important for wildlife in it's own right but also provides valuable linking habitat between other seminatural habitats of high wildlife value. Habitat on site includes reedbed (biodiversity priority habitat), wet grassland dry grassland, a belt of ancient trees along the shoreline of the river, scrub, borrow dyke and rank grassland. The site is particularly important for birds.
Kirton Reservoir CWS	1.73km east	This area consists of a mosaic of priority habitats including; lowland meadow, mixed deciduous woodland, wet woodland and ponds with secondary habitat consisting of areas of semi improved grassland, dry acid grassland and mixed scrub.

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Site name	Distance from Site	Reason for designation
Home Wood CWS	1.80km south-west	A large wood directly abutting the River Orwell SSSI, with a diverse woodland structure and diverse ground flora including the uncommon Broad-leaved Helleborine (<i>Epipactis helleborine</i>), foxglove (<i>Digitalis</i> sp.), Bluebell (<i>Hyacinthoides non-scripta</i>), and Male-fern (<i>Dryopteris filix-mas</i>). Other species characteristic of dry sandy soils occur such as Sheep's Sorrel (<i>Rumex acetosella</i>), Dittander (<i>Lepidium latifolium</i>), and Lesser Trefoil (<i>Trifolium dubium</i>).
Levington Lagoon CWS	1.83km south	One of the major roost sites for waders on the Orwell estuary and is used by a vast number of dunlin, redshank, ringed plover (<i>Charadrius hiaticula</i>), oystercatcher (<i>Haematopus ostralegus</i>), and knot (<i>Calidris canutus</i>). Consists of a saline lagoon with fresh water pools and mudflats which are colonised in part by glasswort (<i>Salicornia</i> agg.), Spear-leaved Orache (<i>Atriplex prostrata</i>) and Sea Couch (<i>Elytrigia atherica</i>). The water level in the saline lagoon is controlled by sluices allowing sea water to flood the area during the spring tides. Saltmarsh islands are managed to encourage redshank, oystercatcher, and avocet to nest.

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Site name	Distance from Site	Reason for designation
Stratton Hall Wood CWS Also an Ancient and Semi-Natural Woodland (ASNW) on the Ancient Woodland Inventory (AWI)	1.84km south-east	Ancient woodland. Has had considerable interference through the planting of non-native species such as Poplar (<i>Populus</i> sp.) and Evergreen Oak (<i>Quercus ilex</i>). Otherwise the dominant tree is Ash (<i>Fraxinus excelsior</i>), with Pedunculate Oak (<i>Quercus robur</i>), Sweet Chestnut (<i>Castanea sativa</i>), and Alder also occurring. Some areas have been coppiced. Ground flora consists of areas of Common Nettle (<i>Urtica dioica</i>) and Dog's-mercury (<i>Mercurialis perennis</i>) with Bugle (<i>Ajuga reptans</i>), Ramsons (<i>Allium ursinum</i>), Opposite-leaved Golden Saxifrage (<i>Chrysosplenium oppositifolium</i>), and Primrose (<i>Primula vulgaris</i>). There are several small streams in the wood with attendant boggy areas and a large pond. Breeding birds recorded include all three species of woodpecker (<i>Dendrocopos major</i> , <i>Dendrocopos minor</i> , <i>Picus viridis</i>), nightingale (<i>Luscinia megarhynchos</i>), blackcap (<i>Sylvia atricapilla</i>), and spotted flycatcher (<i>Muscicapa striata</i>).

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9 GREEN RAIL ROUTE

9.1 Statutory Designated Sites

9.1.1 **Table 14** identified the statutory designated sites within 5km of the rail proposals site. These sites have been identified as relevant to the Sizewell C Project because of their proximity to the site and the relevant qualifying features. These sites are shown on **Figure 7.8** along with the non-statutory designated sites.

Table 14: Statutory designated sites located within 5km of the rail site

Site name	Distance from the site (km)	Reason for designation	Link to citation:
Minsmere to Walberswick Heaths and Marshes SAC, SPA, Ramsar site and SSSI	2.3km north-east at the nearest point	Annex I habitats that are the primary reason for selection of the SAC include: annual vegetation of drift lines, which occurs on a well-developed beach strandline of mixed sand and shingle and supports species such as Sea Sandwort (<i>Honckenya peploides</i>) and Sea Beet (<i>Beta vulgaris ssp. maritima</i>); and European dry heaths dominated by Heather (<i>Calluna vulgaris</i>), Western Gorse (<i>Ulex gallii</i>) and Bell Heather (<i>Erica cinerea</i>). The presence of perennial vegetation of stony banks is an Annex I habitat listed as a qualifying feature of the SAC. The SPA qualifies under Article 4.1 of the EC Birds Directive by supporting populations of European importance of the following species	SSSI: https://designatedsites.naturalengland.org.uk/PDFsForWeb/Citation/1000721.pdf SAC: https://jncc.gov.uk/jncc-assets/SAC-N2K/UK0012809.pdf SPA: http://publications.naturalengland.org.uk/publication/4528783260385280 Ramsar: https://jncc.gov.uk/jncc-assets/RIS/UK11044.pdf

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Site name	Distance from the site (km)	Reason for designation	Link to citation:
		<p>listed on Annex I of the Directive: avocet (<i>Recurvirostra avosetta</i>), bittern (<i>Botaurus stellaris</i>), little tern (<i>Sterna albifrons</i>), marsh harrier (<i>Circus aeruginosus</i>), nightjar (<i>Caprimulgus europaeus</i>) and woodlark (<i>Lullula arborea</i>) during the breeding season; and avocet, bittern and hen harrier (<i>Circus cyaneus</i>) over Winter. The site is also a wetland of international importance and is therefore also designated as a Ramsar site under the Ramsar Convention.</p> <p>The SSSI contains a complex series of habitats, notably mudflats, shingle beach, reedbeds, heathland and grazing marsh, which combine to create an area of exceptional scientific interest.</p>	
Sandlings SPA	2.2km south-east at the closest point	<p>Supports populations of European importance of the following Annex I species:</p> <p><i>During the breeding season</i></p> <p>Nightjar and woodlark.</p>	http://publications.naturalengland.org.uk/publication/6690828793675776
Outer Thames Estuary SPA	3km east	<p>Supports populations of European importance of the following Annex I species:</p> <p><i>Overwinter/passage</i></p> <p>Red-throated diver (<i>Gavia stellata</i>).</p>	http://publications.naturalengland.org.uk/publication/4927106139029504

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Site name	Distance from the site (km)	Reason for designation	Link to citation:
Sizewell Marshes SSSI	930m east at the closest point	Sizewell Marshes SSSI are important for their large area of lowland, unimproved wet meadows which support assemblages of invertebrates and breeding birds. Several nationally scarce plants are also present.	https://designatedsites.naturalengland.org.uk/PDFsForWeb/Citation/1003416.pdf
Leiston to Aldeburgh SSSI	2.2km south-east at the closest point	This site supports a rich mosaic of habitats including acid grassland, heath, scrub, woodland, fen, open water and vegetated shingle. This mix of habitats in close juxtaposition and the associated transition communities between habitats is unusual in the Suffolk Coast and Heaths. The variety of habitats support a diverse and abundant community of breeding and overwintering birds, a high number of dragonfly species and many scarce plants.	https://designatedsites.naturalengland.org.uk/PDFsForWeb/Citation/2000370.pdf
Alde-Ore Estuary SPA, SAC, Ramsar Site and SSSI	4.8km south	Annex I habitats that are the primary reason for selection of the SAC include estuaries. Annex I habitats present as qualifying features, but not primary reason for selection include: mudflats and sandflats not covered by seawater at low tide; and Atlantic salt meadows (<i>Glauco-Puccinellietalia maritima</i>). The SPA qualifies under Article 4.1 of the EC Birds Directive by supporting populations of European importance of the following species listed on Annex I of the Directive: avocet, lesser	SPA: http://publications.naturalengland.org.uk/publication/5170168510545920 Ramsar: https://jncc.gov.uk/jncc-assets/RIS/UK11002.pdf SAC: https://jncc.gov.uk/jncc-assets/SAC-N2K/UK0030076.pdf SSSI: https://designatedsites.naturalengland.org.uk/PDFsForWeb/Citation/1003416.pdf

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Site name	Distance from the site (km)	Reason for designation	Link to citation:
		<p>black-backed gull (<i>Larus marinus</i>), little tern, marsh harrier and sandwich tern (<i>Sterna sandvicensis</i>) during breeding season, and avocet, redshank (<i>Tringa totanus</i>) and ruff (<i>Calidris pugnax</i>) during Winter.</p> <p>The site is also a wetland of international importance and is therefore also designated as a Ramsar site under the Ramsar Convention.</p> <p>The SSSI contains a number of coastal formations and estuarine features including mud-flats, saltmarsh, vegetated shingle and coastal lagoons which are of special botanical and ornithological value.</p>	d.org.uk/PDFsForWeb/Citation/1003208.pdf

9.2 Non-Statutory Designated Sites

9.2.1 **Table 15** identified the non-statutory sites that are located within 2km of the rail site. The boundaries of these sites are shown on **Figure 7.8** and the citations for each are provided in **Annex H** of this appendix.

Table 15: Non-statutory designated sites located within 2km of the rail site

Site name	Distance from the site (km)	Reason for designation
Buckle's Wood CWS	Adjacent to the site, in the western area of the site	The site contains numerous old coppice stools mainly comprising Hazel (<i>Corylus avellana</i>), with Ash (<i>Fraxinus excelsior</i>), Field Maple (<i>Acer campestre</i>) and Hornbeam (<i>Carpinus betulus</i>). Standard trees include mainly Oak (<i>Quercus</i> spp.). There is a good ditch and bank boundary

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Site name	Distance from the site (km)	Reason for designation
		with a mixed-species hedge which, together with the old coppice stools, indicates woodland of some considerable age. Buckle's Wood is also listed on the Ancient Woodland Inventory for Suffolk.
Sizewell Levels and Associated Areas CWS	750m east of the proposed development	A large area of land, consisting of woodland, plantation, wet meadow, osier beds and scrub situated behind Sizewell A and B power stations, is considered to be of both regional and national importance for wildlife conservation.
Leiston Common CWS	1.3km south-east	Leiston Common is an important site for wildlife conservation in Suffolk. Bell Heather, a rare plant in Suffolk, grows on Leiston Common together with more widespread plants for example Harebell (<i>Campanula rotundifolia</i>), Heath Bedstraw (<i>Galium saxatile</i>) and tormentil (<i>Potentilla erecta</i>). Another notable and uncommon feature of the site is the presence of an extensive and diverse lichen flora.
Theberton Woods CWS	2km north-west at the closest point	Theberton Woods is an important example of a semi-natural boulder clay woodland that supports a diverse woodland flora. Although the woodland is not included in the ancient woodland inventory, it is shown on the 1st series O.S. maps and there are some earthworks that suggest it may be ancient. The woodland contains a large number of ponds supporting a significant population of great crested newt. The site includes an arable reversion field which has developed a flora typical of wet chalky boulder clay. This flora is similar to that of the existing and adjacent CWSs of Leiston Airfield and Kiln Meadow.
Leiston Airfield CWS	1.8km north-west at the closest point	This site consists of a mosaic of species-rich grassland and scrub. It is situated on the site of Leiston disused airfield. Although a small area, it supports many plants characteristic of unimproved grassland.

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Site name	Distance from the site (km)	Reason for designation
Minsmere Valley Eastbridge to Reckford Bridge CWS	1.4km east at the closest point	This area of marshland is situated in the central portion of the Minsmere Valley. The entire valley is of extreme importance for wildlife, forming the last unspoilt and least improved of Suffolk's larger marshland river valleys.. In 1994 the majority of this CWS was confirmed as part of the Minsmere-Walberswick SSSI
Kelsale Morio Meadow CWS	3.3km	<p>An unimproved neutral meadow with one of the finest populations of green-winged orchids of any meadow in Suffolk.</p> <p>There is a full range of flora characteristic of such meadows, including field wood-rush, sorrel, ox-eye daisy, black knapweed and glaucous sedge. As is typical of such meadows, there is a wide range of grasses. The meadow is colourful from early spring, when the abundant cowslips flower, to late summer when the knapweed is at its peak. It is managed traditionally with a late summer hay cut.</p>

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ANNEX A: MAIN DEVELOPMENT SITE CWS CITATIONS

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County Wildlife Site Citations

CWS Number	Suffolk Coastal 105
Site Name	LEISTON COMMON
Parish	LEISTON
District	Suffolk Coastal
NGR	TM458633
Description	<p>Leiston Common is a small but important site for wildlife conservation in Suffolk. It was the site of extensive studies of heathland ecology carried out by Lee Chadwick, which were later published. Bell heather, a rare plant in Suffolk, grows on Leiston Common together with more widespread plants for example harebell, heath bedstraw and tormentil. Another notable and uncommon feature of the site is the presence of an extensive and diverse lichen flora</p>
RNR Number	0
Area	1.37

County Wildlife Site Citations

CWS Number	Suffolk Coastal 106
Site Name	SIZEWELL LEVELS & ASSOCIATED AREAS
Parish	LEISTON
District	Suffolk Coastal
NGR	TM463640
Description	<p>A large area of land, consisting of woodland, plantation, wet meadow, osier beds and scrub situated behind Sizewell power station is considered to be of both regional and national importance for wildlife conservation. The area not within the Site of Special Scientific Interest (SSSI) boundary, which comprises wet meadow, sallow scrub and birch/alder woodland is of conservation importance. The flora of the marshes includes a number of uncommon plants, for example ragged robin and purple loosestrife. A recent survey however, has shown that the main importance of the grazing marshes lies in the diversity and abundance of the birds which inhabit the area. The ground remains waterlogged through the winter and numerous dykes provide good cover for high numbers of swan, teal, mallard and moorhen. Also of ornithological importance are the plantations situated to the north of Sizewell Belts; Goose Hill, Nursery Covert and Kenton Hills. The areas support breeding populations of a number of nationally rare birds which are specially protected (Schedule 1 of Wildlife and Countryside Act). Good numbers of migrant birds also frequent the area. The whole site therefore, with its diversity of habitats, is considered to be one of the most important County Wildlife Sites in the county. In 1994 the area designated as a Site of Special Scientific Interest was extended to include a large proportion of this County Wildlife Site.</p>
RNR Number	0
Area	105.35

County Wildlife Site Citations

CWS Number	Suffolk Coastal 210
Site Name	SIZEWELL RIGS
Parish	Leiston
District	Suffolk Coastal
NGR	TM478630
Description	<p>These two rigs are situated offshore from Sizewell A Power Station. Since 1995 the rigs have been home to a growing breeding colony of kittiwakes and is the most southerly colony in the North Sea. Nationally overall breeding numbers of kittiwake have declined in recent years. In 2003 the national average fledging success was 0.66 chicks per nest. Colonies in the north of Scotland averaged 0.43 whilst those in Suffolk averaged 0.93. Nationally, the Suffolk colonies at Lowestoft and Sizewell are therefore important examples of successful breeding colonies.</p>
RNR Number	0
Area	0.04

County Wildlife Site Citations

CWS Number	Suffolk Coastal 216
Site Name	DOWER HOUSE
Parish	Aldringham cum Thorpe
District	Suffolk Coastal
NGR	TM47586514
Description	<p>Grassland on the cliff top of the Dower House is a valuable example of unimproved dry acid/dry maritime grassland. The sward composition includes species typically associated with acid grasslands and heaths such as heath violet – <i>Viola canina</i> and heath speedwell – <i>Veronica officinalis</i>, but also species tolerant of, or preferring more calcareous conditions such as harebell – <i>Campanula rotundifolia</i>, thyme – <i>Thymus pulegioides</i>, meadow saxifrage – <i>Saxifraga granulata</i>, eyebright <i>Euphrasia</i> sp. However the key factors influencing the type and diversity of grassland species present is the free - draining, nutrient – poor soil and rabbit grazing. Areas of bare ground and rabbit scrapings are important for drought tolerant annuals such as corn salad – <i>Valerianella locusta</i> and early forget-me not – <i>Myosotis ramosissima</i> as well as the nationally scarce mossy stonecrop – <i>Crassula tillea</i>. Small areas of ling – <i>Calluna vulgaris</i> and bell heather – <i>Erica cinerea</i> are established on parts of the site gradually grading into blackthorn scrub. In addition to the sites botanical interest it is important for reptiles including slow-worm and adder. The surrounding blackthorn scrub is also important for birds, particularly as feeding stations for migrants.</p>
RNR Number	0
Area	2.13

County Wildlife Site Citations

CWS Number	Suffolk Coastal 3
Site Name ALDEBURGH)	DISUSED RAILWAY LINE(ALDRINGHAM -
Parish	ALDRINGHAM CUM THORPE
District	Suffolk Coastal
NGR	TM461619
Description	<p>This section of disused railway line which serves as a public footpath supports a species-diverse flora both on the line of the old track and on the gently sloping embankments. Plants typical of lightly trampled conditions were recorded on the footpath itself and these include the nationally rare species mossy stonecrop and an unusual species of clover; suffocated clover.Colourful wild flowers such as knapweed and bird's-foot trefoil which grow amongst scattered scrub on the embankments, attract butterflies in good numbers. The majority of this site was designated as part of the Leiston - Aldeburgh SSSI on 19.1.99.</p>
RNR Number	0
Area	4.63

County Wildlife Site Citations

CWS Number	Suffolk Coastal 4
Site Name	SUFFOLK SHINGLE BEACHES
Parish	ALDRINGHAM CUM THORPE
District	Suffolk Coastal
NGR	TM3338
Description	<p>Vegetated shingle is a rare and decreasing habitat, both in the British Isles and in Europe. The plant community which survives in this environment is prone to damage from visitor pressure. The stretches of shingle beach along the Suffolk coast are of a national conservation importance for the range of shingle plants that grow there. Sea pea, which is a nationally scarce plant, grows in profusion on many stretches of beach; other typical shingle flora includes sea kale, sea spurge, sea sandwort and sea bindweed can also be found. There are also rare invertebrates species found in these coastal sites. All of the shingle beaches are of high conservation value and most are already covered as SSSIs the remaining areas have been designated as CWS.</p>
RNR Number	0
Area	38.83

County Wildlife Site Citations

CWS Number	Suffolk Coastal 107
Site Name	SOUTHERN MINSMERE LEVELS
Parish	LEISTON
District	Suffolk Coastal
NGR	TM470658

Description

This site contains all the marshes east of Eastbridge to the sea, south of Minsmere New Cut. It abutts the internationally important Minsmere-Walberswick SSSI, which contains the Minsmere RSPB reserve. The entire valley is of great importance for wildlife forming perhaps the last unspoilt and least improved of Suffolk's larger marshland river valleys. This eastern portion of the valley is of interest principally for breeding wader and wildfowl and for overwintering birds. The extensive area of open marsh, managed in the traditional manner with cattle grazing and high water levels provides ideal conditions for feeding birds. Botanically the marshes are not of the same quality as those further up the valley. Many of them are improved, although some of the dykes retain a reasonable flora with plants such as broad-leaved pondweed, frogbit and water violet. Additional interest is given by a few small areas of scrub and woodland on the site. In 1994 a large proportion of this County Wildlife Site was confirmed as part of the extended Minsmere-Walberswick SSSI.

RNR Number	0
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Area	14.94
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ANNEX B: NORTHERN PARK AND RIDE CWS CITATIONS

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County Wildlife Site Citations

CWS Number	Suffolk Coastal 15
Site Name	BIG / COMMON / HAW WOODS
Parish	THORINGTON
District	Suffolk Coastal
NGR	TM432727
Description	<p>This extensive area of ancient woodland includes Common Wood, Big Wood and the remnants of Haw and Sixteen Acre Woods. The majority of both Sixteen Acre Wood and Haw Wood was grubbed in the early 1980s. The woodland has a sinuous boundary, which is a typical feature of medieval woods. Some parts of the wood are dominated by even aged oak (70-100 years old); some areas have abundant ash. Other tree species which are also present in the wood include field maple, holly, hornbeam and hawthorn. Some parts of the woodland have a species-rich ground flora including bluebell, early purple orchid, primrose and sanicle. Abundant brush wood provides additional habitat for mosses, fungi and invertebrates.</p>
RNR Number	0
Area	33.1

County Wildlife Site Citations

CWS Number Suffolk Coastal 183

Site Name YOXFORD WOOD

Parish YOXFORD

District Suffolk Coastal

NGR TM391704

Description

This wood is marked on all sides by a ditch and bank boundary system and contains ancient coppice, mainly hornbeam. Other coppiced species are ash, field maple, hazel and hawthorn. Many young oaks are also present. The wood has been underplanted with conifers in parts, but these have been largely unsuccessful and the wood still retains an interesting flora. This includes such species as common spotted orchid, yellow pimpernel and remote sedge which have affinities with ancient woodland and are well distributed here. There are also a few shallow ponds and one deeper pond which add to the variety of habitats present and support their own flora which includes yellow iris and pendulous sedge.

RNR Number 0

Area 3.88

County Wildlife Site Citations

CWS Number	Suffolk Coastal 184
Site Name	WILLOWMARSH WOOD
Parish	YOXFORD
District	Suffolk Coastal
NGR	TM395712
Description	<p>Roughly half the area of the woodland (4ha) was planted with poplars about 20 years ago, and these trees now form the canopy layer. The other half (6.1ha) was planted with conifers, mainly Norway spruce, at about the same time. In the broadleaf part of the wood the understorey is formed by naturally regenerating oak and ash with hornbeam, hazel, hawthorn, field maple, willow and dogwood. The field layer is dominated by sedges, rushes and tall grasses in open areas. The ground flora is varied and abundant. It includes false oxlip, cowslip, common spotted orchid and dog's- mercury, with lesser spearwort and ragged robin in wetter areas. Under the conifers in the other part of the wood, the ground flora is very limited except in the occasional damp and more open areas. Common spotted orchid occurs here too, as does yellow pimpernel, which might indicate a potential for successful restoration to a diverse broadleaf woodland in the future. However, even as it stands, the existing ground flora makes it a valuable woodland site. The wood is being managed under a Woodland Grant Scheme. A light selective thinning of the coniferous part is planned favouring oak and ash where they are found. The existing rides are to be opened up for access where they have been allowed to become overgrown.</p>
RNR Number	0
Area	9.73

County Wildlife Site Citations

CWS Number	Suffolk Coastal 55
Site Name	SILLETTS WOOD
Parish	DARSHAM
District	Suffolk Coastal
NGR	TM403713
Description	<p>This ancient woodland is mostly oak, ash, hornbeam and hazel coppice with oak, ash and birch standards. Of particular note is a wild service tree on the western boundary. The wood is surrounded by a ditch and bank except to the east where the railway line cuts across the wood. The ride system is good and the ground flora diverse, with common spotted and early purple orchids. Many typical ancient woodland indicators are present, such as yellow pimpernel, sanicle, remote sedge and yellow archangel. Soft shield fern which has a very local distribution in Suffolk also grows here. The numerous wet hollows and internal ditches add habitat diversity to this very attractive wood.</p>
RNR Number	0
Area	7.86

County Wildlife Site Citations

CWS Number Suffolk Coastal 56

Site Name MINSMERE VALLEY; RECKFORD BRIDGE to
BEVERICHE MANOR

Parish WESTLETON

District Suffolk Coastal

NGR TM404687

Description

This area of marsh represents the western third of the Minsmere Valley. The entire valley is of great importance for wildlife forming perhaps the last unspoilt and least improved of Suffolk's large marshland river valleys. Part of this valley forms the nationally important Minsmere/Walberswick Site of Special Scientific Interest. There is an extensive area of unimproved marsh on this site. Such unimproved flower-rich grasslands are becoming increasingly rare as agricultural treatments and intensive farming destroy the flora. In such marshes may be found Suffolk rarities such as bogbean and bog pimpernel, whilst other uncommon plants including yellow rattle, marsh orchids and water violets are frequent. Included in the site are small areas of scrub, mature woodland and fen. Open water is represented by the Minsmere river, the numerous dykes, several ponds and a large man-made lake at Middleton. The site also contains areas of improved marsh, which although not important floristically, provide nesting habitat for waders. In addition, the site is a prime area for barn owl (a bird protected by Schedule 1, Wildlife & Countryside Act 1981) with a number of productive nest sites, and the whole valley is frequented by otters from the Minsmere group. It is therefore important to maintain the integrity of the whole of the valley site. Developments other than small-scale agricultural changes are likely to be very damaging in this comparatively undisturbed valley.

RNR Number 0

Area 91.03

County Wildlife Site Citations

CWS Number	Suffolk Coastal 57
Site Name	DARSHAM MARSHES
Parish	DARSHAM
District	Suffolk Coastal
NGR	TM424685
Description	<p>This nature reserve, owned by the Suffolk Wildlife Trust, is an extensive area of marsh and fen and an important refuge for wetland wildlife in the Minsmere valley. A main dyke feeds water from the valley side through the reserve to the river. Management work on the neglected marshes has restored the species-rich flora including plants such as yellow rattle, bog pimpernel, southern marsh orchid and marsh marigold. An old horse pond has been restored and now provides habitat for aquatic insects and breeding amphibians. A small reedbed on the northern edge of the reserve provides nesting sites for sedge, reed and grasshopper warblers. Many different raptor species hunt over the marshes including kestrel, marsh and hen harriers. The marshes are also a favourite haunt for owls which feed on the abundant small mammal fauna.</p>
RNR Number	0
Area	23.48



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ANNEX C: SOUTHERN PARK AND RIDE CWS CITATIONS

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County Wildlife Site Citations

CWS Number	Suffolk Coastal 26
Site Name	RIVER DEBEN(Sections)
Parish	WICKHAM MARKET
District	Suffolk Coastal
NGR	TM246600
Description	<p>Water quality is particularly good in these stretches of the River Deben and fish, dragonflies and damselflies are present in large numbers. A wide range of both aquatic and emergent species have been recorded, including unusual riverine plants for example river water-dropwort (a scarce plant in the region), white water lily, flowering rush and mare's-tail. A wide poached shelf along some sections of the river bank supports many marshland plants including gypsywort, lesser water parsnip and purple loosestrife.</p>
RNR Number	0
Area	1.74

County Wildlife Site Citations

CWS Number Suffolk Coastal 40

Site Name THE OAKS

Parish CAMPSEY ASH

District Suffolk Coastal

NGR TM318553

Description

This ancient woodland sits on the side of the Deben valley and is linked to grazing marshes; it has a wide range of ground flora reflecting the varied soils of the valley side with a gradient from wet to dry. In the boggy areas, rushes and yellow iris are found with alder as the dominant tree species. In drier parts the flora includes ancient woodland indicators such as orpine, bluebells and remote sedge. The canopy includes native and introduced broadleaves and there is a very varied understorey including hawthorn, elder, hazel, spindle, crab apple, and some field maple coppice. There is a good ditch and bank with an old mixed hedge running along the western boundary and the southern margin contains some very old oak coppice. There are no rides but there is a footpath and several open grassy clearings.

RNR Number 0

Area 5.02

County Wildlife Site Citations

CWS Number	Suffolk Coastal 39
Site Name	DECOY POND, ASHE ABBEY
Parish	CAMPSEY ASH
District	Suffolk Coastal
NGR	TM317546
Description	<p>The woodland surrounds a large, originally man-made lake fed by the River Deben. To the north is a larch and conifer woodland. The remaining woodland consists of alder and hazel coppice, oak, beech, horse-chestnut, ash, willow, Turkey oak and rhododendron. The ground flora is varied with patches of rank fen vegetation including reed and hairy willowherb. This is interspersed with a more interesting flora which includes hemp agrimony, yellow iris and angelica. Bracken dominates the drier areas in the wood. The lake supports a good population of both yellow and white water lily. The latter species is an indicator of unpolluted water. A kingfisher was observed on a number of occasions on the edge of the lake.</p>
RNR Number	0
Area	7.27

County Wildlife Site Citations

CWS Number	Suffolk Coastal 81
Site Name	GREAT WOOD, GLEVERING HALL
Parish	HACHESTON
District	Suffolk Coastal
NGR	TM299581
Description	<p>This is a large ancient woodland with mixed broadleaved trees and a large herb-rich glade cleared sometime around 1900. As with many Suffolk ancient woods, a few softwood trees such as larch have been planted but this has not greatly affected the wood. The woodland structure is one of neglected hazel, field maple and hornbeam coppice with sparse ash standards. Oak, birch, willows and a variety of other tree and shrub species are present, including the rare wild service tree on the southern edge of the wood. There are stretches of remnant ditch and bank around the perimeter with a hawthorn/blackthorn hedge. The ground flora is extremely diverse with 103 species recorded including moschatel, common spotted orchid, hairy St John's-wort, twayblade and adder's-tongue fern. Additional habitat is provided by a number of ponds and a good deal of fallen dead wood.</p>
RNR Number	0
Area	24.25

County Wildlife Site Citations

CWS Number	Suffolk Coastal 82
Site Name	CATTS WOOD
Parish	HACHESTON
District	Suffolk Coastal
NGR	TM305576
Description	<p>Catt's Wood is a good example of an ancient Suffolk wood of coppice with standards. The canopy trees are oak, ash, and Corsican pine while the coppiced species include ash, field maple, hazel and horse chestnut. The shrub layer also includes elm, elder, dog-rose, redcurrant and spindle (which has an affinity for ancient woodlands). The ground flora is well distributed and varied, especially on the open well managed rides. It too, reflects the ancient nature of the wood with a number of ancient woodland indicator plants, for example, remote sedge and primrose. There are both internal and boundary earthworks, the latter marking the perimeter with a ditch and bank system where there is also an old mixed hedge. Additional habitat is provided by a pond.</p>
RNR Number	0
Area	9.32

County Wildlife Site Citations

CWS Number	Suffolk Coastal 83
Site Name	LOWER HACHESTON MEADOW
Parish	HACHESTON
District	Suffolk Coastal
NGR	TM318567
Description	One of the improved pastures which is situated adjacent to the Campsey Ash/Wickham Market road contains a remnant, species diverse wetland habitat which has not been affected by agricultural chemicals. This corner of the meadow, which is only 0.1 hectare in area, supports a good population of plants which are becoming increasingly rare in Suffolk for example ragged robin, marsh marigold and square-stalked St John's-wort.
RNR Number	0
Area	0.61

County Wildlife Site Citations

CWS Number	Suffolk Coastal 41
Site Name	COPPERAS WOOD
Parish	CAMPSEY ASH
District	Suffolk Coastal
NGR	TM325547
Description	<p>Copperas Wood can be divided into two parts, to the south-west and to the north-east, separated by an area of unimproved meadow. The south-west portion was a pine/sweet chestnut plantation which has recently been felled to be replaced by pure hardwoods. However its ancient history is indicated by a broad ditch and bank running around the perimeter. Old hazel and field maple coppice with oak and ash standards survives in some parts, and ground flora here includes bluebell and primrose. The north-east part of the wood has a double ditch and bank boundary and complex internal earthworks. Here there is hazel and ash coppice with oak standards. There are also some very old horse chestnut coppice stools. Elm, holly, field maple, redcurrant and elder appear in the understorey. The ground flora in this part of the wood includes primrose and remote sedge. The structure of both parts of the wood is very interesting but the north-east section is of great antiquity and therefore of high nature conservation value.</p>
RNR Number	0
Area	11.36



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ANNEX D: TWO VILLAGE BYPASS CWS CITATIONS

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County Wildlife Site Citations

CWS Number	Suffolk Coastal 68
Site Name	FOXBURROW WOOD
Parish	FARNHAM
District	Suffolk Coastal
NGR	TM370598
Description	<p>This is an ancient wood on sandy soils with a variety of tree species including oak, ash and beech (some of which are very mature) in the canopy and also hazel, field maple, hawthorn and hornbeam coppice. In the shrub layer, elder and holly are also present. The perimeter of the wood is marked by a ditch and bank boundary with one very old oak pollard on the northern edge. The ground flora includes ferns and carpets of bluebell, with dog's-mercury dominant in parts.</p>
RNR Number	0
Area	4.38

County Wildlife Site Citations

CWS Number	Suffolk Coastal 186
Site Name	FARNHAM CHURCHYARD
Parish	FARNHAM
District	Suffolk Coastal
NGR	TM362599
Description	<p>Farnham Churchyard provides a valuable refuge for wildlife in an intensively farmed landscape. In addition to many fairly common wild flowers the site also supports a number of scarce Suffolk plants. Orpine, which grows here in abundance is a declining species throughout Suffolk. Grass vetchling which is scattered throughout the churchyard is also uncommon in Suffolk and is mainly restricted to a few sites on the coast. Although parts of the churchyard are cut annually, the cuttings are left lying and a thatch has developed, smothering some of the less vigorous plants. The ideal form of management would be a late annual cut and raking up and removal of the hay.</p>
RNR Number	0
Area	0.38

County Wildlife Site Citations

CWS Number	Suffolk Coastal 79
Site Name	GREAT GLEMHAM WOOD
Parish	STRATFORD ST ANDREW
District	Suffolk Coastal
NGR	TM338607
Description	<p>Great Glemham Wood is a large woodland appearing in English Nature's Ancient Woodland Inventory. As with most of East Anglia's woods it was managed at one time as a coppice with standards system, although all woodland work has now ceased. The wood has been severely damaged by recent management. All the rides have been surfaced with tarmac or concrete, and four pig rearing units have been built inside the wood. Spoil from the surfacing and building has been heaped adjacent to the concrete areas. The composition of the tree species is typically ash, field maple and hazel, although there are good areas of hornbeam in the western areas, with coppice stools up to six feet across. Despite this treatment much of the wood remains intact and there is an excellent ground flora. There are a number of ancient woodland indicator plants, such as remote and wood sedges, wood spurge and barren strawberry. There are also a number of plants present which are not normally found in wood, such as reedmace, common sedge, glaucous sedge and water horsetail. On the edge of the wood is a large pond which is fringed by reed and more reedmace. On the western edge is a large area of abandoned pasture, seemingly unimproved. Most has now become semi-scrub with bramble, rose and hawthorn, but a small wet depression to the north remains marshy with spike-rush, false fox- sedge, gypsywort and reedmace.</p>
RNR Number	0
Area	23.03

County Wildlife Site Citations

CWS Number	Suffolk Coastal 158
Site Name	DENNEYS GROVE
Parish	STRATFORD ST ANDREW
District	East Suffolk
NGR	TM342611
Description	<p>Denney's Grove is one of a number of small ancient woodlands situated in the Great Glemham area. The tree layer consists of oak (both pendunculate and Turkey oak), ash, field maple and hornbeam. Beneath the canopy is dense understorey composed mainly of hazel and hawthorn, with occasional dogwood, bramble and elder. Basically a dog's-mercury woodland, the ground flora also contains a number of other plants including violet, male fern, selfheal and wood sedge. The damp conditions of the woodland floor and numerous fallen trees provide suitable conditions for bryophytes and fungi to grow in profusion.</p>
RNR Number	0
Area	3.29

County Wildlife Site Citations

CWS Number	Suffolk Coastal 118
Site Name	GREAT WOOD
Parish	LITTLE GLEMHAM
District	Suffolk Coastal
NGR	TM339599
Description	<p>A very fine ancient woodland surrounded by a ditch and bank and including internal ditch and banks. The structure is one of abandoned coppice with standards. The oak and ash standards have grown very large and are shading the undergrowth; which is principally hazel and ash but with some hornbeam, maple and sallow also present. The rides too, have become overgrown, and no recent management has taken place. The ground flora is rich and a total of 87 species have been recorded. This includes early purple, twayblade and common spotted orchids, and a range of ancient woodland indicators.</p>
RNR Number	0
Area	27.48

County Wildlife Site Citations

CWS Number	Suffolk Coastal 11
Site Name	BENHALL CHURCHYARD
Parish	BENHALL
District	Suffolk Coastal
NGR	TM372618
Description	<p>Benhall Churchyard provides a valuable refuge for plants and animals in an intensively farmed landscape. It is a good example of unimproved grassland (biodiversity priority habitat) supporting species such as Pignut, Bugle, Lady's Bedstraw, Ox-eye Daisy, Field Wood-rush, Pepper Saxifrage, Cowslip and Primrose. Slow-worms (biodiversity priority) have been seen.</p>
RNR Number	0
Area	0.52

County Wildlife Site Citations

CWS Number	Suffolk Coastal 12
Site Name	MANOR FARM MEADOWS
Parish	BENHALL
District	Suffolk Coastal
NGR	TM381603
Description	<p>These small wet meadows support a good wet grassland flora typical of lowland grazing meadows (biodiversity priority habitat). They are similar in composition to the larger Benhall Green Meadows to the north. With the latter, they form the only remaining areas of unimproved marsh in the Fromus Valley. Between the two meadows lies the sewage works. The southern meadow is contains a richer flora with good colonies of Southern Marsh Orchids and a greater diversity of marsh flowers. Typical wetland species include Brown and Hairy sedges, Meadowsweet, Ragged Robin and Water Mint. The floristic diversity has been maintained in the past by traditional grazing. Without such management it will become rank and overgrown and the diversity will decline. The wettest areas near the drains are fen with Common Reed, Reed Canary grass and Pond Sedge. They support good numbers of Reed and Sedge Warbler.</p>
RNR Number	0
Area	1.43

County Wildlife Site Citations

CWS Number	Suffolk Coastal 69
Site Name	RIVER FROMUS MARSHES
Parish	FARNHAM
District	Suffolk Coastal
NGR	TM387587
Description	<p>This important County Wildlife Site consists of a complex of different habitats bordering the River Fromus at Gromford. The west side of the river is generally drier and is composed of open areas dominated with bracken and scattered oak standards. The banks of the watercourse are characterised by dense clumps of sallow and old overhanging willows some of which require repollarding. The area is managed to promote wildlife conservation; for example oak and field maple trees have been planted in some open areas, rides have been cut through the bracken and bird boxes have been erected in the trees. The eastern side of the river in contrast is composed of wet marshland, old willows and willow/alder carr. One area of wet meadow adjacent to this site is Gromford meadow, which has been scheduled as a SSSI. The meadow situated to the south of the SSSI supports a similar species-rich flora. Amongst the many wild flowers growing here are yellow rattle, ragged robin and purple loosestrife. A kingfisher was seen on one occasion darting along the river.</p>
RNR Number	0
Area	7.85

County Wildlife Site Citations

CWS Number	Suffolk Coastal 13
Site Name	BENHALL GREEN MEADOWS
Parish	BENHALL
District	Suffolk Coastal
NGR	TM387613
Description	<p>This series of meadows forms one of the largest remaining areas of flower-rich marsh in the Alde catchment. They are bordered by the River Fromus and contain a wide range of wet meadow plants. Wild Angelica, Brown sedge, Lady's Smock, Marsh Thistle and Ragged Robin are abundant whilst Southern Marsh orchids and Greater Bird's-foot Trefoil are common. The ditches are not botanically rich, with Greater Pond Sedge, Fool's Water-cress and Lesser Water-parsnip dominating. Old records suggest there was a more diverse flora here in the past with species such as Bogbean found in the pond on the green. The floristic diversity has been maintained in the past by traditional grazing. Without such management it will become rank and overgrown and the diversity will decline. A combination of hay cutting and/or grazing, high water levels and avoidance of fertilisers and herbicides are required to maintain the considerable interest of these marshes.</p>
RNR Number	0
Area	8.83



SIZEWELL C PROJECT –
RESPONSES TO EXAMINING AUTHORITY'S
WRITTEN QUESTIONS ISSUED ON 21ST APRIL 2021

NOT PROTECTIVELY MARKED

ANNEX E: SIZEWELL LINK ROAD CWS CITATIONS

NOT PROTECTIVELY MARKED

County Wildlife Site Citations

CWS Number	Suffolk Coastal 165
Site Name	KILN GROVE & MEADOW
Parish	THEBERTON
District	Suffolk Coastal
NGR	TM425658
Description	<p>Kiln Grove is an excellent example of a coppice-with-standards ancient woodland (biodiversity priority habitat). The standards are mainly oak and ash with occasional hornbeam. The boundaries have a ditch and bank system typical of ancient woodland along with some veteran pollards.</p> <p>The main coppiced species are hazel, field maple and ash, with occasional hornbeam and birch. Shrubs include holly, elder, hawthorn and dogwood.</p> <p>The ground flora is typical of ancient woodland and includes primrose, wood sedge, sanicle, bugle and common spotted orchid. There are two woodland ponds and a number of internal earthworks which provide additional habitat diversity. In the south east corner of the wood there is a massive old oak, possibly a pollard, which has been felled in the past. Re-growth from the stump has formed a unique coppice stool which may be several hundred years old.</p> <p>A small area of unimproved grassland (biodiversity priority habitat) borders the wood on the north side. This supports a good wet grassland flora including common spotted orchids, ragged robin, marsh thistle, cuckoo flower and marsh bedstraw.</p>
RNR Number	0
Area	3.33

County Wildlife Site Citations

CWS Number	Suffolk Coastal 56
Site Name	MINSMERE VALLEY;RECKFORD BRIDGE to BEVERICHE MANOR
Parish	WESTLETON
District	Suffolk Coastal
NGR	TM404687
Description	<p>This area of marsh represents the western third of the Minsmere Valley. The entire valley is of great importance for wildlife forming perhaps the last unspoilt and least improved of Suffolk's large marshland river valleys. Part of this valley forms the nationally important Minsmere/Walberswick Site of Special Scientific Interest. There is an extensive area of unimproved marsh on this site. Such unimproved flower-rich grasslands are becoming increasingly rare as agricultural treatments and intensive farming destroy the flora. In such marshes may be found Suffolk rarities such as bogbean and bog pimpernel, whilst other uncommon plants including yellow rattle, marsh orchids and water violets are frequent. Included in the site are small areas of scrub, mature woodland and fen. Open water is represented by the Minsmere river, the numerous dykes, several ponds and a large man-made lake at Middleton. The site also contains areas of improved marsh, which although not important floristically, provide nesting habitat for waders. In addition, the site is a prime area for barn owl (a bird protected by Schedule 1, Wildlife & Countryside Act 1981) with a number of productive nest sites, and the whole valley is frequented by otters from the Minsmere group. It is therefore important to maintain the integrity of the whole of the valley site. Developments other than small-scale agricultural changes are likely to be very damaging in this comparatively undisturbed valley.</p>
RNR Number	0
Area	91.03

County Wildlife Site Citations

CWS Number	Suffolk Coastal 218
Site Name	THEBERTON WOODS
Parish	THEBERTON
District	Suffolk Coastal
NGR	TM42246551
Description	<p>Theberton Woods is an important example of a semi-natural boulder clay woodland that supports a diverse woodland flora including butterfly and bird's nest orchids. Although the woodland is not included in the ancient woodland inventory, it is shown on the 1st series O.S. maps and there are some earthworks that suggest it may be ancient.</p> <p>Parts of the wood have previously been planted with conifers, but these are now being removed as part of restoration management by the Forestry Commission and the flora is responding and recovering well.</p> <p>The woodland contains a large number of ponds supporting a significant population of great crested newt (Biodiversity Priority species and protected species). Since 2000 a small, introduced population of Purple Emperor butterfly has been established, feeding on the abundant Sallows.</p> <p>The site includes an arable reversion field which has developed a flora typical of wet chalky boulder clay including southern marsh orchid, common spotted orchid and yellow-wort. This flora is similar to that of the existing and adjacent CWSs of Leiston Airfield and Kiln Meadow. The willow scrub around the edges of this area is important for the Purple Emperor butterfly and the dense boundary hedges provide important habitat for farmland bird species such as bullfinch, yellowhammer and linnet (all biodiversity priority species).</p>
RNR Number	0
Area	33.08

County Wildlife Site Citations

CWS Number	Suffolk Coastal 164
Site Name	LEISTON AIRFIELD
Parish	THEBERTON
District	Suffolk Coastal
NGR	TM424651
Description	<p>This site consists of a mosaic of species-rich grassland and scrub. It is situated on the site of Leiston disused airfield. Although a small area, it supports many plants characteristic of unimproved grassland, for example pepper saxifrage, common centaury, primrose, bugle and common spotted orchid. Of particular interest is a population of yellow-wort which grows on the public footpath which runs along the western edge of the site. Maintenance of the right of way keeps some of the grassland open along the right of way, but the remaining grassland glades are vulnerable to scrub encroachment.</p>
RNR Number	0
Area	0.52

County Wildlife Site Citations

CWS Number	Suffolk Coastal 127
Site Name	MINSMERE VALLEY; EASTBRIDGE TO RECKFORD BRIDGE
Parish	WESTLETON
District	East Suffolk
NGR	TM446673
Description	<p>This area of marshland is situated in the central portion of the Minsmere Valley. The entire valley is of extreme importance for wildlife, forming the last unspoilt and least improved of Suffolk's larger marshland river valleys. Part of the valley forms the internationally important Minsmere/Walberswick SSSI. The marshes which form the central portion of the valley are botanically the richest marshes of the whole of the valley. Most of the area consists of herb rich, unimproved marshes which are becoming increasingly rare in Suffolk. Those which are managed either by grazing or cutting or both, maintain conditions suitable for typical plants such as southern marsh orchid, ragged robin and bog stitchwort, whilst rarities such as bogbean, early marsh orchid and water violet are also present. Other areas which have not been grazed for many years are slowly turning into reed fen, sedge swamp and carr woodland. Here the flora has declined. However as an alternative habitat, they provide valuable areas for breeding birds and invertebrates. Part of this site is owned by RSPB and is part of their Minsmere reserve. Otters are known to use the valley. In 1994 the majority of this County Wildlife Site was confirmed as part of the Minsmere-Walberswick SSSI.</p>
RNR Number	0
Area	24.80

County Wildlife Site Citations

CWS Number	Suffolk Coastal 180
Site Name	WESTLETON COMMON AND ADJACENT HABITAT
Parish	WESTLETON
District	Suffolk Coastal
NGR	TM443685
Description	<p>This CWS is situated to the south east of Westleton village. The majority of the site is comprised of Westleton Common - the extent of which has remained more or less as per the 1840 Tithe map with the exception of a few small areas now in private ownership. The CWS boundary extends beyond the Common to include a disused pit to the east of the Minsmere Road. The Common and its immediate surroundings have a history of gravel extraction, dating back at least as far as the 1880's and continuing until the 1960's. Since the cessation of any large scale gravel extraction, no formal 'restoration' of the quarried areas took place. The steep sides of the pits remain, along with damp areas of former washing pits, a bank of washed sand, bare ground and hard standings. Such features are unusual as the majority of former quarries and pits have been in-filled and restored to agricultural land. The semi-natural vegetation present is a diverse mosaic of remnant and naturally regenerated heathland (biodiversity priority habitat), acid grassland (biodiversity priority habitat), scrub, woodland, early successional/ruderal vegetation communities and bare ground. These habitats support a wide range of wildlife including silver studded blue butterfly (biodiversity priority species), bullfinch (biodiversity priority species), nightingale, linnet (biodiversity priority species), four species of reptile including adder (biodiversity priority species) and the rare invertebrate - antlion (biodiversity priority species). The CWS also supports a number of notable plant species including nationally scarce species such as clustered clover and mossy stonecrop. In addition, former industrial/wartime activities and infrastructure such as soil dumping and hard standings have provided 'man-made' habitat niches that have been colonised by species not necessarily characteristic of the locality, but that none the less, add to the ecological diversity e.g. wall pennywort on former soil dumps and lichens that have colonised concrete. The site is also a County Geological Site (CGS) for its exposures of Westleton Beds</p>
RNR Number	0
Area	21.39

County Wildlife Site Citations

CWS Number	Suffolk Coastal 57
Site Name	DARSHAM MARSHES
Parish	DARSHAM
District	Suffolk Coastal
NGR	TM424685
Description	<p>This nature reserve, owned by the Suffolk Wildlife Trust, is an extensive area of marsh and fen and an important refuge for wetland wildlife in the Minsmere valley. A main dyke feeds water from the valley side through the reserve to the river. Management work on the neglected marshes has restored the species-rich flora including plants such as yellow rattle, bog pimpernel, southern marsh orchid and marsh marigold. An old horse pond has been restored and now provides habitat for aquatic insects and breeding amphibians. A small reedbed on the northern edge of the reserve provides nesting sites for sedge, reed and grasshopper warblers. Many different raptor species hunt over the marshes including kestrel, marsh and hen harriers. The marshes are also a favourite haunt for owls which feed on the abundant small mammal fauna.</p>
RNR Number	0
Area	23.48

County Wildlife Site Citations

CWS Number	Suffolk Coastal 212
Site Name	102
Parish	KELSALE CUM CARLTON/MIDDLETON
District	Suffolk Coastal
NGR	TM 39936646 - TM 40476662
Description	Sulphur Clover & Dyer's Greenwood. This site is also a Roadside Nature Reserve.
RNR Number	102
Area	0.32

County Wildlife Site Citations

CWS Number	Suffolk Coastal 104
Site Name	BUCKLES WOOD
Parish	LEISTON
District	Suffolk Coastal
NGR	TM431635
Description	<p>Buckle's Wood has a good coppice with standards structure, several rides and a track for vehicular access. The coppice stools are old, mainly hazel, with ash, field maple and hornbeam also present. The standards are oak and even-aged. The wood appears to be managed at present, with a large new pond under excavation and game bird rearing pens and beehives are also present. There is a good ditch and bank boundary with a mixed species hedge, which together with the old coppice stools, indicates a woodland of some considerable age.</p>
RNR Number	0
Area	4.62

County Wildlife Site Citations

CWS Number	Suffolk Coastal 106
Site Name	SIZEWELL LEVELS & ASSOCIATED AREAS
Parish	LEISTON
District	Suffolk Coastal
NGR	TM463640
Description	<p>A large area of land, consisting of woodland, plantation, wet meadow, osier beds and scrub situated behind Sizewell power station is considered to be of both regional and national importance for wildlife conservation. The area not within the Site of Special Scientific Interest (SSSI) boundary, which comprises wet meadow, sallow scrub and birch/alder woodland is of conservation importance. The flora of the marshes includes a number of uncommon plants, for example ragged robin and purple loosestrife. A recent survey however, has shown that the main importance of the grazing marshes lies in the diversity and abundance of the birds which inhabit the area. The ground remains waterlogged through the winter and numerous dykes provide good cover for high numbers of swan, teal, mallard and moorhen. Also of ornithological importance are the plantations situated to the north of Sizewell Belts; Goose Hill, Nursery Covert and Kenton Hills. The areas support breeding populations of a number of nationally rare birds which are specially protected (Schedule 1 of Wildlife and Countryside Act). Good numbers of migrant birds also frequent the area. The whole site therefore, with its diversity of habitats, is considered to be one of the most important County Wildlife Sites in the county. In 1994 the area designated as a Site of Special Scientific Interest was extended to include a large proportion of this County Wildlife Site.</p>
RNR Number	0
Area	105.35

County Wildlife Site Citations

CWS Number	Suffolk Coastal 154
Site Name	THE SPRING WOOD
Parish	SIBTON
District	Suffolk Coastal
NGR	TM370685
Description	<p>A ditch and bank of ancient origin encloses this small woodland. Another feature of historical value, is an internal bank which divides the wood into two sections. The tree layer consists mainly of oak and ash with frequent horse chestnut, field maple, lime and sycamore standards. Below the tree layer, a dense understorey composed of field maple, elm, hawthorn and hornbeam coppice forms an important part of the structure of the wood. Of particular botanical interest and a strong indicator of ancient woodland is the presence of a wild service tree, a rare species in Suffolk. In addition, woodcock has been recorded in this wood.</p>
RNR Number	0
Area	2.2

County Wildlife Site Citations

CWS Number Suffolk Coastal 153

Site Name COE WOOD

Parish SIBTON

District Suffolk Coastal

NGR TM367675

Description

This ancient woodland is almost entirely dominated by hornbeam and ash coppice, with scattered ash and oak standards. Many of the ash trees have grown from neglected coppice. Goat willow is abundant on the wetter ground; hazel, field maple and aspen occur infrequently. To the south, on the edge of a stream there are stands of mostly wych elm with some ash. Ground flora of interest includes wood anemone, wood sorrel, sanicle, orpine and ramsons. Deer, moles, foxes, rabbits, frogs and toads have all been seen here. There are a series of ditches and banks in and around the wood and a number of rides and pathways, most of which are rather damp and overgrown and support species such as tufted hair-grass. There are a few ponds in the wood however, these obtain little or no light and do not support aquatic vegetation. The wood receives little active management; a few clearings have been made to promote cover for pheasants.

RNR Number 0

Area 21.36

ANNEX F: YOXFORD ROUNDABOUT AND OTHER HIGHWAY IMPROVEMENTS CWS CITATIONS

County Wildlife Site Citations

CWS Number	Suffolk Coastal 56
Site Name	MINSMERE VALLEY;RECKFORD BRIDGE to BEVERICHE MANOR
Parish	WESTLETON
District	Suffolk Coastal
NGR	TM404687
Description	<p>This area of marsh represents the western third of the Minsmere Valley. The entire valley is of great importance for wildlife forming perhaps the last unspoilt and least improved of Suffolk's large marshland river valleys. Part of this valley forms the nationally important Minsmere/Walberswick Site of Special Scientific Interest. There is an extensive area of unimproved marsh on this site. Such unimproved flower-rich grasslands are becoming increasingly rare as agricultural treatments and intensive farming destroy the flora. In such marshes may be found Suffolk rarities such as bogbean and bog pimpernel, whilst other uncommon plants including yellow rattle, marsh orchids and water violets are frequent. Included in the site are small areas of scrub, mature woodland and fen. Open water is represented by the Minsmere river, the numerous dykes, several ponds and a large man-made lake at Middleton. The site also contains areas of improved marsh, which although not important floristically, provide nesting habitat for waders. In addition, the site is a prime area for barn owl (a bird protected by Schedule 1, Wildlife & Countryside Act 1981) with a number of productive nest sites, and the whole valley is frequented by otters from the Minsmere group. It is therefore important to maintain the integrity of the whole of the valley site. Developments other than small-scale agricultural changes are likely to be very damaging in this comparatively undisturbed valley.</p>
RNR Number	0
Area	91.03

County Wildlife Site Citations

CWS Number Suffolk Coastal 183

Site Name YOXFORD WOOD

Parish YOXFORD

District Suffolk Coastal

NGR TM391704

Description

This wood is marked on all sides by a ditch and bank boundary system and contains ancient coppice, mainly hornbeam. Other coppiced species are ash, field maple, hazel and hawthorn. Many young oaks are also present. The wood has been underplanted with conifers in parts, but these have been largely unsuccessful and the wood still retains an interesting flora. This includes such species as common spotted orchid, yellow pimpernel and remote sedge which have affinities with ancient woodland and are well distributed here. There are also a few shallow ponds and one deeper pond which add to the variety of habitats present and support their own flora which includes yellow iris and pendulous sedge.

RNR Number 0

Area 3.88

County Wildlife Site Citations

CWS Number Suffolk Coastal 57

Site Name DARSHAM MARSHES

Parish DARSHAM

District Suffolk Coastal

NGR TM424685

Description

This nature reserve, owned by the Suffolk Wildlife Trust, is an extensive area of marsh and fen and an important refuge for wetland wildlife in the Minsmere valley. A main dyke feeds water from the valley side through the reserve to the river. Management work on the neglected marshes has restored the species-rich flora including plants such as yellow rattle, bog pimpernel, southern marsh orchid and marsh marigold. An old horse pond has been restored and now provides habitat for aquatic insects and breeding amphibians. A small reedbed on the northern edge of the reserve provides nesting sites for sedge, reed and grasshopper warblers. Many different raptor species hunt over the marshes including kestrel, marsh and hen harriers. The marshes are also a favourite haunt for owls which feed on the abundant small mammal fauna.

RNR Number 0

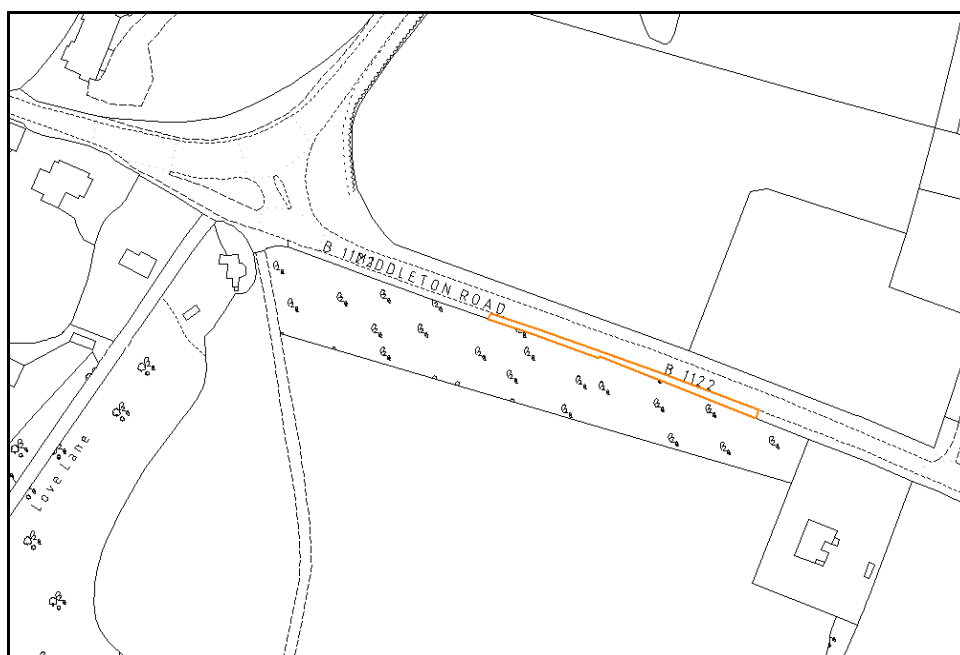
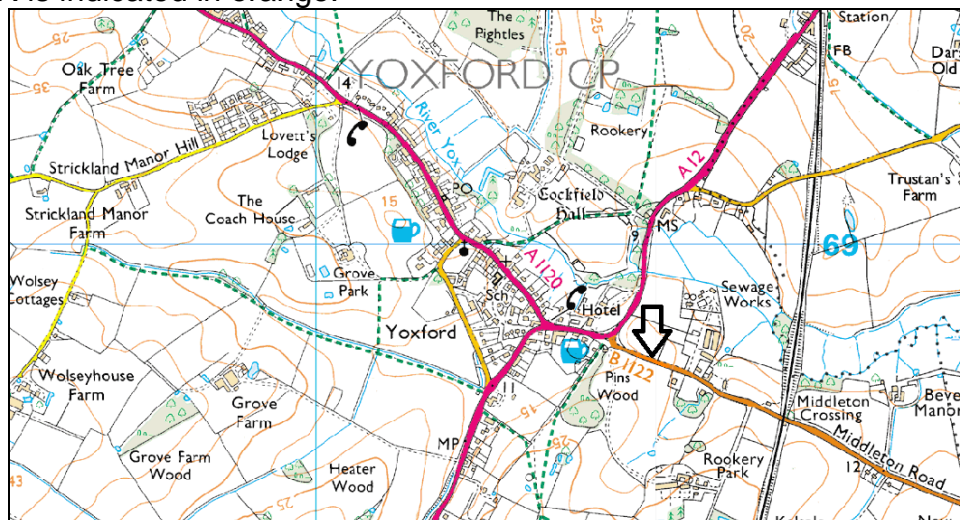
Area 23.48

County Wildlife Site Citations

CWS Number	Suffolk Coastal 212
Site Name	102
Parish	KELSALE CUM CARLTON/MIDDLETON
District	Suffolk Coastal
NGR	TM 39936646 - TM 40476662
Description	Sulphur Clover & Dyer's Greenwood. This site is also a Roadside Nature Reserve.
RNR Number	102
Area	0.32

FACTSHEET - Yoxford Roadside Nature Reserve No. 197

The RNR is indicated in orange.



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Site Name and Number	Yoxford 197
Is there a Warden?	No
Map Reference	TM 39946867 to TM40036863
Road Number	B1122
Highways Area	East
County Wildlife Site?	Legally protected species
RNR Area	236m ²
Road Sides (length)	South: 199m
Cutting time	FEBRUARY
Criteria	Legally protected species

HEALTH AND SAFETY

This is a LOW RISK site.

Please take care, and wear high visibility clothing if visiting this RNR
Volunteers are permitted to work on this RNR provided they take appropriate safety precautions



Rare Fungus can be found on this RNR.

What is an RNR?

An RNR is a Roadside Nature Reserve. Under the Roadside Nature Reserve Scheme, the grass verges are individually managed to benefit the scarce or unusual plants or fungi growing in the stretch protected from normal highways management. RNRs may also be designated as County Wildlife Sites (CWS) and several are Sites of Special Scientific Interest (SSSIs).

RNRs are marked by two white posts, one at each end, with a black arrow on both posts pointing inwards to the RNR. This is to indicate to the grass verge cutters that this specific site is an RNR and is not to be cut outside of its designated cutting times.

Why are we conserving them?

Many roadside verges are very old, on the edges of routes that have changed little over the centuries. These verges are the remains of the semi-natural grassland that was once widespread throughout the country, but which has declined by 98% since 1945, as a result of changes of land use, intensive cultivation and drainage.

By careful management of the sites we aim to preserve the species on RNRs, giving future generations the chance to enjoy these remnants of ancient grassland meadows.

How can you help?

You can help by keeping an eye on the RNR, and letting us know if anything happens to it, such as material being dumped, or the marker posts being damaged. Even if we have a warden we might need help with raking after the grass is cut. If you would like to help out or be a RNR warden please get in touch, we will be happy to talk to you about the RNR and discuss the warden's role with you.

For further information on this RNR contact

RNRs@suffolk.gov.uk

Tel: 01473 265052

ANNEX G: FREIGHT MANAGEMENT FACILITY CWS CITATIONS

County Wildlife Site Citations

CWS Number	Suffolk Coastal 112
Site Name	NACTON MEADOWS
Parish	LEVINGTON
District	Suffolk Coastal
NGR	TM232400
Description	<p>Nacton Decoy Meadow, an unimproved wet meadow, is situated adjacent to the Suffolk Wildlife Trust Reserve. The plant communities of both meadows are very similar. The wet area at the base of the slope supports a good range of wetland plants including southern marsh orchid, oval sedge, marsh arrow-grass and lesser spearwort. Emergent plants, for example, fool's-watercress marsh marigold and hard rush grow along the line of overgrown ditches and along the banks of the stream. Drier conditions prevail at the top of the slope and acid grassland species including red campion, sheep's-sorrel and bird's-foot trefoil grow here. Nettle and bracken patches are beginning to encroach in this area. The meadows are managed by cattle grazing during the summer. A large proportion of the meadow has recently been notified as a Site of Special Scientific Interest.</p>
RNR Number	0
Area	3.06

County Wildlife Site Citations

CWS Number Suffolk Coastal 217

Site Name LEVINGTON CUT

Parish LEVINGTON

District Suffolk Coastal

NGR TM23243860

Description

This CWS comprises a mosaic of semi-natural habitats to both the north and south of, and including 'The Cut' watercourse at Levington. Home Wood CWS is adjacent to the west of the CWS with the River Orwell and Levington Creek immediately to the south and east respectively. The site is therefore not only important for wildlife in its own right, but also provides valuable linking habitat between other seminatural habitats of high wildlife value. Habitat on site includes reedbed (biodiversity priority habitat), wet grassland dry grassland, a belt of ancient trees along the shoreline of the river, scrub, borrow dyke and rank grassland.

The site is particularly important for birds, supporting breeding populations of the biodiversity priority species Turtle dove, Reed bunting, Skylark and Song thrush.

Other breeding birds include Yellowhammer, Reed and Sedge warblers, Blackcap, Whitethroat, Lesser whitethroat, Cetti's warbler (5 territories), Garden warbler, Willow warbler, Chiffchaff, Little owl and Tawny owl.

Waders are also breeding on site including 2 pairs of Redshank in 2006, 2 pairs of Lapwing in 2006 and Snipe within the last four years (since 2002).

The site also includes a major Swallow roost and other roosting birds include Yellow wagtail, Linnet (biodiversity priority species), Meadow pipit and buntings including Corn bunting(biodiversity priority species) (33 in 2006). Barn owl (Suffolk character biodiversity priority species) regularly hunts over the grassland and Long eared owls have regularly over wintered during the last ten years.

The grassland is an important refuge for winter waders including 2000 Golden plover, 1000 Lapwing, Curlew and sometimes flocks of Brent geese.

The watercourses support Water vole (biodiversity priority species). The wet grassland supports a good wet grassland/fen flora including Southern Marsh Orchid.

RNR Number 0

Area 32.61

01/06/2021

County Wildlife Site Citations

CWS Number	Suffolk Coastal 100
Site Name	KIRTON RESERVOIR
Parish	KIRTON
District	Suffolk Coastal
NGR	TM268405
Description	<p>Set in the Suffolk Coast and Heath River Valley this area consists of a mosaic of Priority Habitats including; lowland meadow, mixed deciduous woodland, wet woodland and ponds with secondary habitat consisting of areas of semi improved grassland, dry acid grassland and mixed scrub.</p> <p>Long Meadow, which is situated west of Kirton Reservoir, and the marshy ground below support a wide range of wetland plants including the rare heath spotted orchids (over 1000 have previously been recorded).</p> <p>The areas of deciduous woodland contain predominantly oak, ash, hazel coppice and beech with a hawthorn, blackthorn, elder and holly understory. Ground flora includes bluebell and wild garlic. Honeysuckle and ivy grows on trees and on the ground.</p> <p>A varied habitat mosaic provides excellent structural diversity and provides valuable opportunities for a number of taxonomic groups.</p> <p>Kirton reservoir is part managed under Higher Level Stewardship and connected to a wider landscape of farmland also in stewardship. The main waterbody is managed as a mixed coarse fishery.</p>
RNR Number	0
Area	9.83

County Wildlife Site Citations

CWS Number	Suffolk Coastal 134
Site Name	HOME WOOD
Parish	LEVINGTON
District	Suffolk Coastal
NGR	TM225388
Description	<p>A large wood directly abutting the River Orwell SSSI. This wood, as with so many on the Orwell, has been altered considerably by the planting of Scots pine, horse chestnut, beech, poplar and common lime. Areas of sycamore have been coppiced and there are other open areas producing a diverse woodland structure. Despite the plantings, a diverse ground flora persists including foxglove, bluebell and male fern. Other species characteristic of dry sandy soils occur such as sheep's sorrel, dittander and lesser yellow trefoil, all in the less wooded areas. An important element of the ground flora is the uncommon broad-leaved helleborine which was here in 1986 in good numbers.</p>
RNR Number	0
Area	19.58

County Wildlife Site Citations

CWS Number	Suffolk Coastal 113
Site Name	LEVINGTON LAGOON
Parish	STRATTON HALL
District	Suffolk Coastal
NGR	TM239385
Description	<p>Levington Lagoon is one of the major roost sites for waders on the Orwell estuary and is used by a vast number of dunlin, redshank, ringed plover, oystercatcher and knot. The Suffolk Wildlife Trust reserve area was set aside for conservation following a campaign by ornithologists. The reserve consists of a saline lagoon with fresh water pools and mudflats which are colonised in part by glasswort, spear-leaved orache and sea couch grass. The water level in the saline lagoon is controlled by sluices allowing sea water to flood the area during the spring tides. Saltmarsh islands are managed to encourage Redshank, oystercatcher and avocet to nest. The sea wall is a good viewing point for birds on passage. Spotted redshank, whimbrel, greenshank and curlew sandpiper are all regular passage migrants. Other species often seen in the winter are twite, short-eared owl and kingfisher. In 2008, the CWS was extended to the west to include an area that has developed a grassland/scrub mosaic supporting a range of wildlife. It is particularly important for breeding linnet (biodiversity priority species), reed bunting (biodiversity priority species) and whitethroat. Wintering birds include Stonechat, Short-eared owl, barn owl and a winter roost of linnet.</p>
RNR Number	0
Area	5.25

County Wildlife Site Citations

CWS Number	Suffolk Coastal 159
Site Name	STRATTON HALL WOOD
Parish	STRATTON HALL
District	Suffolk Coastal
NGR	TM245385
Description	<p>This 7.5 hectare woodland is an ancient woodland and appears on English Nature's Ancient Woodland Inventory. It has had considerable interference through the planting of non-native species such as poplar and holm oak. Otherwise the dominant tree is ash, with oak, sweet chestnut and alder also occurring. Some areas have been coppiced. Ground flora consists of areas of nettle and dog's-mercury with bugle, ramsons, oppositeleaved golden saxifrage and primrose. There are several small streams in the wood with attendant boggy areas and a large pond. Breeding birds recorded include all three species of woodpecker, nightingale, blackcap and spotted flycatcher.</p>
RNR Number	0
Area	6.86

ANNEX H: GREEN RAIL ROUTE CWS CITATIONS

County Wildlife Site Citations

CWS Number

Suffolk Coastal

104

Site Name

BUCKLES WOOD

Parish

LEISTON

District

Suffolk Coastal

NGR

TM431635

Description

Buckle's Wood has a good coppice with standards structure, several rides and a track for vehicular access. The coppice stools are old, mainly hazel, with ash, field maple and hornbeam also present. The standards are oak and even-aged. The wood appears to be managed at present, with a large new pond under excavation and game bird rearing pens and beehives are also present. There is a good ditch and bank boundary with a mixed species hedge, which together with the old coppice stools, indicates a woodland of some considerable age.

RNR Number

0

Area

4.62

County Wildlife Site Citations

CWS Number	Suffolk Coastal 105
Site Name	LEISTON COMMON
Parish	LEISTON
District	Suffolk Coastal
NGR	TM458633
Description	<p>Leiston Common is a small but important site for wildlife conservation in Suffolk. It was the site of extensive studies of heathland ecology carried out by Lee Chadwick, which were later published. Bell heather, a rare plant in Suffolk, grows on Leiston Common together with more widespread plants for example harebell, heath bedstraw and tormentil. Another notable and uncommon feature of the site is the presence of an extensive and diverse lichen flora</p>
RNR Number	0
Area	1.37

County Wildlife Site Citations

CWS Number	Suffolk Coastal 106
Site Name	SIZEWELL LEVELS & ASSOCIATED AREAS
Parish	LEISTON
District	Suffolk Coastal
NGR	TM463640
Description	<p>A large area of land, consisting of woodland, plantation, wet meadow, osier beds and scrub situated behind Sizewell power station is considered to be of both regional and national importance for wildlife conservation. The area not within the Site of Special Scientific Interest (SSSI) boundary, which comprises wet meadow, tall scrub and birch/alder woodland is of conservation importance. The flora of the marshes includes a number of uncommon plants, for example ragged robin and purple loosestrife. A recent survey however, has shown that the main importance of the grazing marshes lies in the diversity and abundance of the birds which inhabit the area. The ground remains waterlogged through the winter and numerous dykes provide good cover for high numbers of swan, teal, mallard and moorhen. Also of ornithological importance are the plantations situated to the north of Sizewell Belts; Goose Hill, Nursery Covert and Kenton Hills. The areas support breeding populations of a number of nationally rare birds which are specially protected (Schedule 1 of Wildlife and Countryside Act). Good numbers of migrant birds also frequent the area. The whole site therefore, with its diversity of habitats, is considered to be one of the most important County Wildlife Sites in the county. In 1994 the area designated as a Site of Special Scientific Interest was extended to include a large proportion of this County Wildlife Site.</p>
RNR Number	0
Area	105.35

County Wildlife Site Citations

CWS Number	Suffolk Coastal 164
Site Name	LEISTON AIRFIELD
Parish	THEBERTON
District	Suffolk Coastal
NGR	TM424651
Description	<p>This site consists of a mosaic of species-rich grassland and scrub. It is situated on the site of Leiston disused airfield. Although a small area, it supports many plants characteristic of unimproved grassland, for example pepper saxifrage, common centaury, primrose, bugle and common spotted orchid. Of particular interest is a population of yellow-wort which grows on the public footpath which runs along the western edge of the site. Maintenance of the right of way keeps some of the grassland open along the right of way, but the remaining grassland glades are vulnerable to scrub encroachment.</p>
RNR Number	0
Area	0.52

County Wildlife Site Citations

CWS Number Suffolk Coastal 218
Site Name THEBERTON WOODS
Parish Theberton
District Suffolk Coastal
NGR TM42246551

Description

Theberton Woods is an important example of a semi-natural boulder clay woodland that supports a diverse woodland flora including butterfly and bird's nest orchids. Although the woodland is not included in the ancient woodland inventory, it is shown on the 1st series O.S. maps and there are some earthworks that suggest it may be ancient.

Parts of the wood have previously been planted with conifers, but these are now being removed as part of restoration management by the Forestry Commission and the flora is responding and recovering well.

The woodland contains a large number of ponds supporting a significant population of great crested newt (Biodiversity Priority species and protected species). Since 2000 a small, introduced population of Purple Emperor butterfly has been established, feeding on the abundant Sallows.

The site includes an arable reversion field which has developed a flora typical of wet chalky boulder clay including southern marsh orchid, common spotted orchid and yellow-wort. This flora is similar to that of the existing and adjacent CWSs of Leiston Airfield and Kiln Meadow. The willow scrub around the edges of this area is important for the Purple Emperor butterfly and the dense boundary hedges provide important habitat for farmland bird species such as bullfinch, yellowhammer and linnet (all biodiversity priority species).

RNR Number 0

Area 33.08

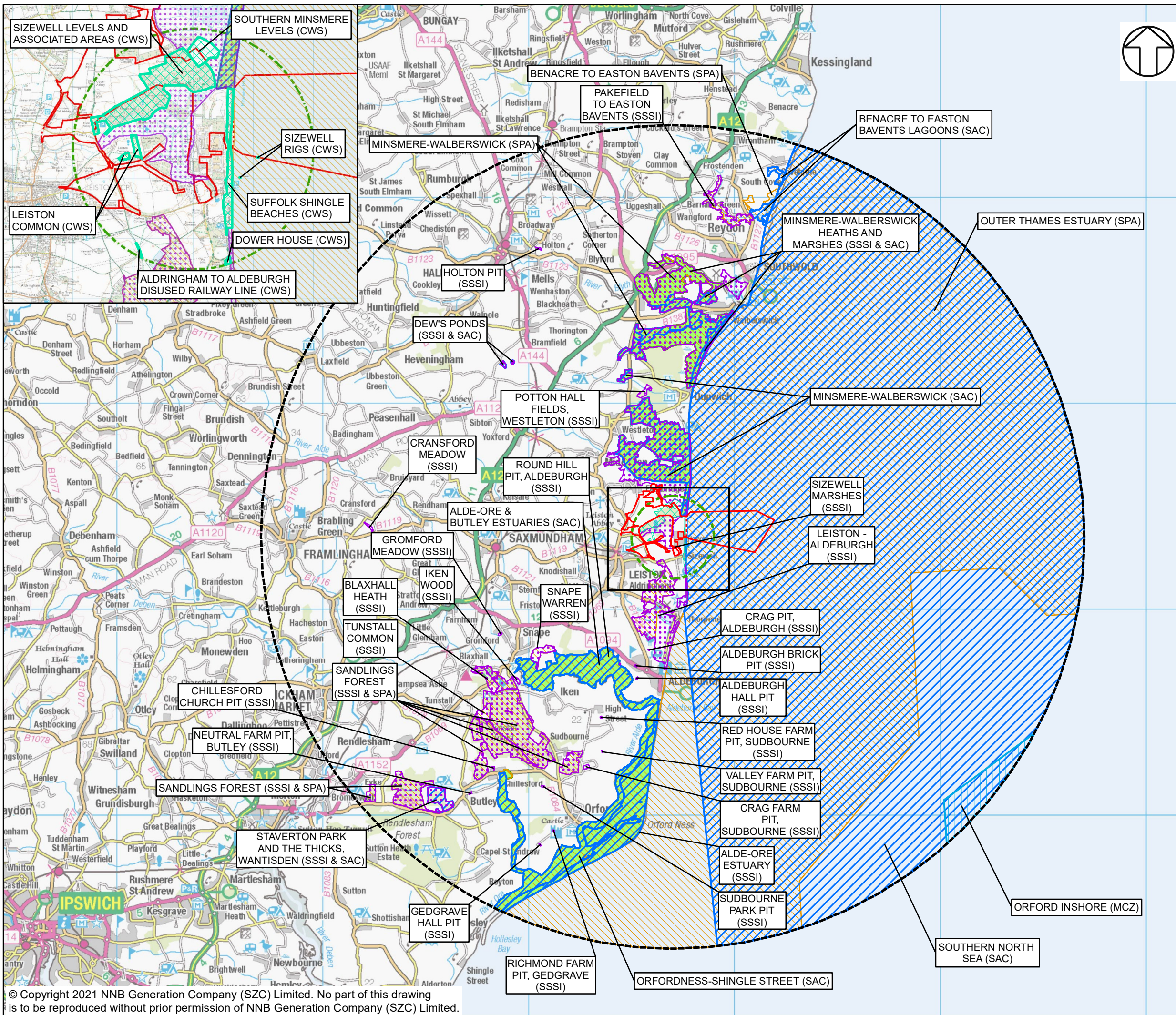
County Wildlife Site Citations

CWS Number	Suffolk Coastal 127
Site Name	MINSMERE VALLEY;EASTBRIDGE to RECKFORD BRIDGE
Parish	WESTLETON
District	Suffolk Coastal
NGR	TM446673
Description	<p>This area of marshland is situated in the central portion of the Minsmere Valley. The entire valley is of extreme importance for wildlife, forming the last unspoilt and least improved of Suffolk's larger marshland river valleys. Part of the valley forms the internationally important Minsmere/Walberswick SSSI. The marshes which form the central portion of the valley are botanically the richest marshes of the whole of the valley. Most of the area consists of herb rich, unimproved marshes which are becoming increasingly rare in Suffolk. Those which are managed either by grazing or cutting or both, maintain conditions suitable for typical plants such as southern marsh orchid, ragged robin and bog stitchwort, whilst rarities such as bogbean, early marsh orchid and water violet are also present. Other areas which have not been grazed for many years are slowly turning into reed fen, sedge swamp and carr woodland. Here the flora has declined. However as an alternative habitat, they provide valuable areas for breeding birds and invertebrates. Part of this site is owned by RSPB and is part of their Minsmere reserve. Otters are known to use the valley. In 1994 the majority of this County Wildlife Site was confirmed as part of the Minsmere-Walberswick SSSI.</p>
RNR Number	0
Area	24.92

County Wildlife Site Citations

CWS Number	Suffolk Coastal 97
Site Name	KELSALE MORIO MEADOW
Parish	KELSALE CUM CARLTON
District	Suffolk Coastal
NGR	TM399643
Description	<p>An unimproved neutral meadow with one of the finest populations of green-winged orchids of any meadow in Suffolk. In 1985 more than 1000 flowering spikes were recorded, mostly concentrated in the north east corner of the meadow. There is a full range of flora characteristic of such meadows, including field wood-rush, sorrel, ox-eye daisy, black knapweed and glaucous sedge. As is typical of such meadows, there is a wide range of grasses. The meadow is colourful from early spring, when the abundant cowslips flower, to late summer when the knapweed is at its peak. It is managed traditionally with a late summer hay cut.</p>
RNR Number	0
Area	1.04

ANNEX I: FIGURES



NOTES

KEY

- SIZEWELL C MAIN DEVELOPMENT SITE BOUNDARY
- DEMARCATION LINE
- STUDY AREA 20KM - SITE CENTERED
- STUDY AREA 2KM - SITE CENTERED
- SITE OF SPECIAL SCIENTIFIC INTEREST (SSSI)
- SPECIAL AREA OF CONSERVATION (SAC)
- SPECIAL PROTECTION AREA (SPA)
- RAMSAR SITE
- MARINE CONSERVATION ZONE (MCZ)
- COUNTY WILDLIFE SITE (CWS)

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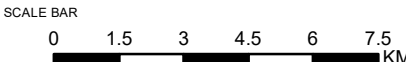


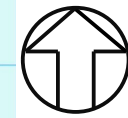
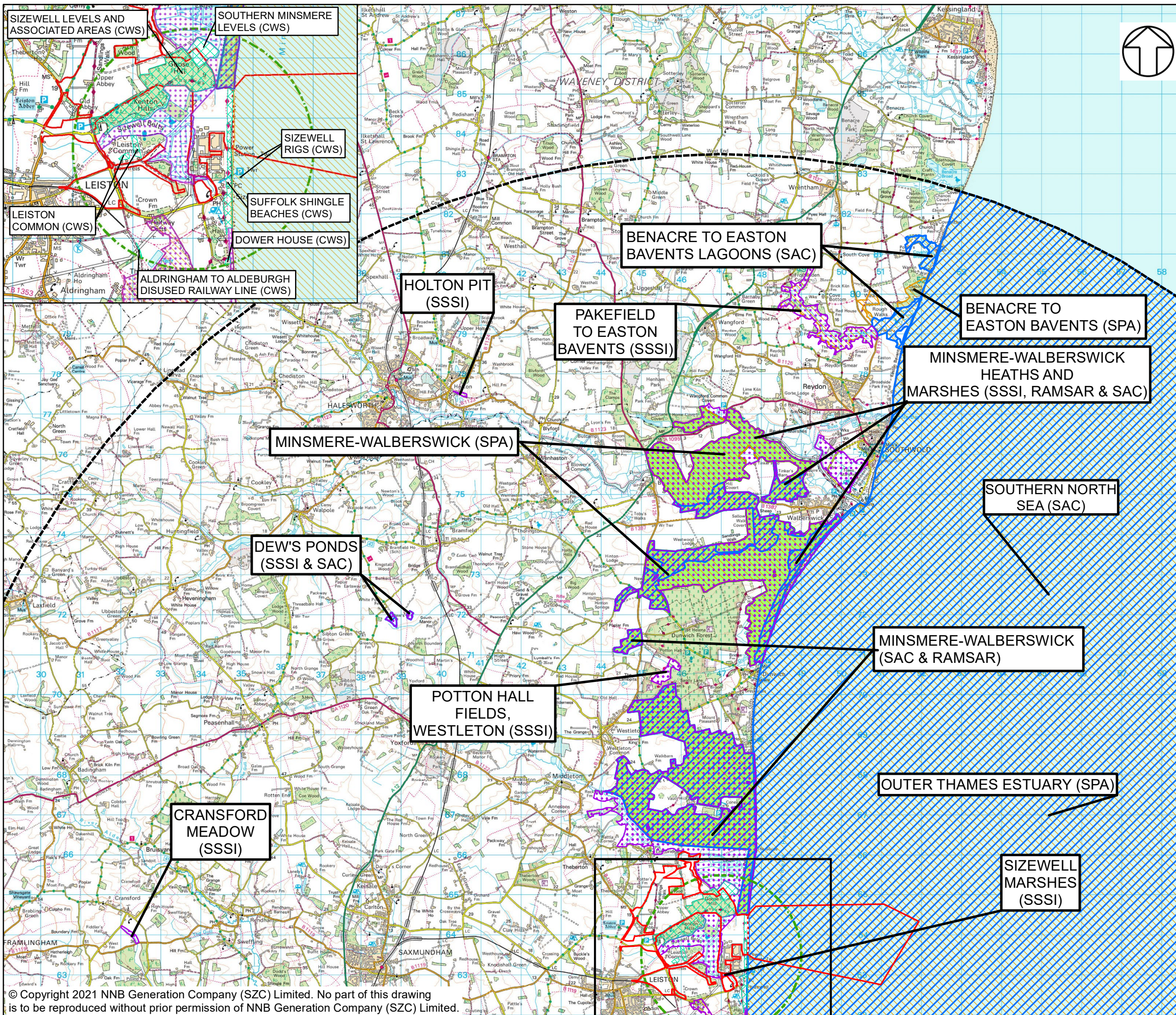
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SIZEWELL C PROJECT
RESPONSES TO EXAMINING AUTHORITY'S
WRITTEN QUESTIONS ISSUED ON 21st APRIL 2021
CHAPTER 7: BIODIVERSITY AND ECOLOGY

DRAWING TITLE:
LOCATION OF INTERNATIONAL, NATIONAL
STATUTORY AND NON-STATUTORY
DESIGNATED SITES WITHIN THE
MAIN DEVELOPMENT SITE STUDY AREA

DRAWING NO:
FIGURE 7.1 - SHEET 1

DATE: JUNE 2021 **DRAWN:** R.G. **SCALE:** 1:60,000 @A3 **REV:** 01





NOTES

KEY

- SIZEWELL C MAIN DEVELOPMENT SITE
- DEMARCATION LINE
- STUDY AREA 20KM - SITE CENTERED
- STUDY AREA 2KM - SITE CENTERED
- SITE OF SPECIAL SCIENTIFIC INTEREST (SSSI)
- SPECIAL AREA OF CONSERVATION (SAC)
- SPECIAL PROTECTION AREA (SPA)
- RAMSAR SITE
- COUNTY WILDLIFE SITE (CWS)

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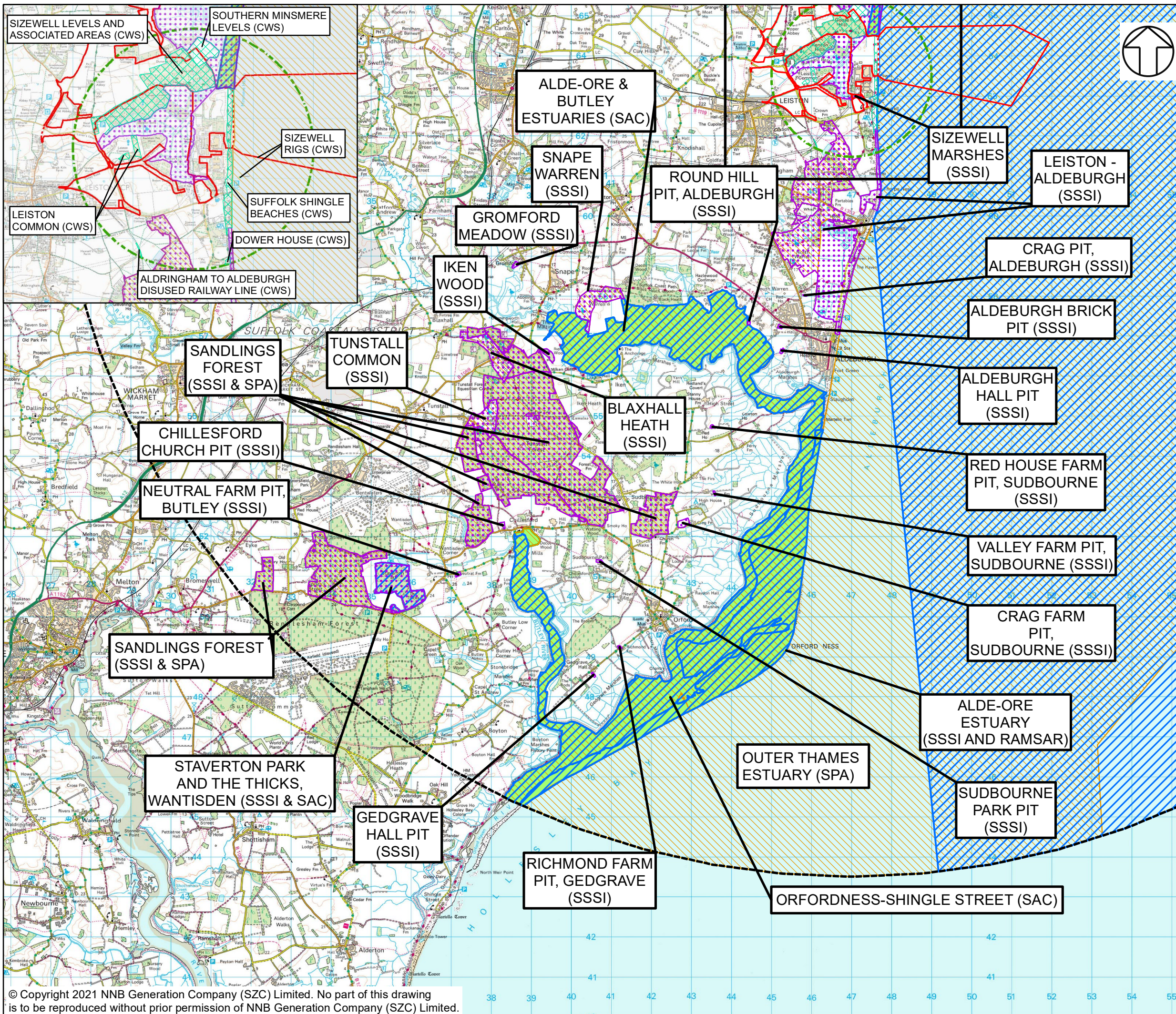
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CHAPTER 7: BIODIVERSITY AND ECOLOGY

DRAWING TITLE:
LOCATION OF INTERNATIONAL, NATIONAL
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DESIGNATED SITES WITHIN THE
MAIN DEVELOPMENT SITE STUDY AREA

DRAWING NO:
FIGURE 7.1 - SHEET 2

DATE: JUNE 2021 **DRAWN:** R.C. **SCALE:** 1:60,000 @A3 **REV:** 01

SCALE BAR
0 0.5 1 1.5 2 2.5
KM



NOTES

KEY

- SIZEWELL C MAIN DEVELOPMENT SITE
- DEMARCATION LINE
- STUDY AREA 20KM - SITE CENTERED
- STUDY AREA 2KM - SITE CENTERED
- SITE OF SPECIAL SCIENTIFIC INTEREST (SSSI)
- SPECIAL AREA OF CONSERVATION (SAC)
- SPECIAL PROTECTION AREA (SPA)
- RAMSAR SITE
- COUNTY WILDLIFE SITE (CWS)

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DRAWING TITLE:

LOCATION OF INTERNATIONAL, NATIONAL
STATUTORY AND NON-STATUTORY
DESIGNATED SITES WITHIN THE
MAIN DEVELOPMENT SITE STUDY AREA

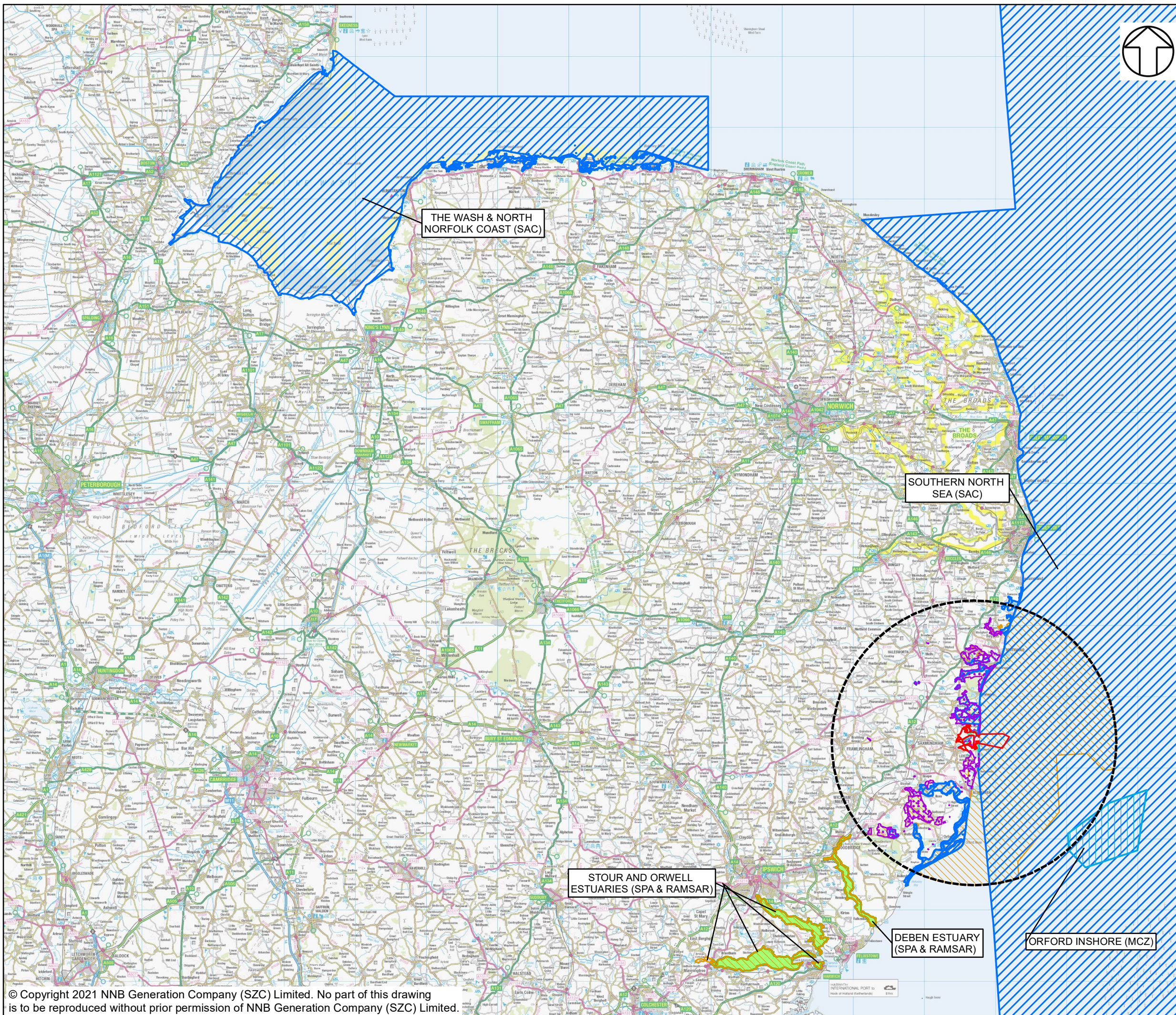
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FIGURE 7.1 - SHEET 3

DATE:	DRAWN:	SCALE:	REV:
JUNE 2021	R.C.	1:60,000 @A3	01

SCALE BAR

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NOTES

FOR ILLUSTRATIVE PURPOSES ONLY THOSE DESIGNATIONS IDENTIFIED IN TABLE 1 OF APPENDIX 7A OF CHAPTER 7 OF RESPONSES TO EXAMINING AUTHORITY'S WRITTEN QUESTIONS ISSUED ON 21ST APRIL 2021 ARE SHOWN ON THIS FIGURE.

KEY

- SIZEWELL C MAIN DEVELOPMENT SITE BOUNDARY
- DEMARCATION LINE
- STUDY AREA 20KM - SITE CENTERED
- STUDY AREA 2KM - SITE
- SITE OF SPECIAL SCIENTIFIC INTEREST (SSSI)
- SPECIAL AREA OF CONSERVATION (SAC)
- SPECIAL PROTECTION AREA (SPA)
- RAMSAR SITE
- MARINE CONSERVATION ZONE
- COUNTY WILDLIFE SITE (CWS)

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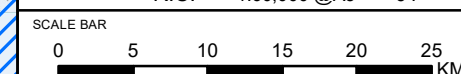


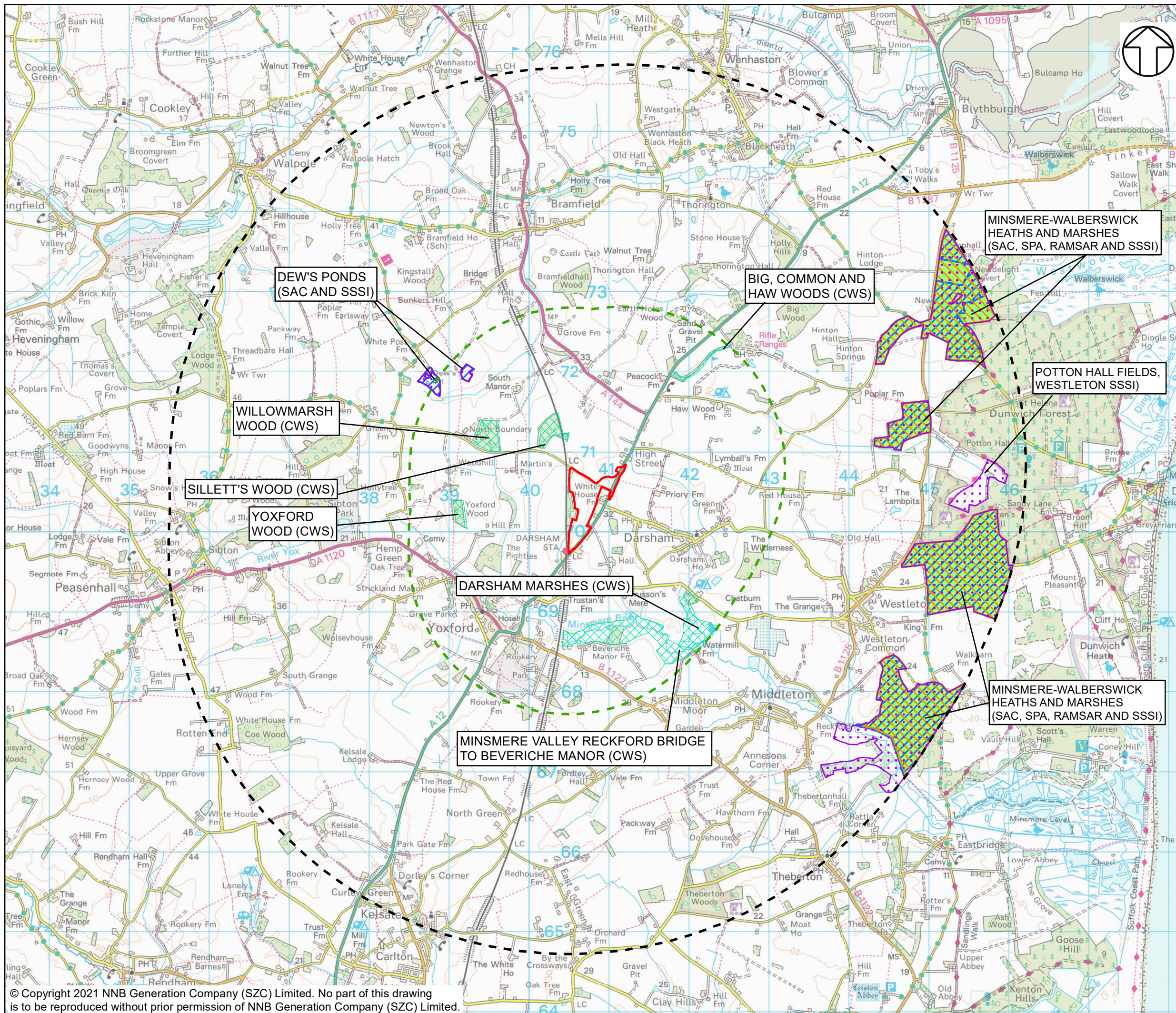
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WRITTEN QUESTIONS ISSUED ON 21st APRIL 2021
CHAPTER 7: BIODIVERSITY AND ECOLOGY

DRAWING TITLE:
LOCATION OF INTERNATIONAL, NATIONAL
STATUTORY AND NON-STATUTORY
DESIGNATED SITES WITHIN THE
MAIN DEVELOPMENT SITE STUDY AREA

DRAWING NO:
FIGURE 7.1 - SHEET 4

DATE: JUNE 2021 DRAWN: R.C. SCALE: 1:60,000 @A3 REV: 01





NOTES

KEY

- NORTHERN PARK AND RIDE DEVELOPMENT SITE BOUNDARY
- 5KM STUDY AREA (STATUTORY DESIGNATIONS)
- 2KM STUDY AREA (NON-STATUTORY DESIGNATIONS)
- COUNTY WILDLIFE SITE (CWS)
- SITE OF SPECIAL SCIENTIFIC INTEREST (SSSI)
- SPECIAL PROTECTION AREA (SPA)
- SPECIAL AREA OF CONSERVATION (SAC)
- RAMSAR SITE

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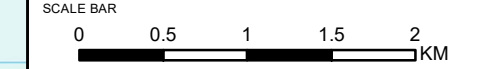


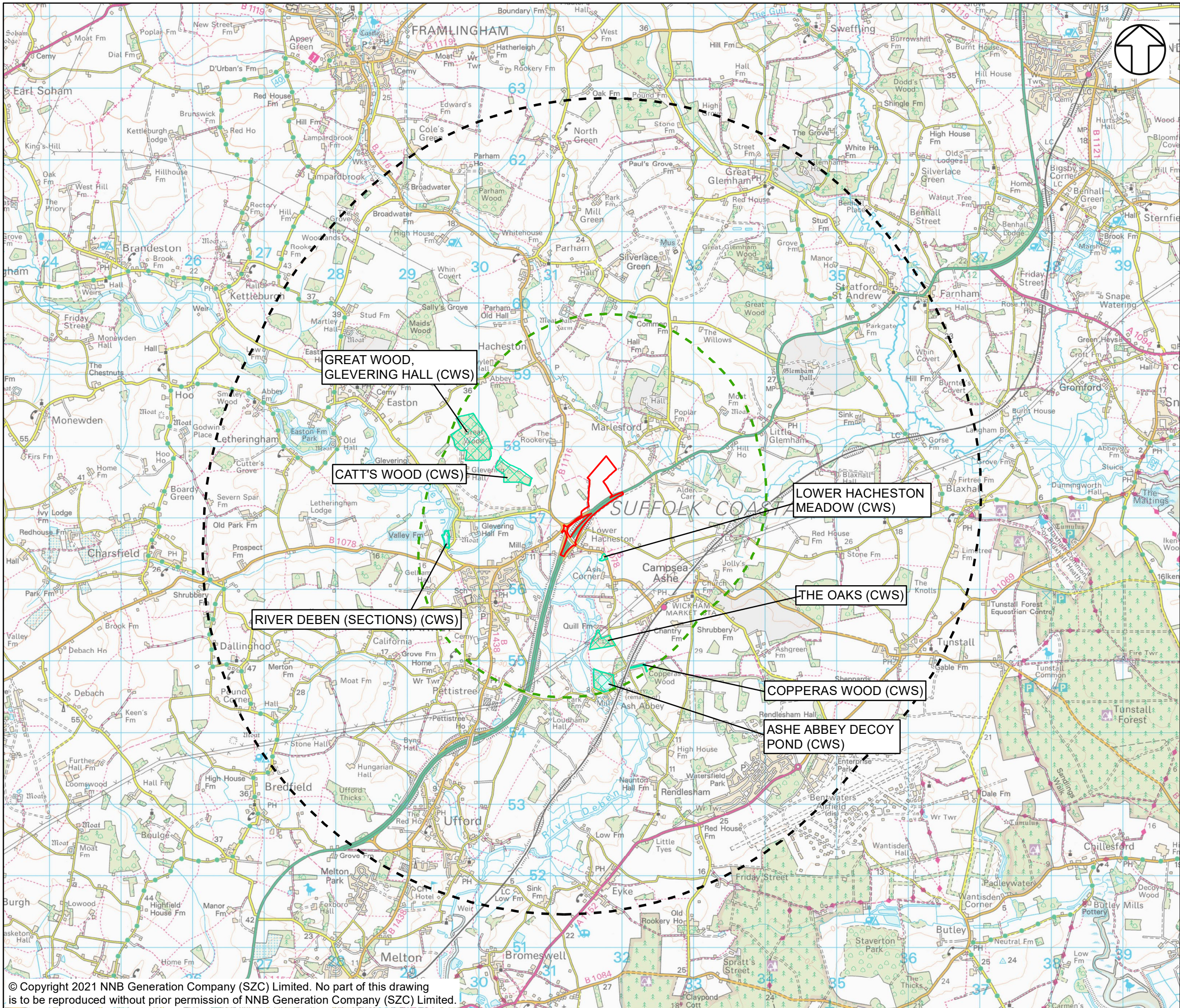
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WRITTEN QUESTIONS ISSUED ON 21st APRIL 2021
CHAPTER 7: BIODIVERSITY AND ECOLOGY

DRAWING TITLE:
LOCATION OF INTERNATIONAL, NATIONAL
STATUTORY AND NON-STATUTORY
DESIGNATED SITES WITHIN THE NORTHERN
PARK AND RIDE STUDY AREA

DRAWING NO:
FIGURE 7.2

DATE: JUNE 2021 **DRAWN:** R.G. **SCALE:** 1:45,000 @A3 **REV:** 01





NOTES

KEY

- SOUTHERN PARK AND RIDE
- WICKHAM DEVELOPMENT SITE BOUNDARY
- 5KM STUDY AREA (STATUTORY DESIGNATIONS)
- 2KM STUDY AREA (NON-STATUTORY DESIGNATIONS)
- COUNTY WILDLIFE SITE (CWS)

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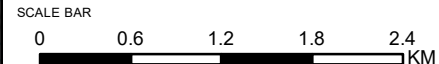


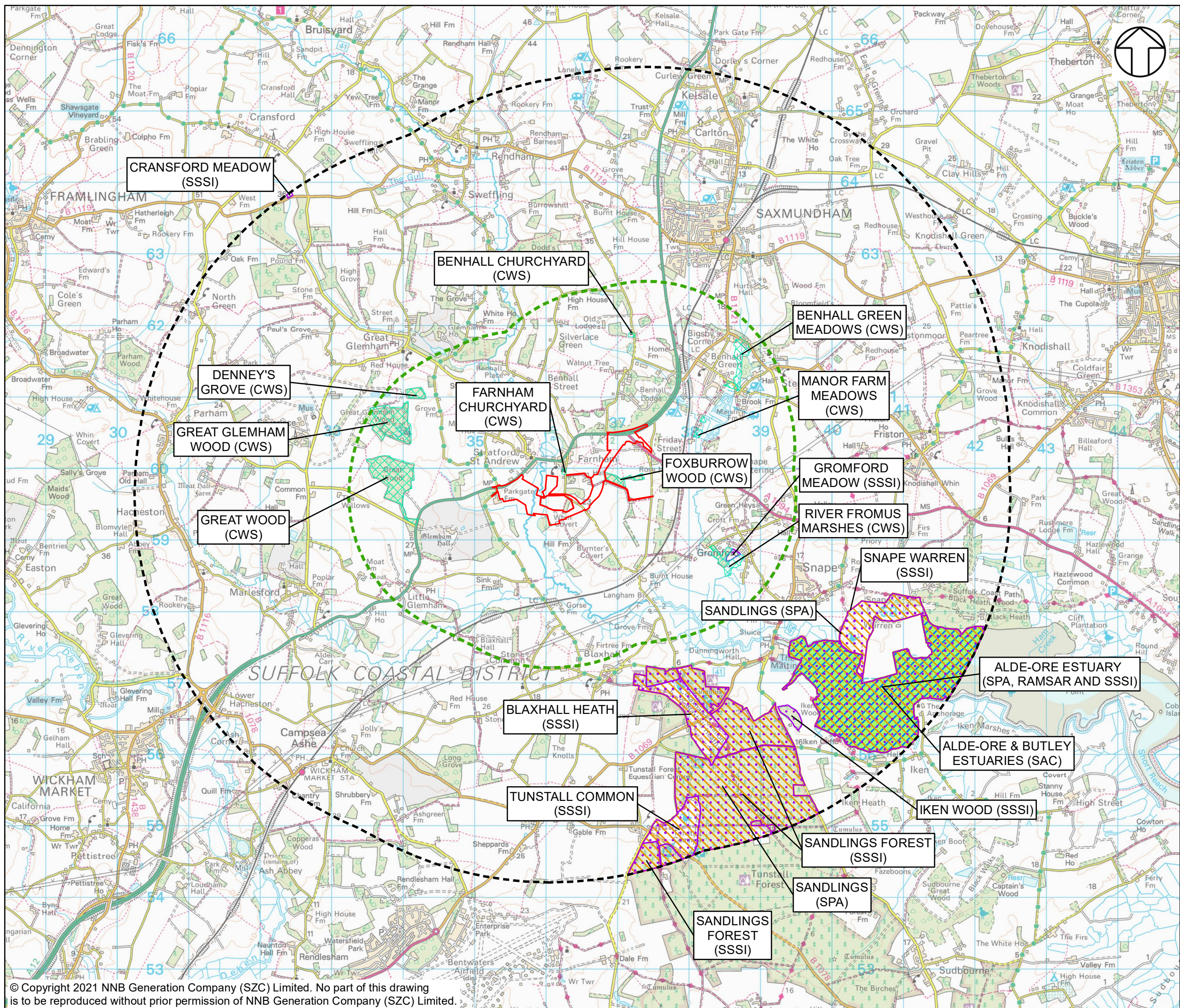
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CHAPTER 7: BIODIVERSITY AND ECOLOGY

DRAWING TITLE:
LOCATION OF INTERNATIONAL, NATIONAL
STATUTORY AND NON-STATUTORY DESIGNATED
SITES WITHIN THE SOUTHERN PARK AND RIDE
SITE STUDY AREA

DRAWING NO:
FIGURE 7.3

DATE: JUNE 2021 **DRAWN:** R.G. **SCALE:** 1:50,000 @A3 **REV:** 01





NOTES

KEY

- TWO VILLAGE BYPASS DEVELOPMENT SITE BOUNDARY
- 5KM STUDY AREA (STATUTORY DESIGNATIONS)
- 2KM STUDY AREA (NON-STATUTORY DESIGNATIONS)
- COUNTY WILDLIFE SITES (CWS)
- SPECIAL PROTECTION AREA
- SPECIAL AREA OF CONSERVATION
- RAMSAR SITE
- SITE OF SPECIAL SCIENTIFIC INTEREST (SSSI)

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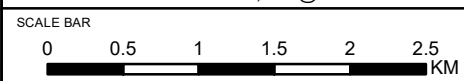


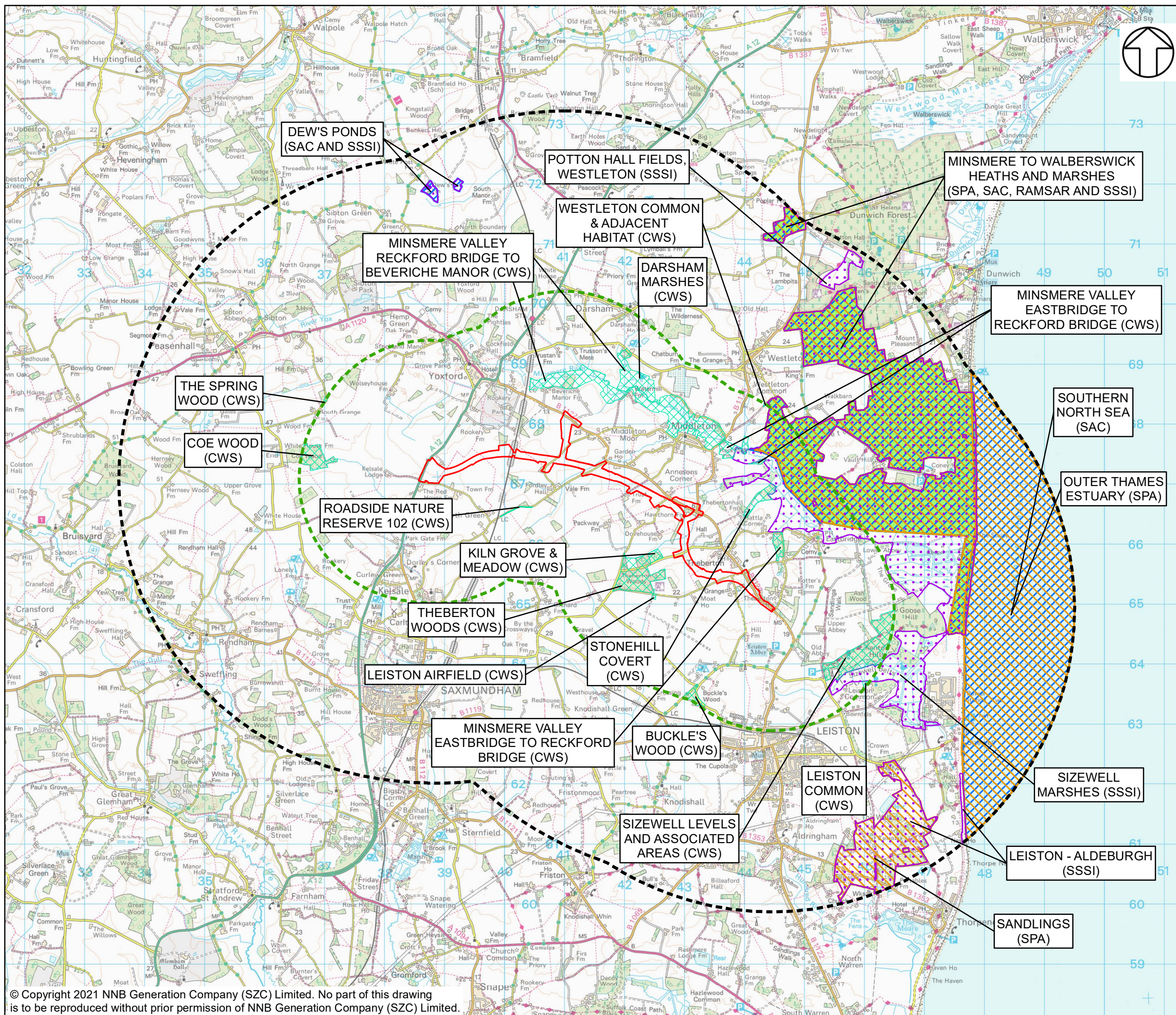
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CHAPTER 7: BIODIVERSITY AND ECOLOGY

DRAWING TITLE:
LOCATION OF INTERNATIONAL,NATIONAL
STATUTORY AND
NON-STATUTORY DESIGNATED SITES
OF TWO VILLAGE BYPASS STUDY AREA

DRAWING NO:
FIGURE 7.4

DATE: JUNE 2021 **DRAWN:** R.G. **SCALE:** 1:50,000 @A3 **REV:** 01





NOTES

KEY

- SIZEWELL LINK ROAD DEVELOPMENT SITE BOUNDARY
- 5KM STUDY AREA (STATUTORY DESIGNATIONS)
- 2KM STUDY AREA (NON-STATUTORY DESIGNATIONS)
- COUNTY WILDLIFE SITES (CWS)
- SPECIAL PROTECTION AREA
- SPECIAL AREA OF CONSERVATION
- RAMSAR SITE
- SITE OF SPECIAL SCIENTIFIC INTEREST (SSSI)

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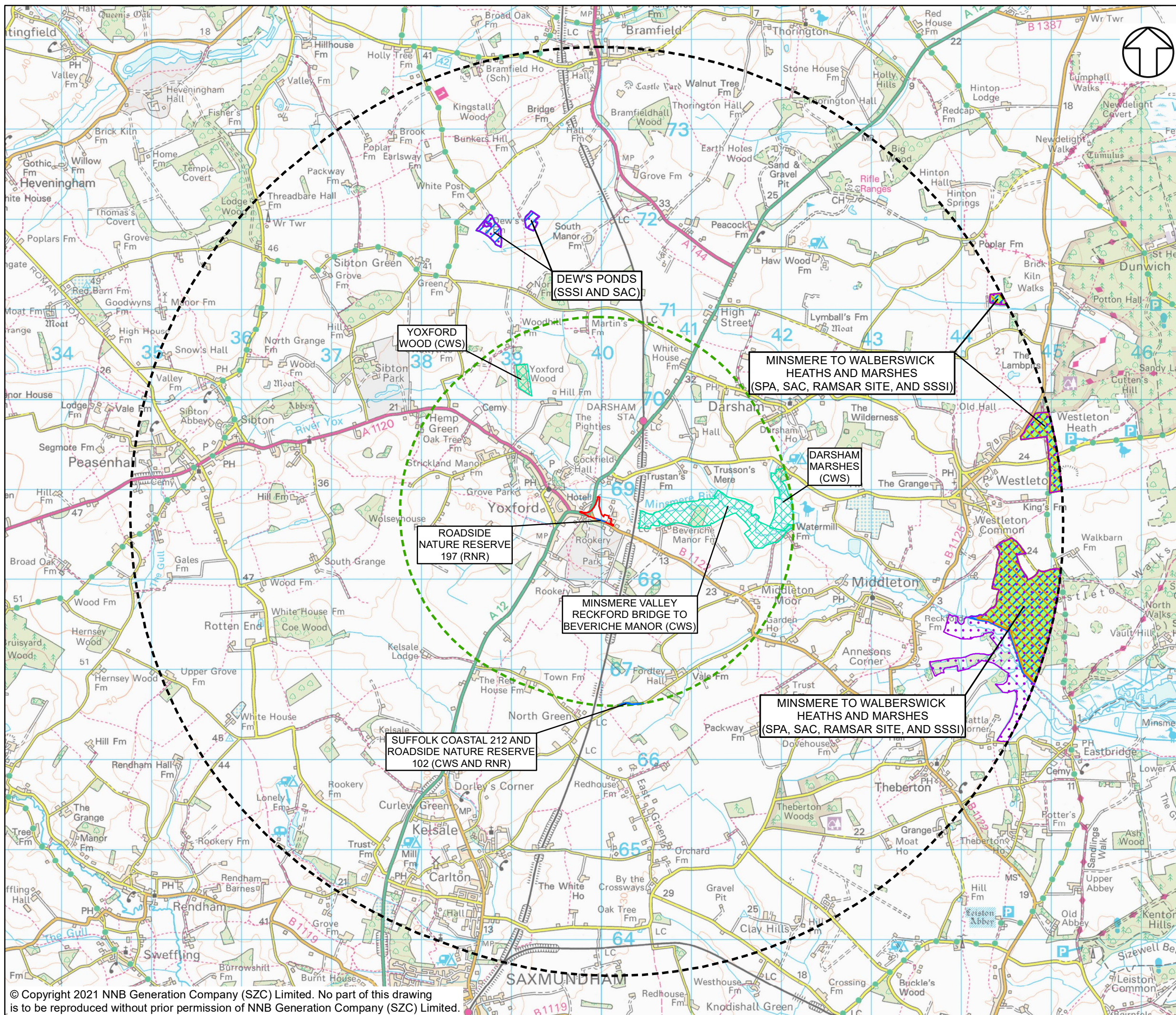
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WRITTEN QUESTIONS ISSUED ON 21st APRIL 2021
CHAPTER 7: BIODIVERSITY AND ECOLOGY

DRAWING TITLE:
LOCATION OF INTERNATIONAL, NATIONAL
STATUTORY AND NON-STATUTORY DESIGNATED
SITES WITHIN THE SIZEWELL LINK ROAD
STUDY AREA

DRAWING NO:
FIGURE 7.5

DATE: JUNE 2021 **DRAWN:** R.G. **SCALE:** 1:60,000 @A3 **REV:** 01

SCALE BAR
0 0.5 1 1.5 2 2.5 KM



NOTES

KEY

- YOXFORD ROUNDABOUT DEVELOPMENT SITE BOUNDARY
- 5KM STUDY AREA (STATUTORY DESIGNATIONS)
- 2KM STUDY AREA (NON-STATUTORY DESIGNATIONS)
- COUNTY WILDLIFE SITE (CWS)
- SPECIAL PROTECTION AREA (SPA)
- SPECIAL AREA OF CONSERVATION (SAC)
- SITE OF SPECIAL SCIENTIFIC INTEREST (SSSI)
- RAMSAR SITE
- ROADSIDE NATURE RESERVE (RNR)

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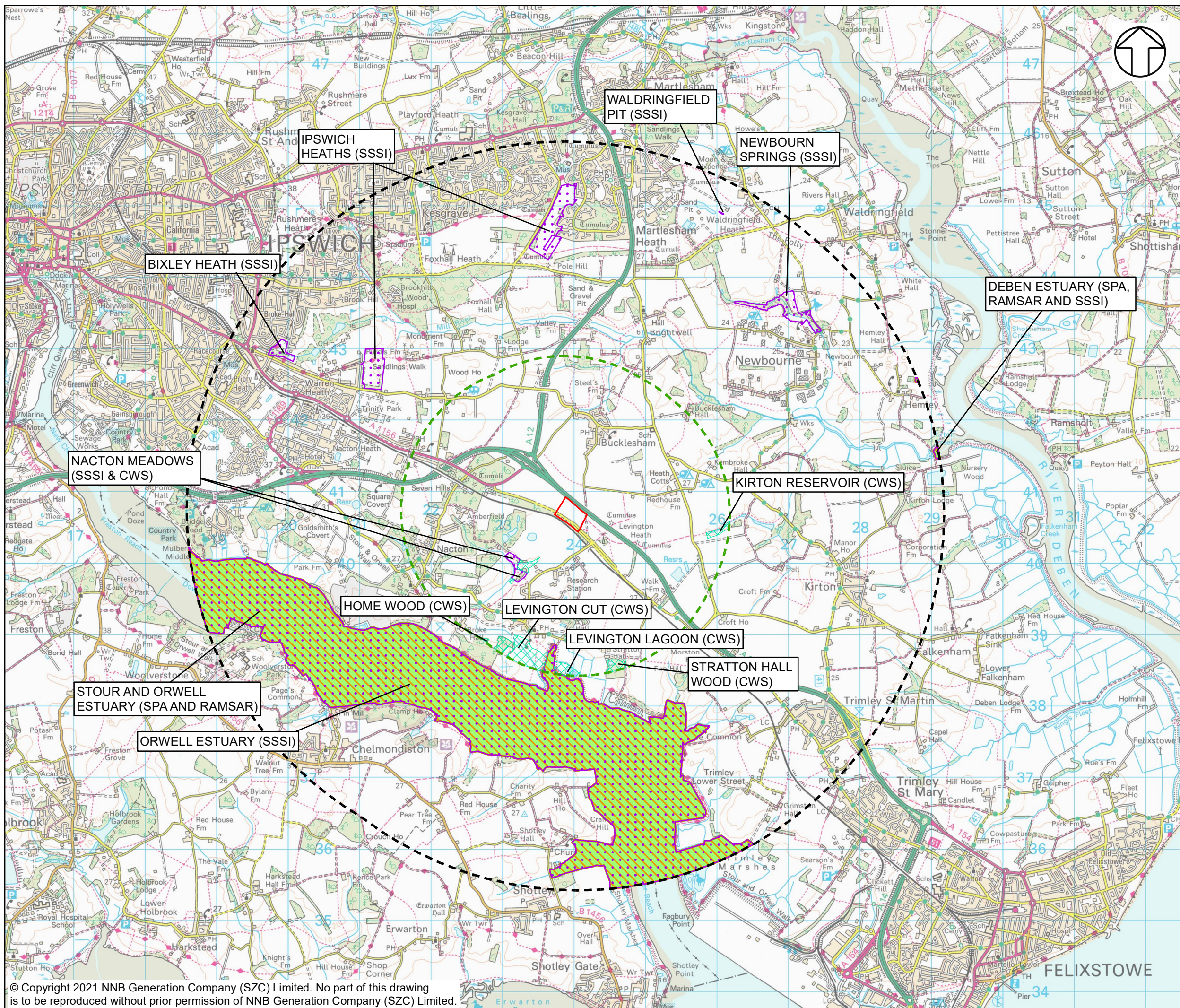
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RESPONSES TO EXAMINING AUTHORITY'S
WRITTEN QUESTIONS ISSUED ON 21st APRIL 2021
CHAPTER 7: BIODIVERSITY AND ECOLOGY

DRAWING TITLE:
LOCATION OF INTERNATIONAL, NATIONAL
STATUTORY AND
NON-STATUTORY DESIGNATED SITES
WITHIN YOXFORD ROUNDABOUT STUDY AREA

DRAWING NO:
FIGURE 7.6

DATE: JUNE 2021	DRAWN: R.G.	SCALE: 1:40,000 @A3	REV: 01
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SCALE BAR



NOTES

KEY

- FREIGHT MANAGEMENT FACILITY DEVELOPMENT SITE BOUNDARY
- 5KM STUDY AREA (STATUTORY DESIGNATIONS)
- 2KM STUDY AREA (NON-STATUTORY DESIGNATIONS)
- COUNTY WILDLIFE SITES (CWS)
- SPECIAL PROTECTION AREA (SPA)
- RAMSAR SITE
- SITE OF SPECIAL SCIENTIFIC INTEREST (SSSI)

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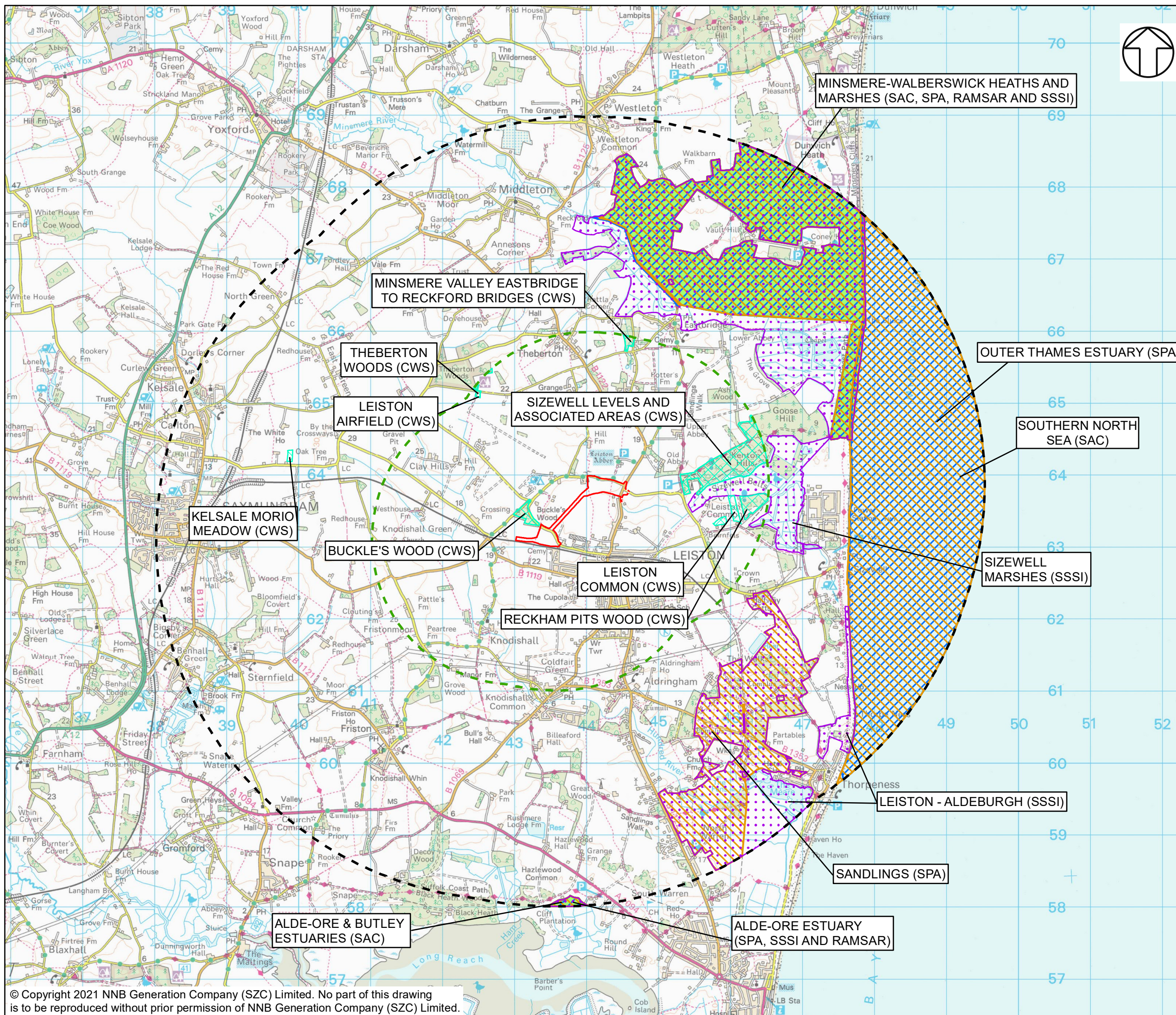
DOCUMENT:
SIZEWELL C PROJECT
RESPONSES TO EXAMINING AUTHORITY'S
WRITTEN QUESTIONS ISSUED ON 21st APRIL 2021
CHAPTER 7: BIODIVERSITY AND ECOLOGY

DRAWING TITLE:
LOCATION OF INTERNATIONAL, NATIONAL
STATUTORY AND NON-STATUTORY
DESIGNATED SITES OF THE
FREIGHT MANAGEMENT FACILITY STUDY AREA

DRAWING NO:
FIGURE 7.7

DATE: JUNE 2021 DRAWN: R.G. SCALE: 1:50,000 @A3 REV: 01





NOTES

KEY

- GREEN RAIL ROUTE DEVELOPMENT
- SITE BOUNDARY
- VOLUME 9 ASSESSMENT AREA
- 5KM STUDY AREA (STATUTORY DESIGNATIONS)
- 2KM STUDY AREA (NON-STATUTORY DESIGNATIONS)
- COUNTY WILDLIFE SITE (CWS)
- RAMSAR SITE
- SPECIAL AREA OF CONSERVATION (SAC)
- SPECIAL PROTECTION AREA (SPA)
- SITE OF SPECIAL SCIENTIFIC (SSSI)

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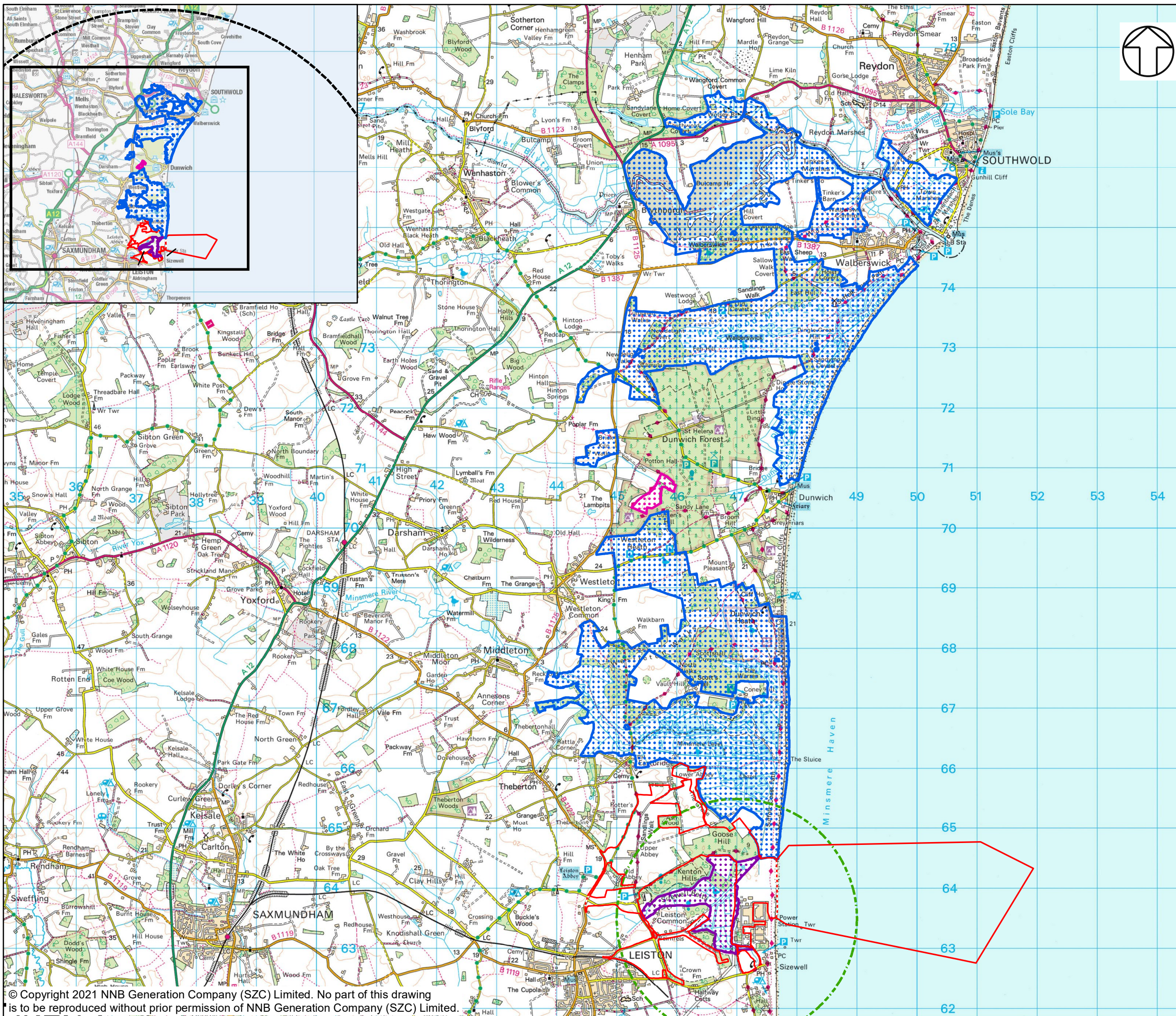
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DRAWING TITLE:
LOCATION OF INTERNATIONAL, NATIONAL
STATUTORY AND
NON-STATUTORY DESIGNATED SITES
OF THE GREEN RAIL ROUTE SITE STUDY AREA

DRAWING NO:
FIGURE 7.8

DATE: JUNE 2021 DRAWN: M.S. SCALE: 1:50,000 @A3 REV: 01

SCALE BAR
0 0.5 1 1.5 2 KM



NOTES

OTHER SSSIS HAVE BEEN REMOVED FOR ILLUSTRATIVE PURPOSES.

KEY

- SIZEWELL C MAIN DEVELOPMENT SITE BOUNDARY
- DEMARCATION LINE
- STUDY AREA 20KM - SITE CENTERED
- STUDY AREA 2KM - SITE CENTERED
- SITE OF SPECIAL SCIENTIFIC INTEREST (SSSI)
- MINSMERE-WALBERSWICK HEATHS & MARSHES
- POTTON HALL FIELDS, WESTLETON
- SIZEWELL MARSHES

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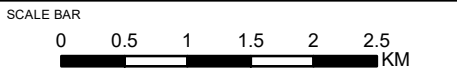


DOCUMENT:
SIZEWELL C PROJECT
RESPONSES TO EXAMINING AUTHORITY'S
WRITTEN QUESTIONS ISSUED ON 21ST APRIL 2021
CHAPTER 7: BIODIVERSITY AND ECOLOGY

DRAWING TITLE:
LOCATION OF SIZEWELL MARSHES SSSI,
MINSMERE-WALBERSWICK HEATHS AND
MARSHES SSSI AND THE POTTON
HALLS FIELDS SSSI.

DRAWING NO:
FIGURE 7.9

DATE: JUNE 2021 DRAWN: R.C. SCALE: 1:300,000 @A3 REV: 01



APPENDIX 7B NATURAL ENVIRONMENT AND RURAL COMMUNITIES ACT 2006 DUTIES

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PLATES

None Provided

FIGURES

None Provided

APPENDICES

None Provided

APPENDIX 7B

1 INTRODUCTION

1.2 ExA Questions Bio. 1.5 - 1.7

- 1.2.12 *'Bio 1.5: Please will the Applicant provide a list and concise explanatory note of the reasonable steps it proposes in the application for the SoS to take in relation to this application, consistent with the proper exercise of the SoS's functions, to further the conservation and enhancement of the flora, fauna or geological or physiographical features by reason of which the site is of special scientific interest (s.28G Wildlife and Countryside Act 1981). The note should specify the relevant flora, fauna or geological or physiographical features, where the steps are described in the application documents, where they are assessed, and how they enable the SoS to meet their duty in s.28G.*
- 1.2.13 *If the Applicant would prefer to do this in one note covering this and the next two questions that would be acceptable.*
- 1.2.14 *Bio 1.6: Please will the Applicant set out in a concise explanatory note the steps which it considers the SoS should take in relation to this application to comply with their duties in s.40 of the Natural Environment and Rural Communities Act 2006 to have regard "so far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity". For the avoidance of doubt, this should include the United Nations Environmental Programme Convention on Biological Diversity of 1992.*
- 1.2.15 *Bio 1.7: Please will the Applicant set out in a concise explanatory note the steps which it considers the SoS should take in relation to this application to comply with their duties in s.41 of the Natural Environment and Rural Communities Act 2006*
- a) *to take such steps as appear to the Secretary of State to be reasonably practicable to further the conservation of the living organisms and types of habitat included in any list published under this section, or*
 - b) *to promote the taking by others of such steps. The application affects a number of such organisms and habitats. The note should deal with each such organism and habitat, explain briefly the steps and conclusion which show that the duties will have been discharged and refer the ExA to the documents and paragraphs in the ES (and other*

application material) where the supporting evidence and conclusions are to be found'.

1.3 Applicant's Response

The Duties

s.28G of the Wildlife and Countryside Act 1981 requires the Examining Authority and Secretary of State (as section 28G authorities) to take reasonable steps, consistent with the proper exercise of its functions, to further the conservation and enhancement of the flora, fauna or geological or physiographical features by reason of which the site is of special scientific interest.

s.40 of the Natural Environment and Rural Communities Act 2006 requires the Examining Authority and Secretary of State to have regard so far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity.

S.41 of the Natural Environment and Rural Communities Act 2006 requires the Secretary of State to take such steps as appear to the Secretary of State to be reasonably practicable to further the conservation of the living organisms and types of habitat included in any list published under s.41, or promote the taking of such steps by others.

The Applicant's response to this question will deal with the following species/habitats:

- a) Batsb) Otter
- c) Water vole
- d) Other mammal (hedgehog, brown hare)
- e) Reptiles
- f) Natterjack toad
- g) Great crested newt
- h) Birds
- i) Invertebrates

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- j) S41 fish species:
- k) Marine-mammals (harbour porpoise and common seal):
- l) Habitats and Sizewell Marshes SSSI :

Each are considered in turn below.

a) Bats:

- 1.3.11 Bats will be conserved by the implementation of a detailed lighting strategy in accordance with the **Lighting Management Plan** [APP-182]. In some sites, bat boxes will be erected to provide alternative roosting opportunities, in addition, there will also be the strategic positioning of close boarded fencing and bunds. The **outline Landscape and Ecology Management Plan (oLEMP)** [REP1-010] and **Terrestrial Ecology Monitoring and Mitigation Plan (TEMMP)** [REP1-016] documents outline the management and monitoring measures proposed for bats. Reasonable avoidance measures will be implemented at each site, including toolbox talk for construction workers and avoidance of night-time working where possible. Trees with bat roost potential will be retained where possible but where they are to be removed, a final inspection of trees will be undertaken and felling of trees would take place outside of the maternity and hibernation periods. Licence conditions will also be in place as stipulated by Natural England.

b) Otter:

- 1.3.12 In the sites where otters are considered to be an important ecological feature, preconstruction surveys will be undertaken to check for holts prior to any vegetation clearance. In addition, any works in close proximity to otter habitat will be designed to minimise impact and avoid interference and the locations of all holts and couches must be identified to contractors in confidence to ensure that they are not accidentally disturbed during the construction process. The landscaping design as it matures will provide further cover for otter. In addition, the salvaged tree stumps/ root plates from the Sizewell B works will also be utilised and strategically positioned within the Sizewell C Estate and over time will vegetate over providing further places of shelter which could be utilised by otter. The **oLEMP** [REP1-010] and **TEMMP** [REP1-016] set out the monitoring and management of these habitat areas and species. Licence conditions will also be in place as stipulated by Natural England.

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c) Water vole:

- 1.3.13 At the main development site, water voles will either be displaced using vegetation removal or trapped out from the area of the proposed SSSI crossing and relocated to the receptor area at Aldhurst Farm. Extensive habitat creation works have already been undertaken at Aldhurst Farm for water vole. As a result of the main development site works, it is considered that there will be an overall increase in the conservation status of water vole due to increased habitat availability. Preconstruction surveys will be undertaken to check for water vole activity prior to any vegetation clearance and, other than where displacement is required, any works in close proximity to water vole habitat will be designed to minimise impact and avoid interference. Water vole have also been confirmed as present at the two village bypass. Water voles will be displaced and habitat creation and enhancements have been incorporated into the landscape design for water vole. The **oLEMP** [REP1-010] and **TEMMP** [REP1-016] set out the monitoring and management of these habitat areas and species. Licence conditions will also be in place as stipulated by Natural England.

d) Other mammal (hedgehog, brown hare):

- 1.3.14 A phased approach to site clearance and topsoil stripping will be used to discourage brown hare and hedgehogs away from site and into surrounding suitable habitat.

e) Reptiles:

- 1.3.15 Reptile translocation from the main development site will be undertaken into large areas of habitat created for reptiles. The receptor sites cover a larger area than the reptile habitats lost and have enhanced features for reptiles (e.g. provision of cover, management to ensure prey availability, and hibernacula). All works that have the potential to impact reptiles would be undertaken following the agreed Method Statement and would be overseen by an Ecological Clerk of Works (ECoW), any potential refugia will be inspected by an ECoW and removed before works takes place and a phased vegetation clearance process would be undertaken to displace any residual reptiles from the site, once the translocation process has been undertaken. The **oLEMP** [REP1-010], **TEMMP** [REP1-016] and **Reptile Mitigation Strategy** [APP-252] sets out the monitoring and management of these habitat areas and species.

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f) Natterjack toad:

- 1.3.16 Natterjack toad are present within the main development site in the vicinity of Water Management Zone 1. Preconstruction surveys will be undertaken and amphibian fencing and a trapping and translocation exercise will be undertaken in advance of site clearance. To compensate for the temporary loss of foraging habitat, a new strategically placed natterjack toad pond will be created and new refuge and overwintering opportunities within Retsom's Field will be created. Breeding and resting sites will be safeguarded from the proposed works by the installation of amphibian proof fencing. The **oLEMP** [REP1-010] and **TEMMP** [REP1-016] set out the monitoring and management of these habitat areas and species. Licence conditions will also be in place as stipulated by Natural England.

g) Great crested newt:

- 1.3.17 Ponds that support great crested newt populations will be retained where possible and a construction buffer will be maintained around the retained ponds. Replacement ponds will be provided where breeding ponds are being lost. Local translocations will be undertaken as necessary, such as for the Sizewell link road. Reasonable avoidance methods statements will be followed, including a toolbox talk to site contractors, and the appointment of an ECoW to monitor vegetation clearance. The landscape designs will provide better quality terrestrial habitat for great crested newt due to improved management and the provision of further planting in locations where this is currently sparse, particularly for the Sizewell link road. New ponds and wetland creation will also be undertaken and further habitat enhancements which will provide suitable and improved habitat conditions for great crested newt. The **oLEMP** [REP1-010] and **TEMMP** [REP1-016] set out the monitoring and management of these habitat areas and species. Licence conditions (where relevant) will also be in place as stipulated by Natural England.

h) Birds:

- 1.3.18 S41 listed bird species have been recorded in the main development site and each associated development site. New reedbed and ditches habitat at Aldhurst Farm has been created to replace the land take of these habitats within Sizewell Marshes SSSI in the main development site as well as habitat areas which have been designed to benefit marsh harrier. The removal of scrub and trees and ground clearance works would generally be undertaken outside of the breeding bird season. Where it is not possible to undertake these works outside of the breeding bird season, an inspection for nests would be undertaken by a suitably experienced ECoW prior to the removal

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of vegetation. If breeding birds are identified during this process, works in the vicinity of the nest (estimated to be a 10m standoff) would cease until the young have fledged.

i) **Invertebrates:**

- 1.3.19 Permanent habitat creation (e.g. reptiles in the Studio Field complex, the compensatory foraging habitat for marsh harriers and the reedbed and ditch habitat created within Aldhurst Farm will benefit invertebrate species.

i) **S41 fish species:**

- 1.3.20 For the main development site, the culvert crossing of the Leiston Drain would be of sufficient dimensions to leave the bed and bank of the Leiston Drain unmodified and the proposed control structure on the realigned Sizewell Drain would incorporate a fish pass so no obstruction to migratory fish and eels is anticipated. An eel and fish rescue is proposed to be carried out. Also, best practise methods will be followed such as no piling at night.

i) **Marine-mammals (harbour porpoise and common seal):**

- 1.3.21 Piling activities associated with installation of the 18 intertidal and subtidal piles required for the permanent beach landing facility (BLF) and approximately 114 piles required to construct the BLF, related to the main development site, will conform to best environmental practice in accordance with Joint Nature Conservation Committee guidelines to mitigate effects on marine mammals.

i) **Habitats and Sizewell Marshes SSSI :**

- 1.3.22 Compensatory habitats for the Sizewell Marshes are considered below. S41 habitats (including reedbed, fen, wet woodland, shingle and sand dune vegetation, acid grassland, shingle and sand dune vegetation, arable field margins, ponds, hedgerow and lowland mixed deciduous woodland) will be retained where possible, or replacement habitat has been incorporated into the proposed development.

- Reedbed: establishment of new reedbed and ditches at Aldhurst Farm (completed in 2016).
- Fen meadow: a **Fen Meadow Strategy** [\[AS-209\]](#) has been submitted which includes three locations in Suffolk (Halesworth, Benhall and Pakenham) at which at least 4.5ha of permanent fen meadow habitat

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would be developed to compensate for the permanent loss of about 0.46ha of fen meadow habitat from within Sizewell Marshes SSSI.

- Wet woodland: a **Wet Woodland Strategy** [REP1-020] has been submitted which will create 0.7ha of new wet woodland on the EDF Energy estate and 2.36ha of wet woodland at the two fen meadow sites at is proposed to compensate for the loss of 3.06ha of wet woodland associated with the SSSI crossing and the diversion of the Sizewell Drain.
- Hedgerows: on-site hedgerows would be retained where appropriate and in some sites hedgerow reinstatement will be completed. For example, for NPR the hedgerows along the eastern and northern site boundaries will be supplemented with further planting to permanently infill existing gaps which currently do not serve a purpose and replacement habitat planting of a permanent hedgerow along the southern side of Willow Marsh Lane during construction would result in the planting of approximately 585m of hedgerow to compensate for the 220m lost during construction.

The steps outlined in these measures will preserve and, in some cases, enhance the conservation of the Section 41 species and habitats within the main development site and associated development site boundaries which will allow the Examining Authority and the Secretary of State to comply with their duties under s.40 and 41 of the Natural Environment and Rural Communities Act 2006 .

In relation to the SSSI, the measures identified above will further the conservation and enhancement of the flora, fauna or geological or physiographical features by reason of which the site is a SSSI and will also allow the Examining Authority and the Secretary of State to comply with their duties under s. 28G of the Wildlife and Countryside Act 1981.

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Table 1: Summary of measures to be implemented to conserve species and habitats listed in the Wildlife and Countryside Act in the Main Development Site and Associated Development Sites

Wildlife & Countryside Act Habitats and Species	Sites of Relevance	Relevant document(s)	Measures to be implemented to conserve these species and habitats
SSSI Habitats (Fen Meadow and Wet Woodland)	Main development site only (scoped out from other sites)	<p>Volume 2, Chapter 14: Terrestrial Ecology and Ornithology [AS-033]</p> <p>Terrestrial Ecology Monitoring and Mitigation Plan [REP1-016]</p>	<p><u>Primary mitigation:</u></p> <ul style="list-style-type: none"> • A barrier (e.g. sheet piling) would be installed to provide separation from the main platform and Sizewell Marshes SSSI with engineered drainage installed to limit the disturbance to the hydrology and geology of Sizewell Marshes SSSI (see Chapter 19: Groundwater and Surface Water of the ES (Book 6)). • The realignment of the Sizewell Drain and the construction of associated water control features would enable manipulation of the water levels within Sizewell Marshes SSSI, to safeguard retained areas of fen meadow and reedbed habitats (see Chapter 19 Ground and Surface Water of the ES (Book 6)). • The establishment of new reedbed and ditches at Aldhurst Farm (completed in 2016) has provided replacement for the land take of these habitats within Sizewell Marshes SSSI. The replacement habitats have established successfully, and mobile aquatic plant and invertebrate species would colonise

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Wildlife & Countryside Act Habitats and Species	Sites of Relevance	Relevant document(s)	Measures to be implemented to conserve these species and habitats
			<p>over time from the adjacent areas of the Sizewell Marshes SSSI.</p> <ul style="list-style-type: none"> • A Fen Meadow Strategy [AS-209] has been prepared (which includes three locations in Suffolk at which permanent fen meadow habitat would be developed to compensate for the permanent loss of about 0.46ha of fen meadow habitat from within Sizewell Marshes SSSI, associated with the construction of the main platform and the diversion of the Sizewell Drain. • An area of 0.7ha of wet woodland would be created within the north of the development, adjacent to the marsh harrier habitat improvement area and a further 2.36ha would be created at the two fen meadow sites at Benhall and Pakenham. This would provide compensatory habitat for the loss of 3.06ha of wet woodland to the development. • The oLEMP outlines management actions to return existing arable land on the EDF Energy estate post-construction to Suffolk Sandlings habitat comprising dry acid grassland and with additional areas of woodland and scrub. In the operational phase of the development, this landscape-scale habitat creation approach would replace existing intensively

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Wildlife & Countryside Act Habitats and Species	Sites of Relevance	Relevant document(s)	Measures to be implemented to conserve these species and habitats
			<p>managed arable farmland with habitats of greater biodiversity value and would increase habitat connectivity. The oLEMP includes also long-term management prescriptions and a monitoring programme for habitats created ensuring that these areas deliver the habitats proposed.</p> <p><u>Wet woodland:</u> A total of 0.7ha of new wet woodland is proposed to compensate for the loss of wet woodland associated with the SSSI crossing and the diversion of the Sizewell Drain (Primary mitigation). A Wet Woodland Strategy [REP1-020] to define further opportunities has been developed. The Wet Woodland Strategy [REP1-020] includes the following:</p> <ul style="list-style-type: none"> Additional areas of wet woodland at the Fen Meadow compensation sites, although not at the expense of fen meadow habitats proposed at these locations. At both Benhall and Pakenham areas of wet Alder woodland are immediately adjacent to the sites and could be extended into the sites by manipulating water levels or by some local shallow excavation of topsoil.

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Wildlife & Countryside Act Habitats and Species	Sites of Relevance	Relevant document(s)	Measures to be implemented to conserve these species and habitats
			<p><u>Reedbed, ditch, fen meadow:</u></p> <ul style="list-style-type: none"> • Reedbed and ditch habitat creation at Aldhurst Farm is well-established and is already supporting plant and bird species characteristic of reedbed habitat. A management strategy for the site, which includes monitoring targets, is in place and is being updated. • A Fen Meadow Strategy [AS-209] is in place which defines two sites in Suffolk on which permanent fen meadow habitat would be developed to compensate for the permanent loss of about 0.46ha of fen meadow habitat from within Sizewell Marshes SSSI. Uncertainties remain regarding the success of fen meadow habitat creation which may take time to be fully effective. • 0.7ha of wet woodland to be created in the north-east of the site. • As outlined in the Plants and Habitats Synthesis Report (Volume 2, Appendix 14B1 [APP-250]) the fen meadow habitats within the Sizewell Marshes SSSI have been subject to a long running monitoring programme undertaken on behalf of the SWT and SZC Co. During construction and operation this monitoring programme would continue, in

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Wildlife & Countryside Act Habitats and Species	Sites of Relevance	Relevant document(s)	Measures to be implemented to conserve these species and habitats
			<p>particular recording the extent of the two sensitive plant assemblages within the Grade 1 and 2 fen meadow, namely low growing species and species indicative of nutrient poor conditions.</p> <ul style="list-style-type: none"> As at present, if monitoring indicates a measurable decline in the extent of these sensitive plant assemblages or indicates that habitat condition is deteriorating, for example due an increase in the extent and abundance of coarse grass and sedge species, then it would be appropriate to undertake additional mitigation. Additional mitigation could include additional stock grazing or a cutting regime to remove excess vegetation. <p><u>Acid grassland:</u></p> <ul style="list-style-type: none"> Landscape-scale restoration to summer parched grassland with scrub across the wider EDF Energy estate under the operational masterplan is providing long-term replacement for any losses of acid grassland.
Deptford Pink	Main development site only	Volume 2, Chapter 14: Terrestrial	A draft Deptford Pink Method Statement [AS-209] has been prepared for Deptford Pink (<i>Dianthus armeria</i>). If the species is relocated in targeted searches, the collection of both seeds and

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Wildlife & Countryside Act Habitats and Species	Sites of Relevance	Relevant document(s)	Measures to be implemented to conserve these species and habitats
	(scoped out from other sites)	<p>Ecology and Ornithology [AS-033]</p> <p>Main development site Draft Deptford Pink Protected Species Licence and associated Method Statement</p>	<p>plants would be undertaken with translocation to a suitable location on the existing sea defence seaward of the Sizewell B power station that would not be directly affected by the construction of the proposed development. The translocation would be monitored pre- and post-construction and would be conducted under licence from Natural England.</p> <p><u>Translocation:</u> Up to 100 non-flowering rosettes will be carefully moved from the donor site to the prepared receptor areas. The plants will be dug by hand using a trowel, attempting to keep the root ball intact. They will then be wrapped in damp newspaper and placed in a plastic bag to prevent drying out before replanting in the prepared receptor areas on the same day. The plants will be moved during cool damp weather in October the year of the DCO (Year 1). Plants will be watered into place.</p> <p><u>Monitoring:</u> The receptor areas will be monitored the following July/August for successful establishment. Flowering plants and non-flowering rosettes will be counted up to 1000 basal rosettes, estimates will</p>

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Wildlife & Countryside Act Habitats and Species	Sites of Relevance	Relevant document(s)	Measures to be implemented to conserve these species and habitats
			<p>be made beyond this number. This monitoring will be extended for 5 years following translocation.</p> <p>In the event that establishment has been poor or plants fail to persist, a proportion of seed stored in the Millennium Seed Bank may be grown on as plugs and transplanted to the site as previously described in an attempt to boost establishment.</p> <ul style="list-style-type: none"> A detailed monitoring plan will be prepared and this will be reported annually.
Norfolk Hawker	Main development site only (scoped out from other sites)	<p>Volume 2, Chapter 14: Terrestrial Ecology and Ornithology [AS-033]</p> <p>Terrestrial Ecological Monitoring and Mitigation Plan [REP1-016]</p>	<p><u>Primary:</u></p> <ul style="list-style-type: none"> Permanent foraging habitat for marsh harriers, which will also benefit invertebrates, is being established and enhanced within the northern part of the EDF Energy estate, in advance of construction, to provide alternative habitats if any potential disturbance effects arise during construction which might discourage marsh harriers from foraging over parts of the Minsmere South Levels and Sizewell Marshes SSSI. These habitats will provide habitats for many invertebrate species including Grayling. The oLEMP outlines management actions to return existing arable land on the EDF Energy estate post-construction to Suffolk Sandlings habitat comprising dry

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Wildlife & Countryside Act Habitats and Species	Sites of Relevance	Relevant document(s)	Measures to be implemented to conserve these species and habitats
			<p>acid grassland and with additional areas of woodland and scrub. In the operational phase of the development, this landscape-scale habitat creation approach would replace existing intensively managed arable farmland with habitats of greater biodiversity value and would increase habitat connectivity. The oLEMP includes also long-term management prescriptions and a monitoring programme for habitats created ensuring that these areas deliver the habitats proposed.</p> <p>Norfolk hawk is a protected species under Schedule 5 of the Wildlife and Countryside Act (1981) and a mitigation plan to recover larvae of this species along with other macro-invertebrates in the impacted lengths of the Sizewell Drain, the Leiston Drain and related ditches has been developed [AS-275] and is appended to the CoCP and thus secured via requirement. This is integrated with a “fish rescue” for these watercourses during the relevant early construction works.</p> <p>Creation of reedbed and ditch habitat at Aldhurst Farm as well as reedbed creation to the north eastern extent of the site. Habitat creation as part of the reptile and marsh harrier</p>

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Wildlife & Countryside Act Habitats and Species	Sites of Relevance	Relevant document(s)	Measures to be implemented to conserve these species and habitats
			<p>mitigation would also benefit the aquatic and terrestrial invertebrate assemblages including the white-mantled wainscot which is dependent on reedbeds.</p> <p>Creation of fen meadow habitat at three locations off-site at three locations in Suffolk (Halesworth, Benhall and Pakenham) at which at least 4.5ha of permanent fen meadow habitat would be developed to compensate for the permanent loss of about 0.46ha of fen meadow habitat from within Sizewell Marshes SSSI.</p> <p><u>Monitoring:</u></p> <ul style="list-style-type: none"> The reedbed and ditch habitat created within Aldhurst Farm, wet woodland and the acid grassland habitats created within the reptile mitigation areas as part of the primary mitigation measures, would become more diverse over time, as additional plant species colonise these areas as well as the additional reedbeds created at the north eastern extent of the site In turn, these areas would support a greater diversity of invertebrate species. The oLEMP provides an overview of the approach which

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Wildlife & Countryside Act Habitats and Species	Sites of Relevance	Relevant document(s)	Measures to be implemented to conserve these species and habitats
			<p>would be used to create and manage the habitats proposed across the EDF Energy estate as well as providing an outline of the monitoring which would be used to assess the success of the habitat establishment.</p> <ul style="list-style-type: none"> • The TEMMP [REP1-016] provides the proposed monitoring schedule and approaches to monitoring of invertebrates. • Monitoring would target invertebrate assemblages of national importance and high conservation value which are characteristic of the habitats to be lost, including populations of Norfolk Hawker and the white-mantled wainscot, to assess the extent to which these assemblages become established in the new habitats within the site boundary and across the wider EDF Energy estate. • The creation of Suffolk Sandlings dry acid grassland habitat during operation across the EDF Energy estate as well as the re-establishment of the coastal habitats would be subject to monitoring to determine the extent to which invertebrate assemblages become established and would

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Wildlife & Countryside Act Habitats and Species	Sites of Relevance	Relevant document(s)	Measures to be implemented to conserve these species and habitats
			be directly relevant to the establishment of Grayling across these areas of the estate.
Amphibians-specifically Natterjack Toad but will benefit other amphibian species.	Main development site only (Natterjack Toad scoped out from other sites).	<p>Volume 2, Chapter 14: Terrestrial Ecology and Ornithology [AS-033]</p> <p>Appendix 14C7A – Natterjack Toad Mitigation Strategy [APP-252]</p> <p>Sizewell C Project Terrestrial Ecology Monitoring and</p>	<p><u>Tertiary mitigation:</u> A draft Natterjack Toad Protected Species Licence has been prepared for the proposed development [AS-209]. Removal of vegetation, ground clearance and the commencement of construction activities have the potential to risk killing or injuring natterjack toads. Amphibian-proof fencing would be installed prior to construction around the footprint of the proposed Water Management Zone (WMZ) in Retsom's Field, to prevent any natterjack toads from entering the construction footprint and would include a trapping out exercise using pitfall buckets. Pre-construction checks of any potential refugia in and alongside Retsom's Field would be required, with any natterjack toads found within the footprint of the proposed WMZ captured and relocated to the retained areas of Retsom's Field. Works would be undertaken outside of the hibernation season (considered to be October to April). Pre-construction checks would be completed by a licensed or accredited ecologist. In addition, a new pond would be created within the retained areas of</p>

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		Mitigation Plan [REP1-016]	<p>Retsom's Field as well as the creation of hibernation features which would be suitable for use by natterjack toads.</p> <p><u>Mitigation details from Mitigation Strategy:</u> The following timeline describes key milestones in the delivery of this Mitigation Strategy:</p> <ul style="list-style-type: none"> • preconstruction: assessment of the impacts of construction based on current Construction Plan; • updated preconstruction surveys to assess the natterjack toad population status to inform the Natural England derogation licence; • at least one year before granting of a Development Consent Order (DCO) construction of additional refugia and other habitat improvements; • inclusion of a draft Natural England derogation licence application as part of the DCO application. If approved, Natural England will issue a Letter of No Impediment to be included with the DCO submission; • on granting of the DCO, submission of a final licence application to Natural England.

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			<ul style="list-style-type: none"> To avoid killing or injuring any natterjack toad, the WMZ will be ring fenced using amphibian fencing and a trapping and translocation exercise undertaken in advance of site clearance. Captured individuals will be released within a safe location adjacent to the breeding pond (N1). Ring fencing will remain in situ to prevent natterjack toads accessing the WMZ for the duration of its operation (10 years). The WMZ would be constructed in daylight hours with no requirement for construction lighting. Similarly lighting is not likely to be required for the WMZ when it is in use and typical maintenance activities would involve a small number of personnel accessing the vicinity to monitor and maintain any equipment, filters and similar. To compensate for the temporary loss of foraging habitat, it is proposed that a new strategically placed natterjack toad pond is created and that refuge and overwintering opportunities within Retsom's Field are improved. Amphibian exclusion fencing (as per Figure 4 of the Great Crested Newt Mitigation Guidelines) will be installed around the perimeter of the working area of the WMZ, once the precise size and orientation of the WMZ is confirmed, within

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			<p>Retsom's Field to exclude and demarcate the trapping and translocation area. 'Permanent' type fencing is proposed as the fencing will remain in situ for between 9-12 years. The trapping and translocation area will then be compartmentalised with temporary amphibian proof fencing in order to increase capture effort. Pitfall traps will be installed on the inside of perimeter fencing and both sides of internal fencing to ensure a trapping density of 100 traps per hectare. Carpet tiles will also be placed between alternate pitfall traps (i.e. at a density of 50 per hectare) and adjacent to N1 to act as a receptor site.</p> <ul style="list-style-type: none"> • Pitfall traps and carpet tiles will be checked daily before 11am and fencing will also be walked at night by torchlight to search for natterjack toads; any individuals encountered will be translocated to the receptor site adjacent to N1. This approach will continue for a minimum of 30 consecutive days/nights and until five consecutive nights of 'no capture' are observed. Following which, internal fencing will be removed, and the construction works for the WMZ would proceed within the exclusion zone. With the exception of an access track to the south, perimeter fencing will remain in

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			<p>situ for the duration of the WMZ (9-12 years). During this time, it will be maintained to ensure that it remains amphibian-proof. Fence installation and removal will be overseen by an Ecological Clerk of Works (ECoW).</p> <ul style="list-style-type: none"> Given the success and active management already in place at N1 it is not proposed that this pond or the adjacent defunct N2 (which may provide terrestrial opportunities) are enhanced as part of these works. Breeding and resting sites (i.e. rabbit warrens and N2) will be safeguarded from the proposed works by the installation of amphibian proof fencing. Natterjack toad populations are usually limited by the number of suitable breeding ponds available rather than the extent of terrestrial habitat. Increasing the number of breeding ponds available is therefore likely to increase the size of the natterjack toad population in time. It is proposed that development is used as an opportunity to supplement natterjack toad conservation efforts by: <ul style="list-style-type: none"> Creating a new pond/scrape (N5). The proposed pond would be strategically placed centrally between N1 and N3 with the aim of providing a stepping stone to aid with colonisation of

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			<p>N3 and N4. It will have a surface area of approximately 150m² and will mimic N1 in terms of creation, comprising a butyl liner with very gently sloping sides (1:10) dug down to a maximum water depth of 50-70 cm. The slope of the pond basin will have a wide drawdown zone and an almost imperceptible edge. The scrape will be pumped dry in late summer and allowed to naturally fill in winter.</p> <ul style="list-style-type: none"> • Creating features such as linear mounds comprising sand and stone adjacent to N5 that will, in the short term increase terrestrial opportunities (resting and overwintering) and increase connectivity between N1 and N3/N4. In the long term the wall will aid rabbit warren excavation and further increase overwintering opportunities. • The management regime of the remainder of Retsom's Field (i.e. outside of the WMZ construction area) would continue as present (i.e. with sheep grazing). N5 will be drained down annually in late summer and allowed to fill naturally over winter (as practiced with N1). After c. 10 years the WMZ will be decommissioned, infilled and this section of Retsom's Field would be reinstated to grazed pasture.

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			<ul style="list-style-type: none"> The new pond N5 would be monitored annually along with N1 and N31 for the duration of WMZ operation (9-12 years). Thereafter, monitoring will continue biannually for 6 years (i.e. 3 years of surveys). The TEMMP [REP1-016] outlines the Natterjack toad monitoring scheme for the population and the habitats during the construction and operation period.
	Northern park and ride	Volume 3, Chapter 7: Terrestrial Ecology and Ornithology [APP-363]	<ul style="list-style-type: none"> Scoped out as not present on site, no further measures implemented as no significant effect is considered likely.
	Southern park and ride	Volume 4, Chapter 7: Terrestrial Ecology and Ornithology [APP-394]	<ul style="list-style-type: none"> Scoped out as not present on site, no further measures implemented as no significant effect is considered likely.

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	Freight management facility	Volume 8, Chapter 7: Terrestrial Ecology and Ornithology [APP-523]	<ul style="list-style-type: none"> Scoped out as not present on site, no further measures implemented as no significant effect is considered likely.
	Sizewell link road	Volume 6 Chapter 7: Terrestrial Ecology and Ornithology [APP-461]	<ul style="list-style-type: none"> Scoped out as not present on site, no further measures implemented as no significant effect is considered likely.
	Two village bypass	Volume 5, Chapter 7: Terrestrial Ecology and Ornithology [APP-425]	<ul style="list-style-type: none"> Scoped out as not present on site, no further measures implemented as no significant effect is considered likely.
	Yoxford	Volume 7, Chapter 7: Terrestrial Ecology and	<ul style="list-style-type: none"> Scoped out as not present on site, no further measures implemented as no significant effect is considered likely.

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		Ornithology [APP-494]	
	Green rail route	Volume 9, Chapter 7: Terrestrial Ecology and Ornithology [APP-555]	<ul style="list-style-type: none"> Scoped out as not present on site, no further measures implemented as no significant effect is considered likely.
Amphibians-specifically Great Crested Newt but will benefit other amphibian species.	Main development site	Volume 2, Chapter 14: Terrestrial Ecology and Ornithology [AS-033] Appendix 14C9A – Great Crested Newt Non-Licensable Method	<u>Tertiary mitigation:</u> <ul style="list-style-type: none"> A Great Crested Newt Method Statement (Volume 2, Appendix 14C9A [APP-252]) has been prepared detailing the approach to be used, including the removal of vegetation and ground clearance in areas where commencement of construction activities have the potential to kill or injure Great Crested Newts during their terrestrial phase (there are no breeding ponds within the site). A RAMS method statement document has been created to outline the appropriate measures that will be undertaken to prevent any negative impacts on GCN:

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		Statement [APP-252]	<ul style="list-style-type: none"> Any clearance within the active season must also consider the potential to impact upon nesting birds. Suitable measures to prevent impacts to nesting birds will be employed, which are likely to include pre-works checks for nests. These measures in relation to birds are not outlined in full within this document. Prior to commencement of the vegetation clearance works, the ECoW will liaise with the contractor to clearly demarcate the required working area. The precautionary working methods to safeguard great crested newts during vegetation clearance in the active season are set out below. The ECoW will work with the contractor to determine a cutting regime whereby any animals present are able to move away from the cutting into retained habitats and not isolated in an unsuitable area. This area will be walked by the ECoW to identify any areas offering great crested newt sheltering opportunities prior to works commencing. Any suitable great crested newt sheltering features (e.g. log piles, compost heaps or debris) will be identified by the on-site ecologist. These will be avoided if possible, if

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			<p>not they will be checked by the ECoW before their removal (should this be required). Any removal of sheltering habitats will be supervised by the ECoW. These will be dismantled by hand; this will be overseen by the ecologist.</p> <ul style="list-style-type: none"> Shelter features that require removal will be reinstated near the clearance area in a quiet, sheltered location. This will ensure that no net loss of potential great crested newt shelter features takes place. If possible, shelter features will be dismantled by hand and moved out of the working area, supervised by the ECoW where appropriate. Such materials will be lifted (not dragged) out of the working area. Vegetation is to be cleared at a minimum 150mm from the ground in the first pass. Subsequent to this, a suitable period of time as decided by the ECoW will be given to allow for any great crested newts present at the time of works to move away from the cut areas, this will also allow the ECoW to check the area for great crested newt, along with other species.

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			<ul style="list-style-type: none"> The vegetation will then be cut to as close to ground level as possible. Vegetation cuttings are to be piled within the site so as to create additional sheltering opportunities to great crested newts within the site.
	Northern park and ride	<p>Volume 3, Chapter 7: Terrestrial Ecology and Ornithology [APP-363]</p> <p>Terrestrial Ecology Monitoring and Mitigation Plan [REP1-016]</p>	<p><u>Primary mitigation:</u></p> <ul style="list-style-type: none"> Pond 78 would be retained, directly protecting the known great crested newt population within the site boundary, as well as the potential water shrew population. A 10m buffer would be maintained around the pond, within which no construction works would take place other than the erection of ecological fencing. Additionally, the pond would be protected from construction and operational impacts by the landscape bund along the eastern boundary of the site. One-way directional newt fencing would be installed around the perimeter of the car parking areas, swales and landscape bunds, to prevent great crested newts from entering the site but allow them to leave should they accidentally gain access. Fencing would be sited to ensure that Pond 78 is excluded in order to maintain connectivity with existing, suitable great crested newt habitats. This approach would eliminate the

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			<p>need to translocate great crested newts away from the landscaped margins of the site when these areas are returned to agriculture use. This fencing would be installed at the start of the first phase of construction, maintained throughout operation, and would remain in place until the end of the site restoration works.</p> <ul style="list-style-type: none"> Two small pipes or culverts would be placed beneath the new access road to allow the passage of great crested newts underneath the road. One of these would be on the north side of the landscape bund, and one would be at the point at which the new access road meets Willow Marsh Lane. Great crested newts would be directed to the culverts by one-way directional newt fencing. The planting of hedgerow along the southern side of Willow Marsh Lane with a rough, unmanaged grassland margin adjacent, and extending along the eastern and western site boundaries would minimise great crested newt habitat severance and habitat loss, facilitate continued access to foraging and hibernation sites within Little Nursery Wood, and allow connectivity between Ponds 78 to 82.

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			<p><u>Tertiary mitigation:</u></p> <ul style="list-style-type: none"> • Additionally, works with the potential to affect great crested newts would be carried out either under a reasonable avoidance methods statement, or under a licence from Natural England, as required, following agreement with Natural England on an appropriate mitigation strategy. In addition to the primary mitigation measures identified previously, this would likely include: • Seasonal constraints to the timing of the installation of the one-way directional newt fencing described in section 7.5a of this chapter. If the timing of fence installation means there would be a risk of encountering newts as they move between their ponds and terrestrial habitat (notably in February/March), then the fencing would be combined with pitfall traps, and any trapped newts would be collected, and transferred to one of the ponds to the west of the A12 where great crested newts are known to occur (e.g. Pond 78 or 101); • If possible, the removal of hedgerow would be undertaken outside of the amphibian hibernation period (October to February inclusive). If this is not possible, vegetation would

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			<p>be cut to the ground (which would remove potential bird nesting habitat), but the roots would remain intact until hibernation is complete. The root system of vegetation would then be removed once the great crested newt hibernation season is over. This work would be overseen by a suitably experienced Ecological Clerk of Works (ECoW);</p> <ul style="list-style-type: none"> The habitat around Pond 78 would be improved, and tussocky grassland and scrub encouraged to grow for the benefit of great crested newts and hibernation features would be installed. This would improve the foraging habitat around Pond 78 and would provide suitable hibernation sites adjacent to the pond. Further details would be included within the great crested newt development licence and subject to agreement with Natural England. In addition, this commitment would need to be agreed with the landowner. In the event of the landowner not agreeing to the above approach, alternative measures would be adopted. <p><u>Monitoring:</u></p> <ul style="list-style-type: none"> During construction, there would be regular checks of the security fence, ecological fencing and close-boarded fence to

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			<p>check these remain intact, and that there is no encroachment of construction activities beyond the site boundary or into the buffer areas. The newt culverts, when installed, would also be monitored to ensure these remain intact and clear of debris.</p> <ul style="list-style-type: none"> • The one-way directional newt fencing would be checked regularly to ensure that this remains intact. • Throughout the operational phase, regular monitoring of the one-way directional newt fencing and newt culverts would be conducted to ensure that these remain intact and clear of debris. This would ensure the continued exclusion of newts from the operational facility on the site. • The TEMMP [REP1-016] outlines the proposed monitoring activities identified for great crested newt during the construction and operational phases.
	Southern park and ride	Volume 4, Chapter 7: Terrestrial Ecology and	<p>No great crested newts were recorded during surveys, however the following precautionary measures are proposed.</p> <p><u>Primary mitigation:</u></p>

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		Ornithology [APP-394]	Pond 59 located within the site, close to the western boundary, would be retained, and so there would be no direct loss of this habitat, and its associated species. This pond would be further protected by a buffer area of a minimum of 10m between the pond, where with the exception of fencing, no above ground buildings or structures will be within this buffer zone.
	Freight management facility	Volume 8, Chapter 7: Terrestrial Ecology and Ornithology [APP-523]	Great crested newts considered absent from the zone of influence and no further measures implemented as no significant effect is considered likely.
	Sizewell link road	Volume 6 Chapter 7: Terrestrial Ecology and Ornithology [APP-461] Terrestrial Ecology	<u>Primary mitigation:</u> <ul style="list-style-type: none"> The site boundary has been amended and reduced where possible to avoid direct and indirect impacts to ponds. Measures would be installed into the road design to maintain connectivity for great crested newts. The locations for crossing points will be finalised at the detailed design stage, however these would be as follows:

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		Monitoring and Mitigation Plan [REP1-016]	<ul style="list-style-type: none"> The preferred option, where there is minimal fragmentation, and the development is at grade, as cited by Natural England, would be to allow newts to cross over the road. These measures would be incorporated into the proposed development design such as no kerbing or features that would inhibit the movement of newts to cross the road. In the event of gully pots (which could become traps for amphibians) being identified as a requirement, the design will ensure that amphibian friendly gully pot designs are used so that a means of egress is provided to ensure that any amphibians do not get trapped within them. The preferred option, where there is minimal fragmentation, and the development is at grade, as cited by Natural England, would be to allow newts to cross over the road. These measures would be incorporated into the proposed development design such as no kerbing or features that would inhibit the movement of newts to cross the road. In the event of gully pots (which could become traps for amphibians) being identified as a requirement, the design will ensure that amphibian friendly gully pot designs are used so

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			<p>that a means of egress is provided to ensure that any amphibians do not get trapped within them.</p> <ul style="list-style-type: none"> Replacement great crested breeding ponds are included within the design of the proposed development to compensate for the loss of existing ponds, although the precise number and location are to be determined. Replacement ponds would be created prior to destruction of the original ponds and appropriate terrestrial habitat would be created around the ponds. Indicative locations for replacement great crested newt ponds and great crested newts crossing points are shown on Figure 2.2 to 2.4 of this volume. <p><u>Tertiary mitigation:</u></p> <ul style="list-style-type: none"> Works with the potential to affect great crested newts would be carried out either under a licence from Natural England, following agreement with Natural England or an appropriate mitigation strategy. The licensable works would encompass and clearance and construction works required within the intermediate and distant habitat zones of ponds within the site.

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			<p><u>Monitoring:</u></p> <ul style="list-style-type: none"> The TEMMP [REP1-016] outlines the proposed monitoring activities identified for great crested newt during the construction and operational phases.
	Two village bypass	<p>Volume 5, Chapter 7: Terrestrial Ecology and Ornithology [APP-425]</p> <p>Volume 5, App 7A, Annex 7A-6B RAMS GCN [APP-426]</p>	<p>Great crested newts are considered absent from the zone of influence and no further measures implemented as no significant effect is considered likely. However, the following measures would be undertaken to enhance the route and follow a precautionary approach to ensure GCN protection, should they move into the area.</p> <p><u>Enhancement:</u></p> <ul style="list-style-type: none"> The provision of up to four ponds is also proposed along the route, which would provide additional pond habitat in the area and contribute to bio-diversity net gain. <p><u>RAMS:</u></p> <p><u>Toolbox talk:</u></p>

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			<ul style="list-style-type: none"> Prior to commencement of the works, all site contractors will be briefed by the ECoW as part of the site induction to provide them with a basic overview of the life history, habitat requirements, identification and legal protection granted to great crested newt. This applies to contractors working in all habitats across the site, not only habitats likely to support great crested newt in the terrestrial phase. Site-specific toolbox talks will also be undertaken as necessary to identify the habitats present within the site that have the potential to be used by great crested newt and outline the environmental measures to be followed in order to avoid breaches of legislation and / or adverse effects on great crested newt that could occur within or in the vicinity of the working area. The toolbox talk will stress that: potential great crested newt refugia / hibernation features will be left undisturbed; and great crested newt will not be handled by contractors. <p><u>Precautionary working methods:</u></p> <ul style="list-style-type: none"> A different precautionary working method will be utilised dependent upon whether the works are being undertaken in the great crested newt active or hibernation period.

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			<p>These periods are dependent upon weather conditions (temperature and rainfall) but are likely to be in the region of November to February inclusive (hibernation season) and March to October (active season). The ECoW will be responsible for determining the appropriate working methodology.</p> <ul style="list-style-type: none"> • The prescriptions of this method statement will be followed during works in any areas with potential to support great crested newts. These areas include but are not limited to: tree roots, hedgerow bases, rough grassland areas, arable field margins, earth banks, log piles, rock piles and woodlands. • If possible, all impacts to terrestrial areas which may offer hibernation potential (i.e. log piles, embankments etc.) will be removed outside of the hibernation period, as great crested newt are more likely to be active and associated with ponds during this period. However, there are restrictions on certain works due to the potential to impact upon nesting birds (during the bird nesting season, generally March to August inclusive), and all works timings will need to consider this.

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			<ul style="list-style-type: none"> No ponds supporting great crested newt are to be directly impacted by the works therefore an approach to pond removal is not required. For clarity, the precautionary working methodologies have been split down into three scenarios: Vegetation clearance in the active season, vegetation clearance in the hibernation season, ground-breaking works in the active and hibernation season. <p><u>Vegetation clearance in the active season:</u></p> <ul style="list-style-type: none"> Any clearance within the active season must also consider the potential to impact upon nesting birds. Suitable measures to prevent impacts to nesting birds will be employed, which are likely to include pre-works checks for nests. These measures in relation to birds are not outlined in full within this document. Prior to commencement of the vegetation clearance works, the ECoW will liaise with the contractor to clearly demarcate the required working area.

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			<p>The precautionary working methods to safeguard great crested newt during vegetation clearance in the active season are set out below.</p> <ul style="list-style-type: none"> • The ECoW will work with the contractor to determine a cutting regime whereby any animals present are able to move away from the cutting into retained habitats and not isolated in an unsuitable area. This area will be walked by the ECoW to identify any areas offering great crested newt sheltering opportunities prior to works commencing. • Any suitable great crested newt sheltering features (e.g. log piles, compost heaps or debris) will be identified by the on-site ecologist. These will be avoided if possible, if not they will be checked by the ECoW before their removal (should this be required). Any removal of sheltering habitats will be supervised by the ECoW. These will be dismantled by hand; this will be overseen by the ecologist. • Shelter features that require removal will be reinstated near the clearance area in a quiet, sheltered location. This will ensure that no net loss of potential great crested newt shelter features takes place. If possible, shelter

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			<p>features will be dismantled by hand and moved out of the working area, supervised by the ECoW where appropriate. Such materials will be lifted (not dragged) out of the working area.</p> <ul style="list-style-type: none"> • Vegetation is to be cleared at a minimum 150mm from the ground in the first pass. • Subsequent to this, a suitable period of time as decided by the ECoW will be given to allow for any great crested newt present at the time of works to move away from the cut areas, this will also allow the ECoW to check the area for great crested newt, along with other species. • The vegetation will then be cut to as close to ground level as possible; • Vegetation cuttings are to be piled within the site so as to create additional sheltering opportunities to great crested newt within the site. <p><u>Vegetation clearance in the hibernation season:</u></p> <ul style="list-style-type: none"> • Prior to commencement of the vegetation clearance works, the ECoW will liaise with the contractor to clearly demarcate the required working area.

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			<p>The precautionary working methods to safeguard great crested newt during vegetation clearance in the hibernation season are set out below.</p> <ul style="list-style-type: none"> Any suitable great crested newt sheltering features (e.g. log piles, compost heaps or debris) will be identified by the on-site ecologist. These will be avoided if possible, if not they will be checked by the ECoW before their removal (should this be required). If possible, this removal will be undertaken by hand or slowly under close supervision by the ECoW. Shelter features that require removal will be reinstated near the clearance area in a quiet, sheltered location. This will ensure that no net loss of potential great crested newt shelter features takes place. If possible, shelter features will be dismantled by hand and moved out of the working area, supervised by the ECoW where appropriate. Such materials will be lifted (not dragged) out of the working area. The vegetation will then be cut to as close to ground level as possible.

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			<ul style="list-style-type: none"> Vegetation cuttings are to be piled within the site so as to create additional sheltering opportunities to great crested newt within the site. <p><u>Approach to ground-breaking works including top-soil stripping (active season and hibernation period):</u></p> <ul style="list-style-type: none"> If possible, all impacts to terrestrial areas which may offer hibernation potential (i.e. log piles, embankments etc) will be removed outside of the hibernation period, as great crested newt are more likely to be active and associated with ponds during this period. However, there are restrictions on certain works due to the potential to impact upon nesting birds (during the bird nesting season, generally March to August inclusive), and all works timings will need to consider this. Given that vegetation clearance works are to take place within the site prior to the commencement of any ground-breaking works, it is likely that the risk of encountering great crested newt will be reduced, due to the removal of suitable terrestrial habitat within the areas proposed for ground-breaking works. Ground-breaking works include

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			<p>any ground investigations, archaeology trenching, topsoil stripping etc.</p> <ul style="list-style-type: none"> • Prior to commencement of the ground-breaking works, the ECoW will liaise with the contractor to clearly demarcate the required working area. The methodology outlined below assumes that all vegetation has previously been removed. <p>The precautionary working methods to safeguard great crested newt during ground-breaking works in the active season are set out below.</p> <ul style="list-style-type: none"> • Any suitable great crested newt sheltering features (e.g. log piles, compost heaps or debris) will be identified by the on-site ecologist. These will be avoided if possible, if not they will be checked by the ECoW before their removal (should this be required). If possible, this removal will be undertaken by hand or slowly under close supervision by the ECoW. • Shelter features that require removal will be reinstated near the clearance area in a quiet, sheltered location. This will ensure that no net loss of potential great crested newt shelter features takes place. If possible, shelter

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			<p>features will be dismantled by hand and moved out of the working area, supervised by the ECoW where appropriate. Such materials will be lifted (not dragged) out of the working area.</p> <ul style="list-style-type: none"> The topsoil will then be carefully removed using a toothed bucket (if permitted under the contractors RAMS) under close ecological supervision by the ECoW. <p><u>Action to take if great crested newts are found:</u></p> <ul style="list-style-type: none"> Should any great crested newts be found during the facilitation works the following must be observed due to the strict level of protection afforded to this species: the works will stop; the great crested newt will not be handled or moved from its resting place; and the ECoW will assess the situation to determine whether a European Protected Species mitigation licence will be required before the works can continue; and if Natural England need to be informed.

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	Yoxford	Volume 7, Chapter 7: Terrestrial Ecology and Ornithology [APP-494]	<ul style="list-style-type: none"> Scoped out as not present on site, no further measures implemented as no significant effect is considered likely.
	Green rail route	Volume 9, Chapter 7: Terrestrial Ecology and Ornithology [APP-555] Volume 9, Chapter 7, Appendix 7A Annex 7A-6 RAMS GCN [APP-556]	<u>Tertiary mitigation:</u> <ul style="list-style-type: none"> Works with the potential to affect great crested newts would be carried out either under a reasonable avoidance methods statement or under a licence from Natural England, as required, following agreement with Natural England on an appropriate mitigation strategy. The sections of hedgerow to be removed would be cleared outside of the amphibian hibernation period (October to February inclusive). If this is not possible, vegetation would be cut to just above ground level (to remove potential bird nesting habitat), but the roots would remain intact until the newt hibernation season is complete. The root system of vegetation would then be removed once the great crested newt hibernation season is over. This work would be

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		Terrestrial Ecology Monitoring and Mitigation Plan [REP1-016]	<p>overseen by a suitably experienced Ecological Clerk of Works (ECoW), under licence from Natural England. Any great crested newts encountered would be translocated to an appropriate pond within the ZOI, known to support them, with suitable adjacent terrestrial habitats.</p> <ul style="list-style-type: none"> • To minimise the risk of incidental mortality, all vegetation within the site boundary would be maintained in a state unsuitable for great crested newts, i.e. vegetation would be maintained to ground level, this would also support mitigation for reptiles. A suitably experienced ECoW would oversee all ground-breaking activities and would inspect all excavations, if uncovered, on a daily basis. • During the removal and reinstatement phase, the removal of the railway ballast and bunds would be conducted outside of amphibian and reptile hibernation period (October to February inclusive) where possible. Otherwise a suitably experienced ECoW would oversee all dismantling and removals. • Should a great crested newt be found during the removal and reinstatement phase, a licence may be required from Natural

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			<p>England following agreement with Natural England on an appropriate mitigation strategy.</p> <ul style="list-style-type: none"> Adhere to GCN RAMS (see two village bypass measures for RAMS detail). <p><u>Monitoring:</u> The TEMMP [REP1-016] outlines the proposed monitoring activities identified for great crested newt during the construction and operational phases.</p>
Amphibians- specifically Common Toad but will benefit other amphibian species.	Main development site	Volume 2, Chapter 14: Terrestrial Ecology and Ornithology [AS-033]	<ul style="list-style-type: none"> There is no specific mitigation proposed for common toad, however tertiary reptile and amphibian mitigation measures will also benefit common toad.
	Northern park and ride	Volume 3, Chapter 7: Terrestrial Ecology and	<ul style="list-style-type: none"> Scoped out, no further measures implemented as no significant effect is considered likely.

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		Ornithology [APP-363]	
	Southern park and ride	Volume 4, Chapter 7: Terrestrial Ecology and Ornithology [APP-394]	<ul style="list-style-type: none"> Scoped out, no further measures implemented as no significant effect is considered likely.
	Freight management facility	Volume 8, Chapter 7: Terrestrial Ecology and Ornithology [APP-523]	<ul style="list-style-type: none"> Scoped out, no further measures implemented as no significant effect is considered likely.
	Sizewell link road	Volume 6 Chapter 7: Terrestrial Ecology and Ornithology [APP-461]	<ul style="list-style-type: none"> Common toad has therefore been scoped out of the detailed assessment; however, mitigation measures employed to protect reptiles / and GCN would also protect this species.

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	Two village bypass	Volume 5, Chapter 7: Terrestrial Ecology and Ornithology [APP-425]	<ul style="list-style-type: none"> Common toad has therefore been scoped out of the detailed assessment, No further measures implemented as no significant effect is considered likely.
	Yoxford	Volume 7, Chapter 7: Terrestrial Ecology and Ornithology [APP-494]	<ul style="list-style-type: none"> Scoped out, no further measures implemented as no significant effect is considered likely.
	Green rail route	Volume 9, Chapter 7: Terrestrial Ecology and Ornithology [APP-555]	<p>No species specific measures are proposed, but the following measures will apply to common toad:</p> <p><u>Tertiary mitigation:</u></p> <ul style="list-style-type: none"> The sections of hedgerow to be removed would be cleared outside of the amphibian hibernation period (October to February inclusive). If this is not possible, vegetation would be cut to just above ground level (to

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			<p>remove potential bird nesting habitat), but the roots would remain intact until the newt hibernation season is complete. The root system of vegetation would then be removed once the great crested newt hibernation season is over. This work would be overseen by a suitably experienced Ecological Clerk of Works (ECoW), under licence from Natural England.</p> <ul style="list-style-type: none"> During the removal and reinstatement phase, the removal of the railway ballast and bunds would be conducted outside of amphibian and reptile hibernation period (October to February inclusive) where possible. Otherwise a suitably experienced ECoW would oversee all dismantling and removals.
Reptiles (adder, grass snake, common lizard, slow worm)	Main development site	Volume 2, Chapter 14: Terrestrial Ecology and Ornithology [AS-033]	<p><u>Primary mitigation:</u></p> <ul style="list-style-type: none"> Large areas of habitats for reptiles have been established, in advance of construction, to enable the translocation of reptiles from the site (further detailed in the Reptile Mitigation Strategy (Volume 2, Appendix 14C2 [APP-252])). This has also created areas of sand-dominated

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		<p>Appendix 14C2A – Reptile Mitigation Strategy [APP-252]</p> <p>Terrestrial Ecology Monitoring and Mitigation Plan [REP1-016]</p>	<p>habitat likely to be beneficial to invertebrate species such as those identified in the coastal and woodland ride habitats.</p> <p><u>Tertiary mitigation:</u></p> <ul style="list-style-type: none"> A Reptile Mitigation Strategy (Volume 2, Appendix 14C2 [APP-252]) has been prepared detailing capture and translocation of reptiles from the footprint of the proposed development to the receptor sites. It also includes measures (installation of reptile-proof fencing, searching refugia and moving individuals outside of the development footprint into receptor site) to avoid incidental mortality associated with construction work phase. Active management of receptor sites is ongoing and would ensure these features are maintained and enhanced, so that the receptor sites have adequate carrying capacity to receive translocated reptiles. The locations of the receptor sites were selected to maximise connectivity with the wider landscape using existing ecological features and corridors. <p><u>Mitigation detail from Reptile Mitigation Strategy document:</u> In summary, the proposed strategy involves:</p>

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			<ul style="list-style-type: none"> • preparation and management of receptor sites to receive translocated reptiles (primary mitigation); • catching and translocation of reptiles from the construction footprint into the receptor sites (tertiary mitigation); • measures to avoid incidental mortality associated with construction (tertiary mitigation); and • pre-, during- and post-construction monitoring of reptile populations (tertiary mitigation). <p>All works that have the potential to impact reptiles would be undertaken following the agreed Method Statement and would be overseen by an ECoW.</p> <p>Managed reptile receptor sites have been provided to mitigate the loss of reptile habitat. The receptor sites cover a larger area than reptile-suitable habitat lost and have enhanced features for reptiles (e.g. provision of cover, management to ensure prey availability, and hibernacula).</p> <ul style="list-style-type: none"> • The final restoration plans as shown in the indicative Outline Landscape and Ecology Management Plan (oLEMP) will provide a long-term gain in suitable reptile habitat and connectivity on a wider, landscape scale, as a result of the creation of dry Sandlings grassland from the arable fields

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			<p>east of Upper Abbey Farm (the marsh harrier habitat compensation area), at Aldhurst Farm and in the areas south of Sandy Lane (including Broom Covert), the 'Studio Field complex'.</p> <ul style="list-style-type: none"> Although the construction period would result in temporary habitat fragmentation across the EDF Energy estate, this would be mitigated in the long term by greater landscape-wide opportunities for enhanced connectivity, including to the north of the EDF Energy estate (through management of Great Mount Walk);; the middle of the estate (through management of the receptor sites at Kenton Hills); to the south-west (through management of Aldhurst Farm); and to the south (through management of Broom Covert and the Studio Field complex). The TEMMP [REP1-016] outlines the proposed monitoring activities identified for reptiles and their habitats during the construction and operational phases.
	All AD Sites including:		<p><u>Tertiary mitigation:</u> A small proportion of habitat within the site, primarily around the field margins, was identified as having some limited potential to support a small population of reptiles. The following measures</p>

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	Northern park and ride	Volume 3, Chapter 7: Terrestrial Ecology and Ornithology [APP-363]	<p>would be undertaken prior to the commencement of construction:</p> <ul style="list-style-type: none"> an inspection would be undertaken by a suitably experienced ecologist of any potential reptile refugia, after which the reptiles would be removed; and a phased vegetation clearance process would be undertaken to displace any reptiles from the site, under the supervision of a suitably experienced ecologist. Removal of vegetation and of places of shelter/hibernation features would be undertaken outside of the reptile hibernating period (October to February inclusive), during periods of warm, dry weather (with due consideration of the seasonal constraints of clearance works during breeding bird season). If this is not possible, vegetation would be cut to the ground (to remove potential bird nesting habitat), but the roots would remain intact until hibernation is complete. The root system of vegetation would then be removed once the reptile hibernation season is over. Clearing of vegetation would be undertaken under the supervision of the suitably experienced ECoW. <p><u>RAMS:</u></p>
	Southern park and ride	Volume 3, Chapter 7, Appendix 7A, Annex 7A.6B RAMS Reptiles [APP-364]	
		Volume 4, Chapter 7: Terrestrial Ecology and Ornithology [APP-394]	

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	Two village bypass	<p>Volume 4, Chapter 7, Appendix 7A, Annex 7A.5B RAMS Reptiles [APP-395]</p> <p>Volume 5, Chapter 7: Terrestrial Ecology and Ornithology [APP-425]</p>	<p><u>Toolbox talk:</u></p> <ul style="list-style-type: none"> Prior to commencement of the vegetation clearance works, all site contractors will be briefed by the ECoW as part of the site induction to provide them with a basic overview of the life history, habitat requirements, identification and legal protection granted to reptiles and outline the environmental measures to be followed in order to avoid breaches of legislation and / or adverse effects on reptiles that could occur within or in the vicinity of the working area. The toolbox talk will stress that potential reptile refugia / hibernation features will be left undisturbed; and reptiles will not be handled by contractors. There is a declaration for those present to sign to confirm they have understood the constraints and actions presented.
	Sizewell link road	<p>Volume 5, Appendix 7A, Annex 7A-6D RAMS Reptiles [APP-426]</p>	<p><u>Vegetation clearance:</u></p> <ul style="list-style-type: none"> Any vegetation clearance likely to impact vegetation below 150mm or which is likely to impact the ground layer or features which offer reptiles shelter or protection will take place during the active reptile period (March to

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	Yoxford	<p>Volume 6 Chapter 7: Terrestrial Ecology and Ornithology [APP-461] Volume 6, Appendix 7A, Annex 7A-6B RAMS Reptiles [APP-462]</p> <p>Volume 7, Chapter 7: Terrestrial Ecology and Ornithology [APP-494]</p> <p>Volume 7, Chapter 7:</p>	<p>October (inclusive), although the exact timings are weather dependant). In order to avoid disturbing reptiles during hibernation (the period where reptiles are most vulnerable). Accordingly, with respect to the proposed clearance of suitable reptile habitat, it is proposed that a staged vegetation clearance exercise is undertaken under the direct supervision of the Ecological Clerk of Works (ECoW), in order to reduce the suitability of the habitats within the site.</p> <ul style="list-style-type: none"> • Where it is necessary to undertake vegetation clearance in and around suitable reptile habitat the following precautionary measures will be put in place to avoid encountering and accidentally injuring reptiles: • Vegetation clearance (below 150mm) and ground-breaking works will only be conducted in the active season (March to October inclusive seasonally dependent)¹ and when the weather is suitable (i.e. it is warm, approximately 8oC should be the minimum temperature). The works will not be conducted early in the morning before reptiles have had a chance to 'warm up';

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	Freight management facility	Terrestrial Ecology and Ornithology [APP-494]	<ul style="list-style-type: none"> the ECoW will work with the contractor to determine a cutting regime whereby any animals present are encouraged away from the cutting into retained habitats and not isolated in an unsuitable area. This area will be walked by the ECoW to disturb reptiles prior to works commencing;
	Green rail route	Volume 8, Chapter 7: Terrestrial Ecology and Ornithology [APP-523] Volume 8, Appendix 7A, Annex 7A04A, RAMS Reptiles [APP-524] Volume 9, Chapter 7: Terrestrial	<ul style="list-style-type: none"> the ECoW will also consider any impacts to ground nesting birds, if appropriate and assess any risk; initially, vegetation is to be cleared to reduce cover for reptiles (at a minimum 150mm from the ground in the first pass); subsequent to this, a suitable period of time as decided by the ECoW will be given to allow for any reptiles present at the time of works to move away from the cut areas; the grassland / remaining vegetation will then be cut to as close to ground level as possible; vegetation cuttings are to be piled within the site so as to create additional sheltering opportunities to reptiles within the site;

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		<p>Ecology and Ornithology [APP-555]</p> <p>Volume 9, Appendix 7a, Annex 7A-6B RAMS Reptiles [APP-556]</p>	<ul style="list-style-type: none"> any suitable reptile sheltering features (e.g. log piles, compost heaps or debris) will be identified by the on-site ecologist. These will be avoided if possible, if not they will be checked by the ECoW before their removal (should this be required). Any removal of sheltering habitats will be supervised by the ECoW. These will be dismantled by hand; this will be overseen by the ecologist. If a reptile is found the ecologist will decide whether or not it is appropriate to relocate the animal; shelter features that require removal will be reinstated near the clearance area in a quiet, sheltered location. This will ensure that no net loss of potential reptile shelter features takes place. If possible, shelter features will be dismantled by hand and moved out of the working area, supervised by the ECoW where appropriate. Such materials will be lifted (not dragged) out of the working area; and if reptiles are found, the ECoW will move the animals out of the way to a place of safety. The exact location would be decided on a case-by-case basis by the ECoW, with any reptiles encountered moved to a safe location within

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			<p>a suitable refuge or hibernation feature, surrounded by suitable foraging and basking habitat and judged to be a safe distance from the ongoing vegetation clearance works. Reptiles will not be handled by contractors, as common lizards and slow worms may shed their tails if handled inappropriately.</p> <ul style="list-style-type: none"> • Should any reptiles be found on site during the works when the ECoW isn't present, the ECoW will be contacted immediately for advice. • A staged vegetation clearance exercise at a suitable time of year will be undertaken in order to safeguard any reptiles present at the time of works. Such works will take place under the supervision of the ECoW. Such an approach will minimise the potential harm caused to reptiles within the site as it will avoid disturbing this species group during the hibernation period. • Prior to commencement of the vegetation clearance works, the ECoW will liaise with the contractor to clearly demarcate the required working areas.

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			<ul style="list-style-type: none"> • If shelter features are present (i.e. log and vegetation piles), those will be checked by the ECoW before their removal (should this be required). • If shelter features are present that require removal, those will be reinstated near the clearance area in a quiet, sheltered location. This will ensure that no net loss of potential reptile shelter features takes place. If possible, shelter features will be dismantled by hand and moved out of the working area, supervised by the ECoW where appropriate. Such materials will be lifted (not dragged) out of the working area. • Should works be required in winter (November to February inclusive) or in cold weather (below 8 oC overnight temperature) the ECoW will advise upon bespoke working methods. Likely to require a hand search and a staged vegetation clearance approach under direct supervision. • The vegetation arisings will be collected and used to create habitat piles in areas adjacent to the site (which are to be retained during the development works).

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			<ul style="list-style-type: none"> The vegetation clearance contractors on site will utilise equipment specific to their clearance methods as per their reasonable avoidance measures. <p><u>Ground-breaking works:</u></p> <ul style="list-style-type: none"> Given that vegetation clearance works are to take place within the site prior to the commencement of any ground-breaking works, it is likely that the risk of encountering reptiles will be reduced, due to the absence of suitable habitat within the areas proposed for ground-breaking works. Reptiles are known to enter hibernation by burrowing underground, by settling into tree root systems or by entering voids and crevices in the ground or surrounding material. Accordingly, should the works take place during the reptile hibernation period (the dormancy period runs from November to February (inclusive) and initially will be avoided where possible), it is considered necessary for the ground-breaking works to be undertaken under direct supervision of the ECoW. Small sections of the topsoil

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			<p>removed and inspected by the ECoW. Hand-digging under ECoW supervision may also be required.</p> <ul style="list-style-type: none"> Contractors will utilise the equipment as per their reasonable avoidance measures method, For example: JCB 16C-I new generation 1 tonne mini digger; spade; spill kits; and Chapter 8 barrier/ Heras fencing.
Bats (all UK species)	Main development site	<p>Volume 2, Chapter 14: Terrestrial Ecology and Ornithology [AS-033]</p> <p>Appendix 14C1A – Bat Mitigation Strategy [APP-252]</p> <p>Terrestrial Ecology</p>	<p><u>Primary mitigation:</u></p> <ul style="list-style-type: none"> The SSSI crossing will consist of a 30m open single span bridge. This will facilitate the passage of bats through the structure. Lighting measures on the crossing would be deployed to ensure the culvert is viable for use by bats. A detailed lighting strategy would be implemented in accordance with the Lighting Management Plan (Volume 2, Appendix 2B) [APP-182]. The strategy would comply with best practice to minimise impacts on nocturnal species such as bats that may use nearby habitats for roosts or foraging. Guidance within the latest Institution of Lighting Professionals (ILP) Guidance Note would be followed. The majority of the woodland resource within the EDF Energy estate would be retained including the line of mature broadleaved trees on the northern edge of Kenton Hills,

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		Monitoring and Mitigation Plan [REP1-016]	<p>known to support features of importance for roosting bat species and also including most of the well-developed hedgerows and mature trees along Bridleway 19, east of Upper Abbey Farm.</p> <ul style="list-style-type: none"> Alternative roost sites (bat boxes) have been erected in advance of construction within woodland least likely to be directly affected by noise and lighting disturbance, should the proposed development displace roosting bats from woodland more directly exposed to disturbance. In addition, a purpose-built 'bat house' would be constructed to provide alternative roosting opportunities for bats. Should any roost loss be confirmed, roosts would be replaced at an appropriate ratio, to be agreed with Natural England. The oLEMP outlines management actions to return existing arable land on the EDF Energy estate post-construction to Suffolk Sandlings habitat comprising dry acid grassland and with additional areas of woodland and scrub. In the operational phase of the development, this landscape-scale habitat creation approach would replace existing intensively managed arable farmland with habitats of greater biodiversity value and would increase habitat connectivity. The oLEMP

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			<p>includes also long-term management prescriptions and a monitoring programme for habitats created ensuring that these areas deliver the habitats proposed.</p> <p><u>Tertiary mitigation:</u></p> <ul style="list-style-type: none"> • The appointment of an Ecological Clerk of Works (ECoW) to manage ecological issues on site, undertaken or supervise ongoing works in relation to protected species, supervise works in sensitive areas and undertake monitoring as required. • Training for construction workers, in the form of tool box talks, on ecological constraints including retained habitats, designated sites and protected species considerations. • A Bat Mitigation Strategy (Volume 2, Appendix 14C1A [APP-252]) has been provided as part of the ES as well as a draft Bat Method Statement (Volume 2, Appendix 14C1B [APP-252]). Tree inspections to determine evidence of use as roosts would be undertaken sufficiently in advance of tree-felling to enable any licence application(s) to be submitted to Natural England, if these are required. A final inspection of these trees would be undertaken as close to the timing of

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			<p>felling as possible to take into account the regular roost switching behaviour displayed by tree-roosting bat species. Should bats (or evidence of use by bats) be identified, the mitigation strategies laid out in any licence application(s) would be implemented (for example, the fitting of exclusion devices and/or soft-felling). The following approaches would be used:</p> <ul style="list-style-type: none"> ○ To mitigate for the confirmed and potential loss of tree roosts, replacement roosts would be installed on retained trees in suitable locations within the site boundary and within the wider EDF Energy estate. This provision would primarily take the form of a variety of bat boxes which would be used to support different species. However, the transfer of potential roost features, bark replacement and veteranisation of retained trees would be considered where appropriate. This is in addition to that already provided for barbastelle and detailed under primary mitigation. ○ Mitigation of roosts within buildings, particularly maternity and/or hibernation roosts that may be functionally lost would require more substantial

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			<p>mitigation. This may require more robust hibernation bat boxes, the improvement of retained locations that have the potential to support roosts of this nature and/or the provision of a new maternity or hibernation specific bat building, probably in the Lower Abbey Farm area.</p> <ul style="list-style-type: none"> Where habitat features would be retained within the site during construction, measures to ensure the protection of these features would be implemented (appropriate to the habitat concerned). <p><u>Additional detail on the measures:</u></p> <ul style="list-style-type: none"> Once construction is complete and the temporary construction area has been removed, landscape-scale habitat creation measures to create acid grasslands would have developed in accordance with the oLEMP. The general pattern of the EDF Energy estate would be maintained as an open landscape with small woodland blocks but fields which are currently intensively managed as arable or improved grassland would be converted to open acid grassland that would result in a greater invertebrate prey biomass (and

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			<p>would establish more rapidly than woodland). Supplementary scrub planting and strengthening of hedgerows and woodland margins and some new woodland blocks are included within the outline landscape design proposals which would enhance connectivity for bats. The measures as a whole would provide a net biodiversity gain compared to the largely arable landscape currently present across the site.</p> <p>The following habitat creation measures have already been undertaken by EDF Energy;</p> <ul style="list-style-type: none"> • 5ha of wetland (reedbed) has already been established at Aldhurst Farm together with approximately 60 ha of acid grassland. • 10ha of species-rich acid grassland at Broom Covert has been taken out of intensive cattle grazing and grassland and scrub allowed to recover and re-establish as part of the reptile mitigation. • 40ha of acid grassland with 40% scrub planting has been established on former arable fields as part of the reptile mitigation.

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			<ul style="list-style-type: none"> 40ha of grassland and scrub planting will be established to provide foraging habitat for marsh harrier. <p><u>Monitoring:</u></p> <ul style="list-style-type: none"> Bat boxes would be monitored on an annual basis during the construction phase from one year after installation. Boxes would continue to be monitored beyond the completion of construction. This monitoring would aim to confirm the presence/absence of bats and the use of the bat boxes. If bat boxes have not been occupied within three years of installation, consideration would be given to moving them to alternative sites nearby, to be determined by a licensed bat ecologist. Monitoring the areas which have been assessed as being sensitive to disturbance from noise will be monitored throughout the various phases of the proposed development, with monitoring surveys being carried out at a minimum of once a year (although greater survey effort is likely to be undertaken). The areas to which this applies are described in the Non licensed method statement.

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			<ul style="list-style-type: none"> The TEMMP [REP1-016] outlines the proposed monitoring activities identified for bats during the construction and operational phases.
	Northern park and ride	<p>Volume 3, Chapter 7: Terrestrial Ecology and Ornithology [APP-363]</p> <p>Volume 3, Chapter 7, Appendix 7A Annex 7A.6A RAMS Bats [APP-364]</p> <p>Terrestrial Ecology Monitoring and</p>	<p><u>Primary mitigation / design:</u></p> <ul style="list-style-type: none"> Operational lighting for the proposed development would be designed to prevent light spill to Little Nursery Wood and other habitats, and light levels would not exceed 0.1lux along the eastern side of this wood. The lighting design for the proposed development would use light fittings chosen to limit stray light. Guidance within the latest Institution of Lighting Professionals Guidance Note would be followed as far as possible. These measures would minimise impacts on nocturnal species; such as bats that use the nearby tree lines or habitats for roosting or foraging. The woodland would be retained in its entirety, with a buffer distance of 20m between the woodland and the proposed development. There would be no direct loss of woodland habitat, and its associated species, and the buffer distance would assist in minimising impacts associated with the proposed development (such as noise, lighting and human disturbance).

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		Mitigation Plan [REP1-016]	<ul style="list-style-type: none"> In addition to the previous measures, close-boarded fencing would be erected along the inside of the security fence where it is adjacent to Little Nursery Wood to provide additional mitigation for lighting impacts (including those from vehicle headlights) and noise impacts. The close-boarded fencing would be retained during the operational phase to act as screen for lighting (from vehicle headlights) and noise impacts. Assessment of trees with bat roost potential identified three trees within the proposed development site with potential to support roosting bats, but these three trees would be retained. Little Nursery Wood adjacent to the development site provided a greater roost resource and 41 trees within Little Nursery Wood were identified with the potential to support roosting bats, including the brown long-eared roost. All of these trees within the adjacent wood land are retained. <p><u>Tertiary mitigation:</u></p> <ul style="list-style-type: none"> Construction work would take place during Monday to Saturday 07:00 to 19:00 hours, and some lighting may be required during the winter months, dependent upon what

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			<p>construction activities are taking place. Outside of these hours, lighting would be required at night for site security. Temporary construction lighting would be controlled to minimise light spill on surrounding habitats. This would minimise impacts on nocturnal species such as bats that may use the nearby tree lines or habitats for commuting, roosts or foraging. The lighting design would use light fittings chosen to limit stray light and minimise impacts on sensitive species. The lighting would also be designed to minimise the visibility from sensitive receptors off-site.</p> <p><u>RAMS:</u> <u>Toolbox talk:</u></p> <ul style="list-style-type: none"> • Prior to commencement of the vegetation clearance works, all site contractors will be briefed by the ECoW as part of the site induction to provide them with a basic overview of the life history, habitat requirements, identification and legal protection granted to bats. Site-specific toolbox talks will also be undertaken as necessary to identify the habitats present within the site that have the potential to be used by bats and

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			<p>outline the environmental measures to be followed in order to avoid breaches of legislation and / or adverse effects on reptiles that could occur within or in the vicinity of the working area.</p> <p><u>Precautionary working methods:</u></p> <ul style="list-style-type: none"> • Little Nursery Wood would be retained in its entirety with a buffer distance of 20m between the woodland and the proposed development. • Close-boarded fencing where the proposed development site abuts Little Nursery woodland. • The three trees within the development site with the potential to support roosting bats would be retained. No trees will be felled as part of this scheme. • Construction lighting would be designed to prevent spill and exposure on to Little Nursery Wood. The lighting design for the proposed development would comply with the lighting strategy and use light fittings chosen to limit stray light. Guidance within the latest Institution of Lighting Professionals (ILP) Guidance Note would be followed as far as possible. These measures would minimise impacts on

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			<p>nocturnal species such as bats that may use the nearby tree lines or habitats for roosting or foraging.</p> <ul style="list-style-type: none"> In addition, although some activities may require 24-hour working, the majority of construction would take place Monday to Saturday 07:00 to 19:00 hours. This means night-time works would be avoided, which is when bats are most active. Incidental mortality associated with traffic movements would therefore not have a significant effect on the bat assemblage. A10m buffer from the development would be maintained along the northeast, south-east and south-west borders. <p><u>Vegetation clearance:</u></p> <ul style="list-style-type: none"> As set out above, vegetation clearance works are required in order to facilitate the development of the site. Whilst this document has been produced in relation to bats, further information has been provided to ensure legal compliance in relation to other protected species. Given that the works are to take place outside of the active bird breeding season (early March and late August inclusive), it is considered that no nesting bird checks are required prior

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			<p>to the commencement of works. Nevertheless, should vegetation clearance works take place within the core bird breeding season, a qualified ECoW will need to carry out a nesting bird check at least 48 hours before the commencement of works effecting the vegetation within the site. Once nesting birds have been confirmed absent, then the vegetation clearance contractors will carry out a habitat manipulation exercise in the form of a two-stage vegetation cut, with the initial cut reducing the vegetation to a height of 150mm before a second cut subsequently reduces it to ground level, with a minimum of two hours between cuts to allow reptiles or amphibians to move out of the cutting area.</p> <ul style="list-style-type: none"> Vegetation clearance which does not disturb the ground or vegetation below 150mm can be conducted year-round with a low risk of impacting upon reptiles. Any vegetation clearance likely to impact vegetation below 150mm or the removal of places of shelter/hibernation features would be undertaken outside of the reptile and amphibian hibernating period (October to February inclusive), during periods of warm, dry weather. If this is not possible, vegetation would be cut to the ground (to remove potential bird nesting

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			<p>habitat), but the roots would remain intact until hibernation is complete. The root system of vegetation would then be removed once the hibernation season is over. Clearing of vegetation would be undertaken under the supervision of the suitably experienced Ecological Clerk of Works (ECoW).</p> <ul style="list-style-type: none"> • The vegetation arisings will be collected and used to create habitat piles in areas adjacent to the site (which are to be retained during the development works). • The habitats present within the site are largely sub-optimal for bats, being intensively managed for arable farming purposes. The sub-optimal arable land supports few invertebrates on which bats can forage. • Works will be undertaken outside of all tree and hedgerow root protection zones that would not be removed as part of the proposed development. Tree protective fencing as described in section 6.2 of British Standard 5837:2012 will be installed (distance of fencing from tree trunk = 12x trunk diameter, distance from hedgerows = 1m from the spread of hedgerow canopy), where required, prior to plant and machinery arriving on site and construction works commencing. The fencing will remain intact throughout the

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			duration of the works and only be removed upon completion. Weather-proof notices will be attached to any protective fencing located adjacent to retained trees displaying the words 'Construction Exclusion Zone'. All personnel must be made aware of these restrictions. If works need to be undertaken within the root protection zones an Arboricultural survey would be required and any advice provided adhered to, to secure the long-term survival of the tree/hedgerow.
	Southern park and ride	<p>Volume 4, Chapter 7: Terrestrial Ecology and Ornithology [APP-394]</p> <p>Volume 4, Chapter 7, Appendix 7A Annex 7A.5A RAMS Bats [APP-395]</p>	<p><u>Primary mitigation:</u></p> <ul style="list-style-type: none"> Operational lighting would be designed so that light spill beyond the site boundary would be minimal (lighting levels would be less than between 1.0 lux), and there would be no substantive light spillage into adjacent habitats and woodland blocks including Whin Belt. The lighting design for the proposed development would use light fittings chosen to limit stray light. Guidance within the latest Institution of Lighting Professionals Guidance Note would be followed as far as possible. These measures would minimise impacts on nocturnal species such as bats that may use the nearby tree lines or habitats for roosts or foraging.

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		Terrestrial Ecology Monitoring and Mitigation Plan [REP1-016]	<p><u>Tertiary mitigation:</u></p> <ul style="list-style-type: none"> Construction work would take place during Monday to Saturday 07:00–19:00 hours, and some lighting in winter may be required dependent upon what construction activities are taking place. Outside of these hours, lighting may be required at night for safety or security. Temporary construction lighting would be controlled to minimise light spill on surrounding habitats. This would minimise impacts on nocturnal species such as bats that may use the nearby tree lines, or habitats for commuting, roosts or foraging. The lighting design would use light fittings chosen to limit stray light, and minimise impacts on sensitive species. The lighting would also be designed to minimise the visibility from sensitive receptors off-site. The proposed development includes the removal of several trees including three trees identified as having the potential to support roosting bats. Therefore, tree inspections to determine evidence of use as roosts would be undertaken sufficiently in advance of tree-felling to

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			<p>enable licence application(s) to be submitted to Natural England and develop an appropriate mitigation strategy, if required. Management measures would likely include:</p> <ul style="list-style-type: none"> ○ A final inspection of these trees would be undertaken as close to the timing of felling as possible to take into account the regular roost-switching behaviour displaced by tree-roosting bat species. Should bats (or evidence of use by bats) be identified, the mitigation strategies laid out in the licence application(s) would be implemented (for example, the fitting of exclusion devices). ○ Felling of trees would generally be undertaken in September or October, to avoid both the maternity and hibernation periods during which bats are more vulnerable to disturbance (this timing also avoids the breeding bird season). • To mitigate for the loss of the tree and potential roost resources, bat boxes would be installed on retained trees in suitable locations within the site boundary, prior to felling. One bat box would be installed per tree with medium or high bat roost potential that is due to be lost,

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			<p>whether or not a roost has been identified. A variety of bat boxes would be used to support different species.</p> <p><u>Monitoring:</u></p> <ul style="list-style-type: none"> • There would be regular checks of construction lighting to monitor and correct for any extraneous light spill into surrounding habitats. • Bat boxes would be monitored post-construction to confirm the presence/absence of bats and use of the bat boxes. If bat boxes have not been occupied by year 5 following installation, consideration would be given to moving them to alternative sites nearby, to be determined by a licensed bat ecologist. • There would also be regular checks of operational lighting to monitor and correct for any extraneous light spill into surrounding habitats. • The TEMMP [REP1-016] outlines the proposed monitoring activities identified for bats during the construction and operational phases. <p><u>RAMS:</u></p>

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			<p><u>Toolbox talk:</u></p> <ul style="list-style-type: none"> Prior to commencement of the vegetation clearance works, all site contractors will be briefed by the ECoW as part of the site induction to provide them with a basic overview of the life history, habitat requirements, identification and legal protection granted to bats. Site-specific toolbox talks will also be undertaken as necessary to identify the habitats present within the site that have the potential to be used by bats and outline the environmental measures to be followed in order to avoid breaches of legislation and / or adverse effects on reptiles that could occur within or in the vicinity of the working area. <p><u>Precautionary working methods:</u></p> <ul style="list-style-type: none"> Construction lighting would be designed so that light spill beyond the site boundary would be minimal and there would be no substantive light spillage into adjacent habitats and woodland blocks including Whin Belt. The lighting design for the proposed development would use light fittings chosen to limit stray light. Guidance within the latest Institution of Lighting Professionals Guidance Note would be followed as

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			<p>far as possible. These measures would minimise impacts on nocturnal species such as bats that may use the nearby tree lines or habitats for roosts or foraging.</p> <ul style="list-style-type: none"> • In addition, although some activities may require 24 hour working, the majority of construction would take place Monday to Saturday 07:00 to 19:00 hours. This means night-time works would be avoided, which is when bats are most active. Incidental mortality associated with traffic movements would therefore not have a significant effect on the bat assemblage. • Close-boarded fencing where the proposed development site abuts areas of woodland to provide additional protection from vehicle headlights and noise. • Initially all trees to be removed will be reassessed for bat roosting potential. • Any trees identified as having low bat roosting potential will be removed using a soft felling methodology outlined below with a suitability experienced, appropriately licensed, bat worker or bat worker assistant present. Trees will generally be removed in October, thereby avoiding the sensitive

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			<p>maternity (April-September) and hibernation (November-February) periods for bats.</p> <ul style="list-style-type: none"> For any trees with moderate or high roosting potential, a thorough pre works check for roosting bats will be undertaken. The methodology and required survey effort for these pre works checks will depend upon the status of the roosting features within the trees, but may include: <ul style="list-style-type: none"> a climbed or ground based tree inspection using an endoscope and / or torch; and emergence / re-entry surveys. Should any of the trees to be removed be found to support bat roosts, an EPS licence is likely to be required. The documents associated with this licence will outline the required mitigation, and the required measures are not discussed further within this report. Should additional emergence re-entry surveys be required these will be undertaken between April and September inclusive. If no roosts are found, the approach outlined below will be undertaken. All trees with potential roost features for bats will be soft felled using the following precautionary measures:

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			<ul style="list-style-type: none"> ○ trees classed as having low potential to support roosting bats, shall be felled under the watching brief of the ECoW; ○ where potential roost features for bats cannot be exhaustively checked they will be section felled, with each section carefully lowered to the ground. Cuts will be made at least 50 cm beyond the extent of the potential roost feature; ○ if limbs or large branches require felling, consideration will be given to cracks which may close (crushing any bats inside) once the weight of the limb has been removed. If the crack cannot be thoroughly inspected to ensure bats are not present, the crack will be wedged open prior to removal of the limb/branch; ○ the stems of dense ivy will be cut at ground level at least 48 hours before the tree is felled; and ○ once the trees have been felled the potential roost features will be re-checked on the ground by a suitably experienced bat ecologist. If any potential roost feature can still not be exhaustively checked that section will be allowed a rest period of at least 24

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			<p>hours to ensure that any individual bats that may have been missed are given the opportunity to relocate.</p> <ul style="list-style-type: none"> • If any bats are encountered during the felling operations all works and activity must cease immediately, until the ECoW has advised on the most appropriate manner to deal with the situation. • To mitigate for the loss of the tree and potential roost resources, bat boxes would be installed on retained trees in suitable locations within the site boundary, prior to felling. One bat box would be installed per tree with medium or high bat roost potential that is due to be lost, whether or not a roost has been identified. A variety of bat boxes would be used to support different species. <p><u>Facilitating work requirements</u></p> <p><u>a) Vegetation clearance methods</u></p> <ul style="list-style-type: none"> • As set out above, vegetation clearance works are required in order to facilitate the development of the site. Given that the works are to take place outside of the active bird breeding season (early March and late August inclusive), it is considered that no nesting bird checks are required prior to

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			<p>the commencement of works. Nevertheless, should vegetation clearance works take place within the core bird breeding season, a qualified ECoW will need to carry out a nesting bird check at least 48 hours before the commencement of works effecting the vegetation within the site. Once nesting birds have been confirmed absent, then the vegetation clearance contractors will carry out a habitat manipulation exercise in the form of a two stage vegetation cut, with the initial cut reducing the vegetation to a height of 150mm before a second cut subsequently reduces it to ground level, with a minimum of two hours between cuts to allow reptiles or amphibians to move out of the cutting area.</p> <ul style="list-style-type: none"> Vegetation clearance which does not disturb the ground or vegetation below 150mm can be conducted year-round with a low risk of impacting upon reptiles. Any vegetation clearance likely to impact vegetation below 150mm or the removal of places of shelter/hibernation features would be undertaken outside of the reptile hibernating period (October to February inclusive), during periods of warm, dry weather. If this is not possible, vegetation would be cut to the ground (to remove potential bird nesting habitat), but the roots would

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			<p>remain intact until hibernation is complete. The root system of vegetation would then be removed once the reptile and amphibian hibernation season is over. Clearing of vegetation would be undertaken under the supervision of the suitably experienced Ecological Clerk of Works (ECoW).</p> <ul style="list-style-type: none"> • The vegetation arisings will be collected and used to create habitat piles in areas adjacent to the site (which are to be retained during the development works). • Works will be undertaken outside of all tree and hedgerow root protection zones that would not be removed as part of the proposed development. Tree protective fencing as described in section 6.2 of British Standard 5837:2012 will be installed (distance of fencing from tree trunk = 12x trunk diameter, distance from hedgerows = 1m from the spread of hedgerow canopy), where required, prior to plant and machinery arriving on site and construction works commencing. The fencing will remain intact throughout the duration of the works and only be removed upon completion. Weather-proof notices will be attached to any protective fencing located adjacent to retained trees displaying the words 'Construction Exclusion Zone'. All personnel must be

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			made aware of these restrictions. If works need to be undertaken within the root protection zones an Arboricultural survey would be required and any advice provided adhered to, to secure the long-term survival of the tree/hedgerow.
	Freight management facility	<p>Volume 8, Chapter 7: Terrestrial Ecology and Ornithology [APP-523]</p> <p>Volume 8, App 7A, Annex 7A04A RAMS Bats</p> <p>Terrestrial Ecology Monitoring and Mitigation Plan [REP1-016]</p>	<p><u>Primary mitigation:</u></p> <ul style="list-style-type: none"> Lighting would be provided at the perimeter, and parking areas, for security and safety reasons. Lanterns would utilise LED based light fittings to ensure energy efficiency with zero-degree tilt, and lighting columns along the perimeter would use demountable shields to reduce backward spill of light. To further assist on mitigating obtrusive light, a Central Management System has been proposed for the lighting which would be capable of dimming of parts of the site independently from other parts (with the site envisaged to be divided in 6-8 main sections), as usage changes through the day. Guidance within the latest Institution of Lighting Professionals Guidance Note would be followed as far as possible. These measures would minimise impacts on nocturnal species such as bats that use the nearby tree lines or habitats for roosting or foraging.

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			<p><u>Tertiary mitigation:</u></p> <ul style="list-style-type: none"> Construction work would take place during Monday to Saturday 07:00 to 19:00 and some lighting may be required during the Winter months, dependent upon the construction activities which are taking place; however, some activities may require 24 hour working and some targeted lighting would be required for site security. Temporary construction lighting would be controlled to minimise light spill on surrounding habitats. This would minimise impacts on nocturnal species such as bats that may use the nearby tree lines or habitats for commuting, roosts or foraging. The lighting design would use light fittings chosen to limit stray light and minimise impacts on sensitive species. The lighting would also be designed to minimise the visibility from sensitive receptors off-site. The proposed development includes the removal of several trees identified as having the potential to support roosting bats. Therefore, tree inspections to determine evidence of use as roosts would be undertaken sufficiently in advance of tree-felling to enable licence application(s) to be submitted to Natural England and develop an appropriate mitigation

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			<p>strategy, if required. Management measures would likely include:</p> <ul style="list-style-type: none"> ○ A final inspection of these trees would be undertaken as close to the timing of felling as possible to account for the regular roost-switching behaviour displaced by tree-roosting bat species. Should bats (or evidence of use by bats) be identified, the mitigation strategies laid out in the licence application(s) would be implemented (for example, the fitting of exclusion devices). ○ Felling would be undertaken in September/October and so would avoid the maternity and hibernation periods during which bats are more vulnerable to disturbance (this timing also avoids the breeding bird season). However, timing requirements would be confirmed following a pre-felling inspection, which could include a climbed inspection, if required. ○ To mitigate for the loss of the tree and potential roost resources, bat boxes would be installed on retained trees in suitable locations within the site boundary. One bat box would be installed per tree with medium or high bat roost potential that is due to be lost,

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			<p>whether or not a roost has been identified. A variety of bat boxes would be used to support different species.</p> <p><u>Monitoring:</u></p> <ul style="list-style-type: none"> • There would be regular checks of construction lighting to monitor and correct for any excessive light spill into the surrounding habitats and particularly into the adjacent hedgerows and habitats. • There would be regular checks of operational lighting to monitor and correct for any excessive light spill into the surrounding habitats and particularly into the hedgerows. • Bat boxes would be monitored post-construction to confirm the presence/absence of bats and use of the bat boxes. If bat boxes have not been occupied by year 5 following installation, consideration would be given to moving them to alternative sites nearby, to be determined by a licensed bat ecologist. • The TEMMP [REP1-016] outlines the proposed monitoring activities identified for bats during the construction and operational phases.

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			<p><u>RAMS:</u></p> <p><u>Toolbox talk:</u></p> <ul style="list-style-type: none"> Prior to commencement of the vegetation clearance works, all site contractors will be briefed by the ECoW as part of the site induction to provide them with a basic overview of the life history, habitat requirements, identification and legal protection granted to bats. Site-specific toolbox talks will also be undertaken as necessary to identify the habitats present within the site that have the potential to be used by bats and outline the environmental measures to be followed in order to avoid breaches of legislation and / or adverse effects on reptiles that could occur within or in the vicinity of the working area. <p><u>Precautionary working methods:</u></p> <ul style="list-style-type: none"> Lighting would be provided at the perimeter, and parking areas, for security and safety reasons. Lanterns would utilise LED based light fittings to ensure energy efficiency with zero-degree tilt, and lighting columns along the perimeter would use focused optics to reduce backward

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			<p>spill of light. To further assist on mitigating obtrusive light, a Central Management System has been proposed for the lighting which would be capable of dimming of parts of the site independently from other parts (with the site envisaged to be divided in 6-8 main sections), as usage changes through the day. Guidance within the latest Institution of Lighting Professionals Guidance Note would be followed as far as possible. These measures would minimise impacts on nocturnal species such as bats that use the nearby tree lines or habitats for roosting or foraging;</p> <ul style="list-style-type: none"> • In addition, although some activities may require 24 hour working, the majority of construction would take place Monday to Saturday 07:00 to 19:00 hours. This means night-time works would be avoided, which is when bats are most active. Incidental mortality associated with traffic movements would therefore not have a significant effect on the bat assemblage. • Initially all trees to be removed will be reassessed for bat roosting potential.

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			<ul style="list-style-type: none"> Any trees identified as having low bat roosting potential will be removed using a soft felling methodology with a suitability experienced, appropriately licensed, bat worker or bat worker assistant present. This is outlined below. Trees will generally be removed in October, thereby avoiding the sensitive maternity (April-September) and hibernation (November-February) periods for bats. For any trees with moderate or high roosting potential, a pre works inspection for roosting bats will be undertaken. The methodology and required survey effort for these pre works checks will depend upon the status of the roosting features within the trees, but may include: a climbed or ground based tree inspection using an endoscope and / or torch; and emergence / re-entry surveys. Should any of the trees to be removed be found to support bat roosts, an European Protected Species licence is likely to be required. The documents associated with this licence will outline the required mitigation, and the required measures are not discussed further within this report.

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Wildlife & Countryside Act Habitats and Species	Sites of Relevance	Relevant document(s)	Measures to be implemented to conserve these species and habitats
			<ul style="list-style-type: none"> • If no roosts are found, the approach outlined below will be undertaken. • All trees with potential roost features for bats will be soft felled using the following precautionary measures: • trees classed as having low potential to support roosting bats, shall be felled under the watching brief of the ECoW; • where potential roost features for bats cannot be exhaustively checked they will be section felled, with each section carefully lowered to the ground. Cuts will be made at least 50 cm beyond the extent of the potential roost feature; • if limbs or large branches require felling, consideration will be given to cracks which may close (crushing any bats inside) once the weight of the limb has been removed. If the crack cannot be thoroughly inspected to ensure bats are not present, the crack will be wedged open prior to removal of the limb/branch; • the stems of dense ivy will be cut at ground level at least 48 hours before the tree is felled; and

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			<ul style="list-style-type: none"> once the trees have been felled the potential roost features will be checked on the ground by a suitably experienced bat ecologist. If any potential roost feature can still not be exhaustively checked that section will be allowed a rest period of at least 24 hours to ensure that any individual bats that may have been missed are given the opportunity to relocate. If any bats are encountered during the felling operations all works and activity must cease immediately, until the ECoW has advised on the most appropriate manner to deal with the situation. To mitigate for the loss of the tree and potential roost resources, bat boxes would be installed on retained trees in suitable locations within the site boundary. One bat box would be installed per tree with medium or high bat roost potential that is due to be lost, whether or not a roost has been identified. A variety of bat boxes would be used to support different species. <p><u>Facilitating work requirements</u> a) <u>Vegetation clearance methods</u></p>

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			<ul style="list-style-type: none"> As set out above, vegetation clearance works are required in order to facilitate the development of the site. Whilst this document has been produced in relation to bats, other species do need to be considered to ensure legal compliance. Given that the works are to take place outside of the active bird breeding season (early March and late August inclusive), it is considered that no nesting bird checks are required prior to the commencement of works. Nevertheless, should vegetation clearance works take place within the core bird breeding season, a qualified ECoW will need to carry out a nesting bird check at least 48 hours before the commencement of works effecting the vegetation within the site. Once nesting birds have been confirmed absent, then the vegetation clearance contractors will carry out a habitat manipulation exercise in the form of a two stage vegetation cut, with the initial cut reducing the vegetation to a height of 150mm before a second cut subsequently reduces it to ground level, with a minimum of two hours between cuts to allow reptiles or amphibians to move out of the cutting area.

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			<ul style="list-style-type: none"> Vegetation clearance which does not disturb the ground or vegetation below 150mm can be conducted year-round with a low risk of impacting upon reptiles. Any vegetation clearance likely to impact vegetation below 150mm or the removal of places of shelter/hibernation features would be undertaken outside of the reptile hibernating period (October to February inclusive), during periods of warm, dry weather. If this is not possible, vegetation would be cut to the ground (to remove potential bird nesting habitat), but the roots would remain intact until hibernation is complete. The root system of vegetation would then be removed once the hibernation season is over. Clearing of vegetation would be undertaken under the supervision of the suitably experienced Ecological Clerk of Works (ECoW). The vegetation arisings will be collected and used to create habitat piles in areas adjacent to the site (which are to be retained during the development works). Works will be undertaken outside of all tree and hedgerow root protection zones that would not be removed as part of the proposed development. Tree

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			protective fencing as described in section 6.2 of British Standard 5837:2012 will be installed (distance of fencing from tree trunk = 12x trunk diameter, distance from hedgerows = 1m from the spread of hedgerow canopy), where required, prior to plant and machinery arriving on site and construction works commencing. The fencing will remain intact throughout the duration of the works and only be removed upon completion. Weather-proof notices will be attached to any protective fencing located adjacent to retained trees displaying the words 'Construction Exclusion Zone'. All personnel must be made aware of these restrictions. If works need to be undertaken within the root protection zones an Arboricultural survey would be required and any advice provided adhered to, to secure the long-term survival of the tree/hedgerow.
	Sizewell link road	Volume 6 Chapter 7: Terrestrial Ecology and Ornithology [APP-461]	<u>Primary mitigation:</u> <ul style="list-style-type: none"> The route of the proposed development would be mostly unlit, thereby maintaining a dark corridor, minimising the potential impacts to nocturnal species. To ensure road safety, lighting would be provided at the A12 and B1122

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		<p>Volume 6, Appendix 7A, Annex 7A-6B RAMS Bats [APP-462]</p> <p>Terrestrial Ecology Monitoring and Mitigation Plan [REP1-016]</p>	<p>roundabouts. The remaining junctions would have low minor road flows and be similar to existing unlit rural junctions and would be unlit to minimise light spill. Operational lighting design would be compliant with relevant highway standards, and where possible would be chosen to limit stray light. Guidance within the latest Institution of Lighting Professionals Guidance Note: Bats and artificial lighting in the UK would be followed as far as possible. These measures would minimise impacts on nocturnal species, such as bats that may use the nearby tree lines, or habitats for roosting or foraging, and would also maximise the use of reinstated 'bat crossing points'.</p> <ul style="list-style-type: none"> • Crossing points (bat hop-overs) to facilitate the passage of bats across the road alignment have been incorporated in the design where foraging or commuting routes have been identified, to reduce the potential for incidental mortality as a result of bats crossing the road and colliding with vehicles. These features would comprise hedgerow planting with tall standards planted where hedgerows meets the road to encourage bats to pass up and over the newly constructed road.

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			<p><u>Tertiary mitigation:</u></p> <ul style="list-style-type: none"> Construction lighting, where required, would be provided at the minimum luminosity and would be designed, positioned and/or directed so as not to unnecessarily intrude on adjacent ecological receptors or habitats. Such measures could include (but not limited to) shielding of luminaires to reduce backward spill of light or use of sensors or timing devices to automatically switch off lighting where appropriate and provision of closed boarded fencing where the site abuts retained woodland. This would minimise impacts on nocturnal species such as bats that may use the nearby tree lines or habitats for commuting, roosting or foraging. The proposed development includes the removal of 46 trees identified as having the potential to support roosting bats. Tree inspections would be undertaken sufficiently in advance of tree-felling to determine evidence of use as roosts to enable licence application(s) to be submitted to Natural England and develop an appropriate mitigation

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			<p>strategy, if required. Management measures would likely include:</p> <ul style="list-style-type: none"> ○ final inspection of these trees would be undertaken as close to the timing of felling as possible to take into account the regular roost-switching behaviour displaced by tree-roosting bat species. Should bats (or evidence of use by bats) be identified, the mitigation strategies laid out in the licence application(s) would be implemented (for example, the fitting of exclusion devices); ○ felling of trees would generally be undertaken in September or October, to avoid both the maternity and hibernation periods during which bats are more vulnerable to disturbance (this timing also avoids the breeding bird season). ● To mitigate for the loss of the trees and potential roost resources, bat boxes would be installed on retained trees in suitable locations within the site boundary. Bat boxes would be installed in trees with medium or high bat roost potential that is due to be lost, whether or not a roost has

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			<p>been identified. A variety of bat boxes would be used to support different species.</p> <p><u>Monitoring:</u></p> <ul style="list-style-type: none"> • There would be regular checks of construction lighting to monitor and correct for any excessive light spill into the surrounding habitats and particularly into the adjacent woodland. • Operational lighting would be checked to monitor and correct for any excessive light spill into the surrounding habitats, and particularly into the adjacent woodland. • Any bat boxes installed as mitigation would be monitored post-construction to confirm the presence/absence of bats and use of the bat boxes. If bat boxes have not been occupied by year 5 following installation, consideration would be given to moving them to alternative sites nearby, to be determined by a licensed bat ecologist. • There would also be maintenance checks of operational lighting to monitor and correct for any extraneous light spill into surrounding habitats.

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			<ul style="list-style-type: none"> The TEMMP [REP1-016] outlines the proposed monitoring activities identified for bats during the construction and operational phases. <p><u>RAMS:</u> <u>Toolbox talk:</u></p> <ul style="list-style-type: none"> Prior to commencement of the vegetation clearance works, all site contractors will be briefed by the ECoW as part of the site induction to provide them with a basic overview of the life history, habitat requirements, identification and legal protection granted to bats. Site-specific toolbox talks will also be undertaken as necessary to identify the habitats present within the site that have the potential to be used by bats and outline the environmental measures to be followed in order to avoid breaches of legislation and / or adverse effects on reptiles that could occur within or in the vicinity of the working area. <p><u>Precautionary working methods:</u></p>

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			<ul style="list-style-type: none"> • Presence of 10m buffer areas between the edge of the proposed development and lowland mixed deciduous woodland • Presence of 10m buffer areas between the edge of the proposed development and watercourses where practicable • Close-boarded fencing where the proposed development site abuts woodland. • Construction lighting would be designed to minimise light spill and the potential for light disturbance on adjacent land. The lighting design for the proposed development would comply with the lighting strategy and use light fittings chosen to limit stray light. Guidance within the latest Institution of Lighting Professionals Guidance Note would be followed as far as possible. These measures would minimise impacts on nocturnal species such as bats that may use the nearby tree lines or habitats for roosting or foraging. • In addition, although limited activities may require 24 hour working, the majority of construction would take place Monday to Saturday 07:00 to 19:00 hours. This means

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			<p>night-time works would be avoided, which is when bats are most active. Incidental mortality associated with traffic movements would therefore not have a significant effect on the bat assemblage.</p> <ul style="list-style-type: none"> Initially all trees to be removed will be reassessed for bat roosting potential. Any trees identified as having low bat roosting potential will be removed using a soft felling methodology with a suitability experienced, appropriately licensed, bat worker or bat worker assistant present. This is outlined below. Trees will generally be removed in October, thereby avoiding the sensitive maternity (April-September) and hibernation (November-February) periods for bats. For any trees with moderate or high roosting potential, a pre works inspection for roosting bats will be undertaken. The methodology and required survey effort for these pre works checks will depend upon the status of the roosting features within the trees, but may include: <ol style="list-style-type: none"> 1. a climbed or ground based tree inspection using an endoscope and / or torch; and

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			<p>2. emergence / re-entry surveys.</p> <ul style="list-style-type: none"> Should any of the trees to be removed be found to support bat roosts, an EPS licence is likely to be required. The documents associated with this licence will outline the required mitigation, and the required measures are not discussed further within this report. If no roosts are found, the approach outlined below will be undertaken. All trees with PRFs will be soft felled using the following precautionary measures: <ul style="list-style-type: none"> where PRFs cannot be exhaustively checked they will be section felled, with each section carefully lowered to the ground. Cuts will be made at least 50 cm beyond the extent of the potential roost feature; if limbs or large branches require felling, consideration will be given to cracks which may close (crushing any bats inside) once the weight of the limb has been removed. If the crack cannot be thoroughly inspected to ensure bats are not present, the crack will be wedged open prior to removal of the limb/branch;

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			<ul style="list-style-type: none"> ○ the stems of dense ivy will be cut at ground level at least 48 hours before the tree is felled; and ○ once the trees have been felled the potential roost features will be checked on the ground by a suitably experienced bat ecologist. If any potential roost feature can still not be exhaustively checked that section will be allowed a rest period of at least 24 hours to ensure that any individual bats that may have been missed are given the opportunity to relocate. ● If any bats are encountered during the felling operations all works and activity must cease immediately, until the ECoW has advised on the most appropriate manner to deal with the situation. ● To mitigate for the loss of the trees and potential roost resources, bat boxes would be installed on retained trees in suitable locations within the site boundary. One bat box would be installed per tree with moderate or high bat roost potential that is due to be lost, whether or not a roost has been identified. A variety of bat boxes would be used to support different species.

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			<p><u>Facilitating work requirements</u></p> <p><u>Vegetation clearance methods:</u></p> <ul style="list-style-type: none"> As set out above, vegetation clearance works are required in order to facilitate the development of the site. Vegetation clearance works would take place outside of the active bird breeding season (early March and late August inclusive) and no nesting bird checks would be required prior to the commencement of works. Nevertheless, if any vegetation clearance works was required within the core bird breeding season, a qualified ECoW will need to carry out a nesting bird check at least 48 hours before the commencement of works effecting the vegetation within the site. Once nesting birds have been confirmed absent, then the vegetation clearance contractors will carry out a habitat manipulation exercise in the form of a two stage vegetation cut, with the initial cut reducing the vegetation to a height of 150mm before a second cut subsequently reduces it to ground level, with a minimum of two hours between cuts to allow reptiles or amphibians to move out of the cutting area.

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			<ul style="list-style-type: none"> Vegetation clearance which does not disturb the ground or vegetation below 150mm can be conducted year-round with a low risk of impacting upon reptiles. Any vegetation clearance likely to impact vegetation below 150mm or the removal of places of shelter/hibernation features would be undertaken outside of the reptile and amphibian hibernating period (October to February inclusive), during periods of warm, dry weather. If this is not possible, vegetation would be cut to the ground (to remove potential bird nesting habitat), but the roots would remain intact until hibernation is complete. The root system of vegetation would then be removed once the hibernation season is over. Clearing of vegetation would be undertaken under the supervision of the suitably experienced Ecological Clerk of Works (ECoW). The vegetation arisings will be collected and used to create habitat piles in areas adjacent to the site (which are to be retained during the development works). The habitats present within the site are largely sub-optimal for bats, being intensively managed for arable farming purposes. The sub-optimal arable land supports few invertebrates on which bats can forage.

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			<ul style="list-style-type: none"> Works will be undertaken outside of all tree and hedgerow root protection zones that would not be removed as part of the proposed development. Tree protective fencing as described in section 6.2 of British Standard 5837:2012 will be installed (distance of fencing from tree trunk = 12x trunk diameter, distance from hedgerows = 1m from the spread of hedgerow canopy), where required, prior to plant and machinery arriving on site and construction works commencing. The fencing will remain intact throughout the duration of the works and only be removed upon completion. Weather-proof notices will be attached to any protective fencing located adjacent to retained trees displaying the words 'Construction Exclusion Zone'. All personnel must be made aware of these restrictions. If works need to be undertaken within the root protection zones an Arboricultural survey would be required and any advice provided adhered to, to secure the long-term survival of the tree/hedgerow.
	Two village bypass	Volume 5, Chapter 7: Terrestrial	<p><u>Primary mitigation:</u></p> <ul style="list-style-type: none"> The route of the proposed development would be mostly unlit, thereby maintaining a dark corridor and minimising the

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		<p>Ecology and Ornithology [APP-425]</p> <p>Volume 5, App 7A, Annex 7A-6A RAMS Bats</p> <p>Terrestrial Ecology Monitoring and Mitigation Plan [REP1-016]</p>	<p>potential impacts to nocturnal species. To ensure road safety lighting would be provided at the A12 western roundabout and the A12/A1094 eastern roundabout extending north to highlight the junction to approaching vehicles. The remaining junctions would have low minor road flows, and be similar to existing unlit rural junctions, and would therefore be unlit to minimise light spill. Operational lighting design would be compliant with relevant highway standards and where possible would be chosen to limit light spill. Guidance within the latest Institution of Lighting Professionals Guidance Note: Bats and artificial lighting in the UK would be followed as far as possible. These measures would minimise impacts on nocturnal species such as bats that may use the nearby tree lines or habitats for roosting or foraging.</p> <ul style="list-style-type: none"> To reduce the potential for incidental mortality through collisions with vehicles, the design of the proposed development includes safe crossing points for bats and terrestrial mammal species such as oversized culverts as well as bat hop-over features whereby tree planting would be installed as close the carriageway edge as possible to

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			<p>encourage an inter-linking canopy, that in the long-term that would keep bats at height and away from the path of vehicles using the road.</p> <p><u>Tertiary mitigation:</u></p> <ul style="list-style-type: none"> • Construction lighting, where required, would be provided at the minimum luminosity and would be designed, positioned and/or directed so as not to unnecessarily intrude on adjacent ecological receptors or habitats. Such measures could include (but not limited to) shielding of luminaires to reduce backward spill of light or use of sensors or timing devices to automatically switch off lighting where appropriate and provision of closed boarded fencing where the site abuts retained woodland. This would minimise impacts on nocturnal species such as bats that may use the nearby tree lines or habitats for commuting, roosting or foraging. • During the construction stage, close-boarded fencing would be erected along the side of woodland blocks, where the site abuts these (e.g. TN2, Whin Covert, Nuttery Belt, The Belt and Foxburrow Wood CWS). This would help to minimise

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			<p>impacts from construction lighting and noise from construction activity.</p> <ul style="list-style-type: none"> • The proposed development includes the removal of 56 trees identified as having the potential to support roosting bats. Tree inspections would need to be undertaken sufficiently in advance of tree-felling to determine evidence of use as roosts to enable licence application(s) to be submitted to Natural England, and develop an appropriate mitigation strategy, if required. Management measures would likely include: <ul style="list-style-type: none"> ○ A final inspection of these trees would be undertaken as close to the timing of felling as possible to take into account the regular roost-switching behaviour displaced by tree-roosting bat species. Should bats (or evidence of use by bats) be identified, the mitigation strategies set out in the licence application(s) would be implemented (for example, the fitting of exclusion devices). ○ Felling would ideally be undertaken in September or October, to avoid the maternity and hibernation periods during which bats are more vulnerable to

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			<p>disturbance (this timing also avoids the breeding bird season).</p> <ul style="list-style-type: none"> ○ To mitigate for the loss of the tree and potential roost resources, bat boxes would be installed on retained trees in suitable locations within the site boundary. ● Bat boxes would be installed in trees with medium or high bat roost potential if they are due to be lost, whether or not a roost has been identified. A variety of bat boxes would be used to support different species. <p><u>Monitoring:</u></p> <ul style="list-style-type: none"> ● There would be regular checks of construction lighting to monitor and correct for any excessive light spill into the surrounding habitats and particularly into the adjacent woodland, floodplain grassland and watercourses. ● There would be regular operational checks of lighting to monitor and correct for any excessive light spill into the surrounding habitats, and in particular into the adjacent woodland, floodplain grassland and watercourses. ● Any bat boxes installed as mitigation would be monitored post-construction to confirm the presence/absence of

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			<p>bats and use of the bat boxes. If bat boxes have not been occupied by year 5 following installation, consideration would be given to moving them to alternative sites nearby, to be determined by a licensed bat ecologist.</p> <ul style="list-style-type: none"> The TEMMP [REP1-016] document outlines the proposed monitoring activities identified for bats during the construction and operational phases. <p>RAMS document will be adhered to (same RAMS as the other AD sites) with the addition of;</p> <ul style="list-style-type: none"> In order to control impacts, 15m buffer areas between the edge of the proposed development and Foxburrow Wood CWS and watercourse. Erection of close-board fencing where the proposed development abuts woodland (such as along Whin Covert, Nuttery Belt, The Belt, Pond Wood and Foxburrow Wood CWS).
	Yoxford	Volume 7, Chapter 7: Terrestrial	<p><u>Primary mitigation:</u></p> <ul style="list-style-type: none"> Existing trees and hedgerows adjoining the site boundary would be retained where possible. This includes the

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		<p>Ecology and Ornithology [APP-494]</p> <p>Terrestrial Ecology Monitoring and Mitigation Plan [REP1-016]</p>	<p>retention of a tree belt to the north-west of the site, along the boundary of Satis House Hotel and hedgerow along the southern side of the B1122 (Middleton Road).</p> <ul style="list-style-type: none"> Operational phase lighting would be designed to achieve a balance between providing lighting appropriate for all road users whilst seeking to minimise light-spill into adjacent habitats. Operational lighting design will be compliant with relevant highway standards and use light fittings chosen to limit stray light. Guidance within the latest Institution of Lighting Professionals (ILP) Guidance Note: Bats and artificial lighting in the UK would be followed as far as possible. <p><u>Tertiary mitigation:</u></p> <ul style="list-style-type: none"> Construction work would take place during Monday to Saturday 07:00 to 19:00, and there may be a requirement for lighting at night in the winter or for safety and security. In addition, there may be the need for 24-hour working and therefore would require lighting. Where temporary construction lighting is required, it would be controlled to minimise light spill on surrounding habitats and minimise the

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			<p>visibility from sensitive receptors off-site, where reasonably practicable. This would minimise impacts on nocturnal species such as bats that may use the nearby tree lines or habitats for commuting, roosting or foraging.</p> <ul style="list-style-type: none"> • The proposed development includes the removal of two trees identified as having the potential to support roosting bats. Therefore, tree inspections to determine evidence of use as roosts would be undertaken sufficiently in advance of tree-felling to enable licence application(s) to be submitted to Natural England and develop an appropriate mitigation strategy, if required. Management measures are likely to include: <ul style="list-style-type: none"> ○ A final inspection of these trees to be undertaken as close to the timing of felling as possible to account for the regular roost-switching behaviour displaced by tree-roosting bat species. Should bats (or evidence of use by bats) be identified, the mitigation strategies laid out in the licence application(s) would be implemented (for example, the fitting of exclusion devices).

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			<ul style="list-style-type: none"> ○ Felling would ideally be undertaken in September/October, to avoid the maternity and hibernation periods during which bats are more vulnerable to disturbance (this timing also avoids the bird-nesting season). • To mitigate for the loss of the tree and potential roost resources, bat boxes would be installed on retained trees in suitable locations within the site boundary. For every tree with moderate or high bat roost potential that is due to be lost bat boxes would be installed in retained trees to maintain roosting resources within the site boundary. A variety of bat boxes would be used to support different species. <p><u>Monitoring:</u></p> <ul style="list-style-type: none"> • There would be regular checks of construction lighting to monitor and correct for any excessive light spill into the surrounding habitats and particularly into the adjacent woodland and watercourses. • There would be regular operational checks of lighting to monitor and correct for any excessive light spill into the

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			<p>surrounding habitats and in particular into the adjacent woodland and watercourses.</p> <ul style="list-style-type: none"> • If required, bat boxes would be monitored post-construction to confirm the presence/absence of bats and use of the bat boxes. If bat boxes have not been occupied by year 5 following installation, consideration would be given to moving them to alternative sites nearby, to be determined by a licensed bat ecologist. • The TEMMP [REP1-016] outlines the proposed monitoring activities identified for bats during the construction and operational phases.
	Green rail route	<p>Volume 9, Chapter 7: Terrestrial Ecology and Ornithology [APP-555]</p> <p>Terrestrial Ecology</p>	<p><u>Primary mitigation:</u></p> <ul style="list-style-type: none"> • Operational lighting would be limited to the B1122 (Abbey Road) level crossing and the level crossing at Buckleswood Road. The remaining rail route extension would be unlit. The lighting design for the proposed development would use light fittings chosen to limit stray light. These measures would minimise impacts on nocturnal species such as bats that may use the nearby tree lines or habitats for roosting or foraging.

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		Monitoring and Mitigation Plan [REP1-016]	<p><u>Tertiary mitigation:</u></p> <ul style="list-style-type: none"> Where required, temporary construction lighting would be controlled to minimise light spill on surrounding habitats. The lighting design would use light fittings chosen to limit stray light and minimise impacts on sensitive species. The lighting would also be designed to minimise the visibility from sensitive receptors off-site. This would minimise impacts on nocturnal species such as bats that may use the nearby tree lines or habitats for commuting, roosting or foraging. The proposed vegetation clearance includes the removal of trees with the potential to support roosting bats. Tree inspections to determine evidence of use as roosts would be undertaken sufficiently in advance of tree-felling to enable licence application(s) to be submitted to Natural England, if required. A final inspection of these trees would be undertaken as close to the timing of felling as possible to take into account the regular roost-switching behaviour displaced by tree-roosting bat species. Should bats (or evidence of use by bats) be identified, the mitigation strategies laid out in the licence application(s) would be implemented (for example, the fitting of exclusion devices).

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			<p>Should evidence of bat roosting be found, felling would ideally be undertaken under licence in September/October, to avoid the maternity and hibernation periods during which bats are more vulnerable to disturbance (this timing would also avoid the bird-nesting season).</p> <ul style="list-style-type: none"> To mitigate for the loss of the tree and potential roost resources, bat boxes would be installed on retained trees in suitable locations within the site boundary. One bat box would be installed per tree with medium or high bat roost potential that is due to be lost, whether or not a roost has been identified. A variety of bat boxes would be used to support different species. <p><u>Monitoring:</u></p> <ul style="list-style-type: none"> There would be regular checks of construction lighting to monitor and correct any excessive light spill into the surrounding habitats and particularly into the adjacent woodland. There would be regular checks of operational lighting to monitor and correct for any excessive light spill into the

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			<p>surrounding habitats and particularly into the adjacent woodland.</p> <ul style="list-style-type: none"> Bat boxes would be monitored over a five-year period post-construction, to confirm the presence/absence of bats and use of the bat boxes. If bat boxes have not been occupied within three years of erection, consideration would be given to moving them to alternative sites nearby, to be determined by a licensed bat ecologist. The TEMMP [REP1-016] outlines the proposed monitoring activities identified for bats during the construction and operational phases.
Otter	Main development site	<p>Volume 2, Chapter 14: Terrestrial Ecology and Ornithology [AS-033]</p> <p>Terrestrial Ecology Monitoring and</p>	<p><u>Primary mitigation:</u></p> <ul style="list-style-type: none"> A barrier (e.g. sheet piling) would be installed to provide separation from the main platform and Sizewell Marshes SSSI with engineered drainage installed to limit the disturbance to the hydrology and geology of Sizewell Marshes SSSI (see Chapter 19: Groundwater and Surface Water of the ES (Book 6).

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		Mitigation Plan [REP1-016]	<ul style="list-style-type: none"> The establishment of new reedbed and ditches at Aldhurst Farm (completed in 2016) has provided replacement for the land take of these habitats within Sizewell Marshes SSSI. The replacement habitats have established successfully, and mobile aquatic plant and invertebrate species would colonise over time from the adjacent areas of the Sizewell Marshes SSSI. Otters have already been sighted in the newly created wetlands at Aldhurst Farm. The SSSI crossing will consist of a 30m open single span bridge. This will facilitate the passage of otter. Pre-construction surveys to avoid disturbance or destruction of otter holts, and habitat creation at Aldhurst Farm. Primary mitigation includes a Lighting Management Plan for Construction and Operational Sites (Volume 2, Appendix 2B [APP-182]) and boundary treatments. <p><u>Tertiary mitigation:</u></p> <ul style="list-style-type: none"> An Otter Method Statement (Volume 2, Appendix 14C10 [APP-252]) has been prepared detailing the approach to be used, including the removal of vegetation and ground

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			<p>clearance in areas where commencement of construction activities have the potential to damage or destroy otter holts. Pre-construction surveys would be required to provide up-to-date information as to whether any holts are present within the construction footprint or in the Zol. A European Protected Species Licence application and Method Statement may be required to permit works that would otherwise disturb, injure or kill otter, and/or damage or restrict access to their holts, should an active holt be identified. If required, a detailed mitigation strategy for otter would be provided in a method statement, based on Natural England's standing advice and guidance in relation to otter and mitigation for development projects and Highways Agency's design Manual for Roads and Bridges. If any holts would be impacted by the works, it may be necessary to create artificial holt(s) to mitigate for their loss.</p> <ul style="list-style-type: none"> Monitoring of otter activity would take place before, during and after construction, and would include methods to assess use of the SSSI crossing culvert by otter. The

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			<p>TEMMP [REP1-016] outlines the proposed monitoring activities identified for otter during the construction and operational phases.</p> <ul style="list-style-type: none"> •
	Northern park and ride	Volume 3, Chapter 7: Terrestrial Ecology and Ornithology [APP-363]	<ul style="list-style-type: none"> • Scoped out as not present on site, no further measures implemented as no significant effect is considered likely.
	Southern park and ride	Volume 4, Chapter 7: Terrestrial Ecology and Ornithology [APP-394]	<ul style="list-style-type: none"> • Scoped out as not present on site, no further measures implemented as no significant effect is considered likely.
	Freight management facility	Volume 8, Chapter 7: Terrestrial Ecology and	<ul style="list-style-type: none"> • Otter are not considered likely to be present within the site boundary, no further measures implemented as no significant effect is considered likely.

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		Ornithology [APP-523]	
	Sizewell link road	Volume 6 Chapter 7: Terrestrial Ecology and Ornithology [APP-461]	<p>There is no predicted effect upon otter population, so no specific measures are proposed.</p> <p><u>Tertiary mitigation:</u> No storage of equipment or material would be allowed within 10m of a watercourse, and no materials would be stored in areas of high flood risk to avoid sediment loss during flooding. All soils would be stored away from watercourses (or potential pathways to watercourses), and any potentially contaminated soil would be stored on an impermeable surface and covered to reduce leachate generation and potential migration to surface waters.</p> <ul style="list-style-type: none"> •
	Two village bypass	Volume 5, Chapter 7: Terrestrial Ecology and Ornithology [APP-425]	<p><u>Primary mitigation:</u> Proposed River Alde overbridge:</p> <ul style="list-style-type: none"> • The crossing of the River Alde would comprise an overbridge, approximately 60m in length which would preserve the natural integrity of the banks of the river, bed and bankside, and minimise shading effects. This would be

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		<p>Volume 5, App 7A, Annex 7A-6C RAMS otter</p> <p>Terrestrial Ecology Monitoring and Mitigation Plan [REP1-016] [REP1-016]</p>	<p>of sufficient size to enable passage for otters and water voles to be maintained during construction and operation. An otter ledge would be installed on bridge abutments, if required, to allow passage at times of high flows. Otter fencing would be incorporated where appropriate to guide otters to the crossing point.</p> <ul style="list-style-type: none"> • There would be eight 5.4m long, 3m wide flood relief culverts proposed (four on either side of the River Alde overbridge). There would also be two further culverts within the embankment outside the floodplain extent; on the western side of the River Alde overbridge (approximately 200m south-east from the existing A12), the culvert would be approximately 5.4m by 3m and would allow an existing watercourse and livestock access track to pass beneath the road (on their existing alignment of an existing accommodation access track which would be diverted under the proposed bridge). A mammal mitigation culvert would be provided on the east side of the River Alde overbridge outside of the floodplain extent (approximately 5.4m by 1.2m) • Field drains located at the western end of the bypass, either side of the proposed River Alde overbridge, would be

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			<p>diverted along the base of the embankment to the River Alde where possible with additional/excess water culverted through the embankments.</p> <ul style="list-style-type: none"> Any required flood compensation areas would be designed to minimise impacts to ditches and watercourses to avoid interfering with suitable otter and water vole habitat. The banks of the River Alde and the associated ditches would be protected during construction of any flood compensation areas. It is currently not thought likely that flood compensations areas will be required. <p><u>Tertiary mitigation:</u> Prior to any works taking place in watercourses and ditches, the following approaches would be used for otter and water vole:</p> <ul style="list-style-type: none"> Otter: a pre-construction survey for otters would be conducted. If an otter lying up site or holt is recorded that would be impacted by the works, then an appropriate mitigation strategy would be developed and completed under agreement and, where necessary, licence to Natural England.

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			<p><u>RAMS:</u></p> <p><u>Toolbox talk:</u></p> <ul style="list-style-type: none"> Prior to commencement of the vegetation clearance works, all site contractors will be briefed by the ECoW as part of the site induction to provide them with a basic overview of the life history, habitat requirements, identification and legal protection granted to otters. Site-specific toolbox talks will also be undertaken as necessary to identify the habitats present within the site that have the potential to be used by these species and outline the environmental measures to be followed in order to avoid breaches of legislation and / or adverse effects on the species that could occur within or in the vicinity of the working area. <p><u>Precautionary working methods:</u></p> <ul style="list-style-type: none"> Pre-construction surveys will be undertaken to provide up-to-date information on otter activity and as to whether any holts or other resting places are present within the construction footprint. Otter breeding and resting places ("holts") are typically tunnels under waterside trees, and are legally protected. Natal or breeding holds may be used at any time

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			<p>of the year. Although no natal holts have been found within the site boundary, there remains the possibility that otter may set up a new natal den site.</p> <ul style="list-style-type: none"> • A European Protected Species Licence application and Method Statement would be required to permit works that would otherwise disturb, injure or kill otter, and/or damage or restrict access to their holts, should an active holt be identified. If required, a detailed mitigation strategy for otter would be provided in a method statement, based on Natural England's standing advice and guidance in relation to otter and mitigation for development projects. • The locations of all holts and couches must be identified to contractors in confidence to ensure that they are not accidentally disturbed during the construction process. • Demarcation and of a 30m exclusion zone around otter holts. • Where possible, a minimum of a 20m buffer will be maintained between the construction activities and the toe of the bank of the River Alde and ditches to attenuate the impacts of lighting and noise from the construction activities. • Works compounds, storage sites and access roads must not be located between important areas of otter habitat.

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			<p>Potential water quality issues associated with the terrestrial (i.e. non-marine) environment, would be dealt with through embedded (primary) mitigation measures.</p> <ul style="list-style-type: none"> • Prior to works commencing an appropriately experienced ECoW will undertake a toolbox talk to site staff covering the Precautionary Working Methods to be adhered to. • Where works are required in areas of otter activity (but not a place of shelter) the ECoW will demarcate and agree on site in which areas which activity is permitted. • If night-time working is required, the works around the areas with suitable habitat for otter, light spill would be minimised to reduce any possible impacts to the species. • Such precautions will be put in place to avoid an offence being committed during the proposed works and subsequent development with respect to otter. <p><u>Vegetation clearance:</u></p> <ul style="list-style-type: none"> • As set out above, vegetation clearance works are required in order to facilitate the development of the site. These works have the potential to impact the local otter population. Should vegetation clearance work occur within the proximity of the

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			<p>River Alde, a qualified ECoW will need to carry out a pre-construction check for signs of otter and otter activity within the footprint of the works.</p> <ul style="list-style-type: none"> • A European Protected Species Licence application and Method Statement would be required to permit works that would otherwise disturb, injure or kill otter, and/or damage or restrict access to their holts, should an active holt be identified. • Should otter signs be present the ECoW will demarcate and agree on site in which areas which activity is permitted. <p><u>Equipment:</u></p> <ul style="list-style-type: none"> • The vegetation clearance contractors on site will utilise equipment specific to their clearance methods as per their RAMS. For example: <ul style="list-style-type: none"> ○ John Deere 3 series compact with cut and collector flail; ○ John Deere 4 series compact tractor with side arm flail; and ○ brushcutter, rakes, pitchforks and other hand tools.

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			<p><u>Ground-breaking works:</u></p> <ul style="list-style-type: none"> As set out above, ground-breaking works are required in order to facilitate the development of the site. These works have the potential to impact the local otter population. Should ground-breaking works take occur (20m of the River Alde and within 10m of other watercourses), a qualified ECoW will need to carry out a pre-construction check for signs of otter and otter activity within the footprint of the works. A European Protected Species Licence application and Method Statement would be required to permit works that would otherwise disturb, injure or kill otter, and/or damage or restrict access to their holts, should an active holt be identified. Should otter signs be present the ECoW will demarcate and agree on site in which areas which activity is permitted. Demarcation and exclusion from holts within 30m of working areas, potentially with the use of Heras fencing. Any excavations made during construction activities would be closed at the end of the day to prevent access by otter

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			and other terrestrial nocturnal animals. If it is not be possible for excavations to be closed at night, a means of egress (i.e. a wooden plank or soil ramp) would be provided to ensure that any animals that may access these excavations have a means of escape.
	Yoxford	Volume 7, Chapter 7: Terrestrial Ecology and Ornithology [APP-494]	<p><u>Primary mitigation:</u></p> <ul style="list-style-type: none"> A 5m buffer would be maintained between the proposed Yoxford roundabout and the adjacent River Yox to protect the integrity of the banks as well as the associated ecological features. <p><u>Tertiary mitigation:</u> Prior to works taking place adjacent to the River Yox, a pre-construction survey would be conducted for otter and water voles:</p> <ul style="list-style-type: none"> Otter: a pre-construction survey would be conducted to confirm the absence/presence of any otter holt. Should an otter holt be identified that would be directly impact by the proposed works, a licence from Natural England would be obtained. Should breeding otter be recorded, then all works

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			<p>would cease until both adult and young otter have left the holt.</p> <ul style="list-style-type: none">
	Green rail route	Volume 9, Chapter 7: Terrestrial Ecology and Ornithology [APP-555]	<ul style="list-style-type: none"> • Otter are not considered likely to be present within the site boundary, no further measures implemented as no significant effect is considered likely.
Water vole	Main development site	Volume 2, Chapter 14: Terrestrial Ecology and Ornithology [AS-033] Appendix 14C6A - Water Vole Mitigation Strategy [APP-252]	<u>Primary mitigation:</u> <ul style="list-style-type: none"> • The SSSI crossing will consist of a 30m open single span bridge. This will facilitate the passage water vole through the structure. • The establishment of new reedbed and ditches at Aldhurst Farm (completed in 2016) has provided replacement for the land take of these habitats within Sizewell Marshes SSSI. The replacement habitats have established successfully, and mobile aquatic plant and invertebrate species have colonised over time from the adjacent areas of the Sizewell Marshes SSSI. These new habitats are suitable for water voles and Aldhurst Farm would act as the main receptor site for water

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		Terrestrial Ecology Monitoring and Mitigation Plan [REP1-016]	<p>voles, if they need to be translocated from the footprint of the main development site. One of the four lagoons at Aldhurst Farm was fenced to minimise the risk of water vole colonising naturally ahead of translocation however contained a moderate population when surveyed in 2020.</p> <p><u>Tertiary mitigation:</u></p> <ul style="list-style-type: none"> Tertiary mitigation measures are outlined in the mitigation strategy which was updated as part of the Jan 2021 submission to PINS and described in the 'Details from the mitigation strategy' section below. <p><u>Details from the mitigation strategy:</u></p> <ul style="list-style-type: none"> Displacement techniques and monitoring requirements are proposed where there is a working area with maximum length of 50m (for watercourse this equates to 50m on each bank). However, should displacement be unsuccessful (i.e. programme, season, signs continuously recorded following vegetation clearance), trapping will be undertaken within those areas. Displacement is proposed to mitigate habitat loss/disturbance within the 31m section of the east-west

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			<p>running drains west of Sizewell Drain by SZB that is due to be impacted.</p> <ul style="list-style-type: none"> Trapping out water vole from the Sizewell Marshes SSSI crossing construction footprint will be undertaken if displacement is no longer a viable alternative i.e. water vole are recorded present in areas currently unoccupied. The preference is for animals to be released directly into the receptor area at Aldhurst Farm. Should trapping be necessary and depending on the time of year, if the weather is cold (night-time temperature below freezing (0oC)) in the autumn, a contingency option for water vole captured during the 15 September to 30 November trapping is to be over-wintered in captivity. The water voles would then be released into the receptor area the following spring (between 1 March and 15 April). As soon as water voles have been displaced/removed from the Sizewell Marshes SSSI crossing footprint, their habitat would be rendered unsuitable for re-colonisation. <p>Overall, in the long term, as a result of the proposed SZC main development site works, it is considered that there will be an</p>

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			<p>overall increase in the conservation status of water vole, as a result of an increase in habitat availability.</p> <p><u>Monitoring:</u> The TEMMP [REP1-016] outlines the proposed monitoring activities identified for water vole during the construction and operational phases.</p>
	Northern park and ride	Volume 3, Chapter 7: Terrestrial Ecology and Ornithology [APP-363]	Water vole are not considered likely to be present within the site boundary, no further measures implemented as no significant effect is considered likely.
	Southern park and ride	Volume 4, Chapter 7: Terrestrial Ecology and Ornithology [APP-394]	<ul style="list-style-type: none"> Water vole are not considered likely to be present within the site boundary, no further measures implemented as no significant effect is considered likely.

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	Freight management facility	Volume 8, Chapter 7: Terrestrial Ecology and Ornithology [APP-523]	<ul style="list-style-type: none"> Water vole are not considered likely to be present within the site boundary, no further measures implemented as no significant effect is considered likely.
	Sizewell link road	Volume 6 Chapter 7: Terrestrial Ecology and Ornithology [APP-461]	<ul style="list-style-type: none"> Water vole are not considered likely to be present within the site boundary, no further measures implemented as no significant effect is considered likely.
	Two village bypass	Volume 5, Chapter 7: Terrestrial Ecology and Ornithology [APP-425] Sizewell C Draft Water Vole Method	<u>Primary mitigation:</u> <ul style="list-style-type: none"> There would be eight 5.4m long, 3m wide flood relief culverts proposed (four on either side of the River Alde overbridge). There would also be two further culverts within the embankment outside the floodplain extent; on the western side of the River Alde overbridge (approximately 200m south-east from the existing A12), the culvert would be approximately 5.4m by 3m and would allow an existing watercourse and livestock access track to pass beneath the road (on their existing alignment of an existing

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		<p>Statement and Supporting Information – Two Village Bypass</p> <p>Terrestrial Ecology Monitoring and Mitigation Plan [REP1-016]</p>	<p>accommodation access track which would be diverted under the proposed bridge). A mammal mitigation culvert would be provided on the east side of the River Alde overbridge outside of the floodplain extent (approximately 5.4m by 1.2m)</p> <ul style="list-style-type: none"> Field drains located at the western end of the bypass, either side of the proposed River Alde overbridge, would be diverted along the base of the embankment to the River Alde where possible with additional/excess water culverted through the embankments. Any required flood compensation areas would be designed to minimise impacts to ditches and watercourses to avoid interfering with suitable otter and water vole habitat. The banks of the River Alde and the associated ditches would be protected during construction of any flood compensation areas. It is currently not thought likely that flood compensations areas will be required. <p><u>Tertiary mitigation:</u></p> <ul style="list-style-type: none"> No equipment or material would be stored within 10m of a watercourse, and no materials would be stored in areas of high flood risk to avoid sediment loss during flooding.

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			<ul style="list-style-type: none"> All soils would be stored away from watercourses (or potential pathways to watercourses), and any potentially contaminated soil would be stored on an impermeable surface and covered to reduce leachate generation and potential migration to surface waters. <p>Prior to any works taking place in watercourses and ditches, the following approaches would be used for otter and water vole:</p> <ul style="list-style-type: none"> Water voles: a pre-construction survey for water voles would be conducted. In the event of works being required that affect the banks of watercourses and ditches/ within the wetted channel and where water voles are known to be present, then a licence from Natural England would be required. All survey work would be in line with best practice guidelines. If the proposed works do not require more than 50m of vegetation clearance from either bank of the ditch, then works would be conducted under a class licence WML-CL31. If works would require vegetation clearance exceeding 50m, then a conservation licence would be required. <p><u>Monitoring:</u></p>

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			The protected species licence, which will be agreed with Natural England, will detail the monitoring requirements for water vole. The requirement for licensing has also been noted in the TEMMP [REP1-016] .
	Yoxford	Volume 7, Chapter 7: Terrestrial Ecology and Ornithology [APP-494]	<p><u>Primary mitigation:</u></p> <ul style="list-style-type: none"> A 5m buffer would be maintained between the proposed Yoxford roundabout and the adjacent River Yox to protect the integrity of the banks as well as the associated ecological features. <p><u>Tertiary mitigation:</u></p> <p>Prior to works taking place adjacent to the River Yox, a pre-construction survey would be conducted for otter and water voles:</p> <ul style="list-style-type: none"> Water vole: a pre-construction survey would be undertaken the year prior to construction to determine if any water voles or features which indicate water vole are present within the footprint of the work or within 3m. If water voles are confirmed within the footprint of works or within 3m, to inform a licence application, detailed surveys would need to be

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			conducted. The results of these surveys will inform a mitigation licence application to Natural England. Mitigation to displace water vole under licence can only take place between 15 February to 15 April. Surveys would be conducted in line with The Water Vole Mitigation Handbook.
	Green rail route	Volume 9, Chapter 7: Terrestrial Ecology and Ornithology [APP-555]	<ul style="list-style-type: none"> Water vole are not considered likely to be present within the site boundary, no further measures implemented as no significant effect is considered likely.
Hedgehog	Main development site	Volume 2, Chapter 14: Terrestrial Ecology and Ornithology [AS-033]	<u>Tertiary mitigation:</u> Removal of vegetation, ground clearance and the commencement of construction activities have the potential to risk killing or injuring hedgehogs, either in summer or “day” nests or winter hibernation nests (hibernation occurs between November to April). Ground clearance works would generally be undertaken outside of the hibernation period. Prior to ground clearance, an inspection for hedgehog nests would be

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			undertaken by a suitably experienced ECoW prior to the removal of vegetation; this is likely to be undertaken in parallel with removal of reptiles from the construction footprint.
	Northern park and ride	Volume 3, Chapter 7: Terrestrial Ecology and Ornithology [APP-363]	<u>Tertiary mitigation:</u> The phased approach to site clearance and topsoil stripping (as described previously to safeguard reptiles) would discourage brown hare and hedgehogs away from the site and into the surrounding suitable habitat.
	Southern park and ride	Volume 4, Chapter 7: Terrestrial Ecology and Ornithology [APP-394]	<u>Tertiary mitigation:</u> <ul style="list-style-type: none"> The phased approach to site clearance and topsoil stripping (as described previously to safeguard reptiles) would discourage brown hare and hedgehogs away from the site and into the surrounding suitable habitat.
	Freight management facility	Volume 8, Chapter 7: Terrestrial Ecology and	<u>Tertiary mitigation:</u> During the preliminary works and site preparatory works, the phased approach to site clearance (as described above to safeguard reptiles) would discourage brown hare and hedgehog

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		Ornithology [APP-523]	away from the site of activity and into the surrounding suitable habitat.
	Sizewell link road	Volume 6 Chapter 7: Terrestrial Ecology and Ornithology [APP-461]	<u>Tertiary mitigation:</u> The phased approach to site clearance and topsoil stripping (as described previously to safeguard reptiles) would discourage brown hare, and hedgehogs away from the site of activity and into the surrounding suitable habitat.
	Two village bypass	Volume 5, Chapter 7: Terrestrial Ecology and Ornithology [APP-425]	<u>Tertiary mitigation:</u> The phased approach to site clearance and topsoil stripping (as described previously to safeguard reptiles) would discourage brown hare, and hedgehogs away from the site of activity and into the surrounding suitable habitat.
	Yoxford	Volume 7, Chapter 7: Terrestrial Ecology and	<u>Tertiary mitigation:</u> <ul style="list-style-type: none"> The phased approach to site clearance and topsoil stripping (as described previously to safeguard reptiles) would discourage brown hare, and hedgehogs away from the site of activity and into the surrounding suitable habitat.

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Wildlife & Countryside Act Habitats and Species	Sites of Relevance	Relevant document(s)	Measures to be implemented to conserve these species and habitats
		Ornithology [APP-494]	
	Green rail route	Volume 9, Chapter 7: Terrestrial Ecology and Ornithology [APP-555]	<u>Tertiary mitigation:</u> During the preliminary works and site preparatory works, a phased approach to site clearance and topsoil stripping would discourage brown hares and hedgehogs away from the site of activity and into the surrounding suitable habitat.
Polecat	Main development site	Volume 2, Chapter 14: Terrestrial Ecology and Ornithology [AS-033]	<ul style="list-style-type: none"> Scoped out, no further measures implemented as no significant effect is considered likely.
	Northern park and ride	Volume 3, Chapter 7: Terrestrial Ecology and	<ul style="list-style-type: none"> Scoped out, no further measures implemented as no significant effect is considered likely.

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Wildlife & Countryside Act Habitats and Species	Sites of Relevance	Relevant document(s)	Measures to be implemented to conserve these species and habitats
		Ornithology [APP-363]	
	Southern park and ride	Volume 4, Chapter 7: Terrestrial Ecology and Ornithology [APP-394]	<ul style="list-style-type: none"> Scoped out, no further measures implemented as no significant effect is considered likely.
	Freight management facility	Volume 8, Chapter 7: Terrestrial Ecology and Ornithology [APP-523]	<ul style="list-style-type: none"> Scoped out, no further measures implemented as no significant effect is considered likely.
	Sizewell link road	Volume 6 Chapter 7: Terrestrial Ecology and Ornithology [APP-461]	<ul style="list-style-type: none"> Scoped out, no further measures implemented as no significant effect is considered likely.
	Two village bypass	Volume 5, Chapter 7:	<ul style="list-style-type: none"> Scoped out, no further measures implemented as no significant effect is considered likely.

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Wildlife & Countryside Act Habitats and Species	Sites of Relevance	Relevant document(s)	Measures to be implemented to conserve these species and habitats
		Terrestrial Ecology and Ornithology [APP-425]	
	Yoxford	Volume 7, Chapter 7: Terrestrial Ecology and Ornithology [APP-494]	<ul style="list-style-type: none"> Scoped out, no further measures implemented as no significant effect is considered likely.
	Green rail route	Volume 9, Chapter 7: Terrestrial Ecology and Ornithology [APP-555]	<ul style="list-style-type: none"> Scoped out, no further measures implemented as no significant effect is considered likely.
Schedule 1 listed bird species	Main development site	Volume 2, Chapter 14: Terrestrial	No species- specific measures are proposed for any of the S1 listed species. General measures that apply to all bird species are as follows.

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Wildlife & Countryside Act Habitats and Species	Sites of Relevance	Relevant document(s)	Measures to be implemented to conserve these species and habitats
(wintering marsh harrier, barn owl, hobby, peregrine falcon, black redstart, Cetti's warbler) and all nesting bird species.		Ecology and Ornithology [AS-033]	<p><u>Primary mitigation:</u></p> <ul style="list-style-type: none"> The Rights of Way and Access Strategy for the EDF Energy estate (see Chapter 15, Appendix 15I of the ES (Book 6)) has been developed to minimise the displacement of people away from the proposed development area to nearby European (National) sites to minimise disturbance to ground-nesting bird species and trampling of vegetation at those sites. In addition, the strategy outlines a monitoring programme for recreational displacement and identify local mitigation measures, to be agreed with local land managers, which could be introduced to further reduce recreational disturbance. The establishment of new reedbed and ditches at Aldhurst Farm (completed in 2016) has provided replacement for the land take of these habitats within Sizewell Marshes SSSI. The replacement habitats have established successfully, and mobile aquatic plant and invertebrate species would colonise over time from the adjacent areas of the Sizewell Marshes SSSI. These new habitats also provide nesting and foraging

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Wildlife & Countryside Act Habitats and Species	Sites of Relevance	Relevant document(s)	Measures to be implemented to conserve these species and habitats
			<p>habitat for many bird species. Marsh Harriers have already started breeding in the new wetlands.</p> <ul style="list-style-type: none"> • The extensive grasslands created to provide reptile mitigation and marsh harrier compensation habitats as well as the grasslands at Aldhurst Farm already support populations of ground nesting bird species which would have been present at substantially lower densities when these habitats were intensively cultivated arable fields. • Removal of vegetation, ground clearance and the commencement of construction activities have the potential to risk killing or injuring nesting birds, and to damage or destroy nests, including those of ground-nesting species, should works be undertaken during the breeding bird season. Birds and their nests are protected under the Wildlife and Countryside Act (W&CA) and the removal of scrub and trees and ground clearance works would generally be undertaken outside of the breeding bird season. Where it is not possible to undertake these works outside of the breeding bird season, an inspection for nests would be undertaken by a suitably experienced ECoW prior to the removal of vegetation. If nesting birds are identified during this process,

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Wildlife & Countryside Act Habitats and Species	Sites of Relevance	Relevant document(s)	Measures to be implemented to conserve these species and habitats
			works in the vicinity of the nest (estimated to be a 10m standoff or greater, depending upon species) would cease until the young have fledged.
	Northern park and ride	Volume 3, Chapter 7: Terrestrial Ecology and Ornithology [APP-363]	<u>Tertiary mitigation:</u> <ul style="list-style-type: none"> The removal of vegetation, ground clearance, and the commencement of construction activities have the potential to risk killing or injuring nesting birds, and to damage or destroy nests, including those of ground-nesting species, should works be undertaken during the breeding bird season (considered to be late February to August). Birds and their nests are protected under the Wildlife and Countryside Act, and the removal of scrub and trees and ground clearance works would generally be undertaken outside of the breeding bird season. Measures could also be put in place to deter birds from nesting in any hedgerow to be removed (for example, cutting back vegetation and making the area less suitable), however, the ground would need to remain undisturbed during the reptile hibernation period. Where it is not possible to undertake these works outside of the breeding bird season, an inspection for nests would be

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Wildlife & Countryside Act Habitats and Species	Sites of Relevance	Relevant document(s)	Measures to be implemented to conserve these species and habitats
			undertaken by a suitably experienced ECoW prior to the removal of vegetation. If nesting birds are identified during this process, works in the vicinity of the nest (estimated to be a 10m standoff) would cease until the young have fledged.
	Southern park and ride	Volume 4, Chapter 7: Terrestrial Ecology and Ornithology [APP-394]	<p><u>Tertiary mitigation:</u></p> <ul style="list-style-type: none"> Construction activities have the potential to risk killing or injuring breeding birds, and damage or destroy nests, including those of ground-nesting species, should works be undertaken during the breeding bird season (late February to August inclusive). Birds and their nests are protected under the Wildlife and Countryside Act, therefore removal of scrub and trees and ground clearance works would generally be undertaken outside of the breeding bird season. Measures could also be put in place to deter birds from nesting in any hedgerow to be removed (for example, cutting back vegetation and making the area less suitable); however, the ground would need to remain undisturbed during the reptile hibernation period. Where it is not possible to undertake these works outside of the breeding bird season, an inspection for nests would be undertaken by a suitably

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Wildlife & Countryside Act Habitats and Species	Sites of Relevance	Relevant document(s)	Measures to be implemented to conserve these species and habitats
			experienced ECoW prior to the removal of vegetation. If breeding birds are identified during this process, works in the vicinity of the nest (estimated to be a 10m standoff) would need to cease until the young have fledged.
	Freight management facility	Volume 8, Chapter 7: Terrestrial Ecology and Ornithology [APP-523]	<u>Tertiary mitigation:</u> <ul style="list-style-type: none"> Removal of vegetation, ground clearance, and the commencement of construction activities have the potential to risk killing or injuring nesting birds and to damage or destroy nests, including those of ground-nesting species, if works are undertaken during the breeding bird season (considered to be late February to August inclusive). Birds and their nests are protected under the Wildlife and Countryside Act and the removal of scrub and trees and ground clearance works would generally be undertaken outside of the breeding bird season. Measures could also be put in place to deter birds from nesting in any hedgerow to be removed (for example, cutting back vegetation and making the area less suitable); however, the ground would need to remain undisturbed during the reptile hibernation period. Where it is not possible to undertake these works outside of

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Wildlife & Countryside Act Habitats and Species	Sites of Relevance	Relevant document(s)	Measures to be implemented to conserve these species and habitats
			the breeding bird season, an inspection for nests would be undertaken by a suitably experienced Ecological Clerk of Works (ECoW) prior to the removal of vegetation. If nesting birds are identified during this process, works in the vicinity of the nest (estimated to be a 10m standoff) would cease until the young have fledged.
	Sizewell link road	Volume 6 Chapter 7: Terrestrial Ecology and Ornithology [APP-461]	<u>Tertiary mitigation:</u> <ul style="list-style-type: none"> Construction activities have the potential to risk killing or injuring breeding birds, and damage or destroy nests, including those of ground-nesting species, should works be undertaken during the breeding bird season (late February to August inclusive). Birds and their nests are protected under the Wildlife and Countryside Act, therefore removal of scrub and trees and ground clearance works would generally be undertaken outside of the breeding bird season. Measures could also be put in place to deter birds from nesting in any hedgerow to be removed (for example, cutting back vegetation and making the area less suitable); however, the ground would need to remain undisturbed during the reptile hibernation period. Where it is not possible to undertake these works outside of the breeding bird season, an

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			inspection for nests would be undertaken by a suitably experienced ECoW prior to the removal of vegetation. If breeding birds are identified during this process, works in the vicinity of the nest (estimated to be a 10m standoff) would need to cease until the young have fledged
	Two village bypass	Volume 5, Chapter 7: Terrestrial Ecology and Ornithology [APP-425]	<u>Tertiary mitigation:</u> <ul style="list-style-type: none"> Construction activities have the potential to risk killing or injuring breeding birds, and damage or destroy nests, including those of ground-nesting species, should works be undertaken during the breeding bird season (late February to August inclusive). Birds and their nests are protected under the Wildlife and Countryside Act, therefore removal of scrub and trees and ground clearance works would generally be undertaken outside of the breeding bird season. Measures could also be put in place to deter birds from nesting in any hedgerow to be removed (for example, cutting back vegetation and making the area less suitable); however, the ground would need to remain undisturbed during the reptile hibernation period. Where it is not possible to undertake these works outside of the breeding bird season, an inspection for nests would be undertaken by a suitably

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Wildlife & Countryside Act Habitats and Species	Sites of Relevance	Relevant document(s)	Measures to be implemented to conserve these species and habitats
			experienced ECoW prior to the removal of vegetation. If breeding birds are identified during this process, works in the vicinity of the nest (estimated to be a 10m standoff) would need to cease until the young have fledged.
	Yoxford	Volume 7, Chapter 7: Terrestrial Ecology and Ornithology [APP-494]	<u>Tertiary mitigation:</u> <ul style="list-style-type: none"> The removal of vegetation, ground clearance and the commencement of construction activities have the potential to risk killing or injuring nesting birds, and to damage or destroy nests, including those of ground-nesting species, should works be undertaken during the breeding bird season (considered to be late February to August). Birds and their nests are protected under the Wildlife and Countryside Act and the removal of scrub and trees and ground clearance works would generally be undertaken outside of the breeding bird season. Measures could also be put in place to deter birds from nesting in any hedgerow to be removed (for example, cutting back vegetation and making the area less suitable); however, the ground would need to remain undisturbed during the reptile hibernation period, after which groundworks could commence. Where it is not possible to undertake these works outside of the breeding bird season,

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			an inspection for nests would be undertaken by a suitably experienced ECoW prior to the removal of vegetation. If nesting birds are identified during this process, works in the vicinity of the nest (estimated to be a 10m standoff) would cease until the young have fledged.
	Green rail route	Volume 9, Chapter 7: Terrestrial Ecology and Ornithology [APP-555]	<p><u>Tertiary mitigation:</u></p> <ul style="list-style-type: none"> Removal of vegetation, ground clearance and the commencement of construction activities have the potential to risk killing or injuring nesting birds, and to damage or destroy nests, including those of ground-nesting species, should works be undertaken during the breeding bird season (considered to be late February to August). Birds and their nests are protected under the Wildlife and Countryside Act and the removal of scrub and trees and ground clearance works would generally be undertaken outside of the breeding bird season. Measures could also be put in place to deter birds from nesting in any hedgerow to be removed (for example, cutting back vegetation and making the area less suitable); however, if conducted during the reptile hibernation period, the ground would need to remain undisturbed. Where it is not possible to undertake these works outside of the

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Wildlife & Countryside Act Habitats and Species	Sites of Relevance	Relevant document(s)	Measures to be implemented to conserve these species and habitats
			breeding bird season, an inspection for nests would be undertaken by a suitably experienced ECoW prior to the removal of vegetation. If nesting birds are identified during this process, works in the vicinity of the nest (estimated to be a 10m standoff) would cease until the young have fledged.

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Table 2: Summary of measures to be implemented to conserve species and habitats listed under Section 41 of the NERC Act in the Main Development Site and Associated Development Sites

NERC Section 41 Habitats and Species	Sites of Relevance	Relevant document(s)	Measures to be implemented to conserve these species and habitats
S41 bat species present: Barbastelle bat, Soprano pipistrelle, Bechstein's, Brown long eared, Horseshoe bat (greater and lesser), Noctule	Main development site	<p>Volume 2, Chapter 14: Terrestrial Ecology and Ornithology [AS-033]</p> <p>Appendix 14C1A – Bat Mitigation Strategy [APP-252]</p> <p>Terrestrial Ecology Monitoring and Mitigation Plan [REP1-016]</p>	<p><u>Primary mitigation:</u></p> <ul style="list-style-type: none"> The SSSI crossing will consist of a 30m open single span bridge. This will facilitate the passage of bats through the structure. Lighting measures on the crossing would be deployed to ensure the culvert is viable for use by bats. A detailed lighting strategy would be implemented in accordance with the Lighting Management Plan (Volume 2, Appendix 2B) [APP-182]. The strategy would comply with best practice to minimise impacts on nocturnal species such as bats that may use nearby habitats for roosts or foraging. Guidance within the latest Institution of Lighting Professionals (ILP) Guidance Note would be followed. The majority of the woodland resource within the EDF Energy estate would be retained including the line of mature broadleaved trees on the northern edge of Kenton Hills, known to support features of importance for roosting bat species and also including most of the well-developed

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NERC Section 41 Habitats and Species	Sites of Relevance	Relevant document(s)	Measures to be implemented to conserve these species and habitats
			<p>hedgerows and mature trees along Bridleway 19, east of Upper Abbey Farm.</p> <ul style="list-style-type: none"> Alternative roost sites (bat boxes) have been erected in advance of construction within woodland least likely to be directly affected by noise and lighting disturbance, should the proposed development displace roosting bats from woodland more directly exposed to disturbance. In addition, a purpose-built 'bat house' would be constructed to provide alternative roosting opportunities for bats. Should any roost loss be confirmed, roosts would be replaced at an appropriate ratio, to be agreed with Natural England. The oLEMP outlines management actions to return existing arable land on the EDF Energy estate post-construction to Suffolk Sandlings habitat comprising dry acid grassland and with additional areas of woodland and scrub. In the operational phase of the development, this landscape-scale habitat creation approach would replace existing intensively managed arable farmland with habitats of greater biodiversity value and would increase habitat connectivity. The oLEMP includes also long-term management prescriptions and a monitoring programme for habitats created ensuring that these areas deliver the habitats proposed.

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NERC Section 41 Habitats and Species	Sites of Relevance	Relevant document(s)	Measures to be implemented to conserve these species and habitats
			<p><u>Tertiary mitigation:</u></p> <ul style="list-style-type: none"> • The appointment of an Ecological Clerk of Works (ECoW) to manage ecological issues on site, undertaken or supervise ongoing works in relation to protected species, supervise works in sensitive areas and undertake monitoring as required. • Training for construction workers, in the form of tool box talks, on ecological constraints including retained habitats, designated sites and protected species considerations. • A Bat Mitigation Strategy (Volume 2, Appendix 14C1A [APP-252]) has been provided as part of the ES as well as a draft Bat Method Statement (Volume 2, Appendix 14C1B [APP-252]). Tree inspections to determine evidence of use as roosts would be undertaken sufficiently in advance of tree-felling to enable any licence application(s) to be submitted to Natural England, if these are required. A final inspection of these trees would be undertaken as close to the timing of felling as possible to take into account the regular roost switching behaviour displayed by tree-roosting bat species. Should bats (or evidence of use by bats) be identified, the mitigation strategies laid out in any licence

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NERC Section 41 Habitats and Species	Sites of Relevance	Relevant document(s)	Measures to be implemented to conserve these species and habitats
			<p>application(s) would be implemented (for example, the fitting of exclusion devices and/or soft-felling). The following approaches would be used:</p> <ul style="list-style-type: none"> ○ To mitigate for the confirmed and potential loss of tree roosts, replacement roosts would be installed on retained trees in suitable locations within the site boundary and within the wider EDF Energy estate. This provision would primarily take the form of a variety of bat boxes which would be used to support different species. However, the transfer of potential roost features, bark replacement and veteranisation of retained trees would be considered where appropriate. This is in addition to that already provided for barbastelle and detailed under primary mitigation. ○ Mitigation of roosts within buildings, particularly maternity and/or hibernation roosts that may be functionally lost would require more substantial mitigation. This may require more robust hibernation bat boxes, the improvement of retained locations that have the potential to support roosts of this nature and/or the provision of a new maternity or hibernation

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NERC Section 41 Habitats and Species	Sites of Relevance	Relevant document(s)	Measures to be implemented to conserve these species and habitats
			<p>specific bat building, probably in the Lower Abbey Farm area.</p> <ul style="list-style-type: none"> Where habitat features would be retained within the site during construction, measures to ensure the protection of these features would be implemented (appropriate to the habitat concerned). <p><u>Additional detail on the measures:</u></p> <ul style="list-style-type: none"> Once construction is complete and the temporary construction area has been removed, landscape-scale habitat creation measures to create acid grasslands would have developed in accordance with the oLEMP. The general pattern of the EDF Energy estate would be maintained as an open landscape with small woodland blocks but fields which are currently intensively managed as arable or improved grassland would be converted to open acid grassland that would result in a greater invertebrate prey biomass (and would establish more rapidly than woodland). Supplementary scrub planting and strengthening of hedgerows and woodland margins and some new woodland blocks are included within the outline landscape design proposals which would enhance connectivity for bats. The

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			<p>measures as a whole would provide a net biodiversity gain compared to the largely arable landscape currently present across the site.</p> <p>The following habitat creation measures have already been undertaken by EDF Energy;</p> <ul style="list-style-type: none"> • 5ha of wetland (reedbed) has already been established at Aldhurst Farm together with approximately 60 ha of acid grassland. • 10ha of species-rich acid grassland at Broom Covert has been taken out of intensive cattle grazing and grassland and scrub allowed to recover and re-establish as part of the reptile mitigation. • 40ha of acid grassland with 40% scrub planting has been established on former arable fields as part of the reptile mitigation. • 40ha of grassland and scrub planting will be established to provide foraging habitat for marsh harrier. <p><u>Monitoring:</u></p> <ul style="list-style-type: none"> • Bat boxes would be monitored on an annual basis during the construction phase from one year after installation. Boxes

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			<p>would continue to be monitored beyond the completion of construction. This monitoring would aim to confirm the presence/absence of bats and the use of the bat boxes. If bat boxes have not been occupied within three years of installation, consideration would be given to moving them to alternative sites nearby, to be determined by a licensed bat ecologist.</p> <ul style="list-style-type: none"> Monitoring the areas which have been assessed as being sensitive to disturbance from noise will be monitored throughout the various phases of the proposed development, with monitoring surveys being carried out at a minimum of once a year (although greater survey effort is likely to be undertaken). The areas to which this applies are described in the Non licensed method statement. The TEMMP [REP1-016] outlines the proposed monitoring activities identified for bats during the construction and operational phases.
Species specific measures: Barbastelle	Main development site	Volume 2, Chapter 14: Terrestrial Ecology and	<ul style="list-style-type: none"> In anticipation of tree removal to facilitate the Sizewell C development, 45 bat boxes suitable for barbastelle have already been erected in the wider Sizewell estate within: Sandpytle Plantation (10); The Grove (15); St. James

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		<p>Ornithology [AS-033]</p> <p>Appendix 14C1A – Bat Mitigation Strategy [APP-252]</p>	<p>Covert (10); Reckham Pits (5) and Leiston Carr (5), as compensation.</p> <ul style="list-style-type: none"> New roosts have been erected across the site and further roosting provision would be installed. These would include the provision of a dedicated bat barn at Lower Abbey Farm in an area relatively remote from construction noise. The bat house has been designed to include features suitable for species found roosting at Upper Abbey Farm; barbastelle, Natterer's bat, Daubenton's bat, brown long-eared, common and soprano pipistrelle. The proposed location for the bat barn will be surrounded by retained vegetation and good quality foraging habitats. This area will not be lit and will not be used for general public use. Existing vegetation is present around the proposed location of the bat barn. Hedgerows will be retained along Upper Abbey Bridleway, which has been shown to be a key existing commuting route and will provide connectivity to the bat barn. The bat barn will need to have a suitable thermal regime in order to be successful; features to help create a range of temperatures have been included within the building design. It will be draft free and a stable temperature environment will

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			<p>be created. It will be load bearing to allow for safe internal monitoring visits.</p> <ul style="list-style-type: none"> • Temperature and humidity data loggers will be placed inside the bat barn after construction to measure the environmental conditions. Data for the duration of the monitoring period will be collected and compared with the findings of the monitoring surveys. Like the bat boxes, monitoring will take place on an annual basis during the construction phase from one year after installation. Boxes would continue to be monitored for five-years beyond the completion of construction. The monitoring of these features is secured in the TEMMP [REP1-016] via way of requirement. • To mitigate for the impacts of severance on barbastelle, the SSSI crossing, linking Goose Hill to the main platform, would be designed to promote connectivity between habitats to the north and south of the construction footprint. The design of the SSSI crossing was updated as part of the ES Addendum and will now consist of a 30m open single span bridge. This will be more porous than the original proposed culvert and will facilitate the passage of fish, bats, invertebrates, reptiles, otter and water vole through the structure.

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			<ul style="list-style-type: none"> Alternative foraging and commuting areas are also being provided. The 'marsh harrier habitat improvement area as well as the multiple reptile receptor sites would provide extensive new areas of foraging habitat. Monitoring of known roost locations and key foraging/commuting routes during Phase 1 and 2 would be undertaken to establish the extent of any disturbance and quantify any potentially negative impacts e.g. roost abandonment and the need for any remedial measures. The monitoring is secured in the TEMMP [REP1-016] via way of requirement.
S41 bat species: noctule, soprano pipistrelle, barbastelle, brown long-eared	Northern park and ride	<p>Volume 3, Chapter 7: Terrestrial Ecology and Ornithology [APP-363]</p> <p>Volume 3, Chapter 7, Appendix 7A Annex 7A.6A</p>	<p><u>Primary mitigation / design:</u></p> <ul style="list-style-type: none"> Operational lighting for the proposed development would be designed to prevent light spill to Little Nursery Wood and other habitats, and light levels would not exceed 0.1lux along the eastern side of this wood. The lighting design for the proposed development would use light fittings chosen to limit stray light. Guidance within the latest Institution of Lighting Professionals Guidance Note would be followed as far as possible. These measures would minimise impacts on nocturnal species; such as bats that use the nearby tree lines or habitats for roosting or foraging.

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		RAMS Bats [APP-364] Terrestrial Ecology Monitoring and Mitigation Plan [REP1-016]	<ul style="list-style-type: none"> The woodland would be retained in its entirety, with a buffer distance of 20m between the woodland and the proposed development. There would be no direct loss of woodland habitat, and its associated species, and the buffer distance would assist in minimising impacts associated with the proposed development (such as noise, lighting and human disturbance). In addition to the previous measures, close-boarded fencing would be erected along the inside of the security fence where it is adjacent to Little Nursery Wood to provide additional mitigation for lighting impacts (including those from vehicle headlights) and noise impacts. The close-boarded fencing would be retained during the operational phase to act as screen for lighting (from vehicle headlights) and noise impacts. Assessment of trees with bat roost potential identified three trees within the proposed development site with potential to support roosting bats, but these three trees would be retained. Little Nursery Wood adjacent to the development site provided a greater roost resource and 41 trees within Little Nursery Wood were identified with the potential to

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			<p>support roosting bats, including the brown long-eared roost. All of these trees within the adjacent wood land are retained.</p> <p><u>Tertiary mitigation:</u></p> <ul style="list-style-type: none"> Construction work would take place during Monday to Saturday 07:00 to 19:00 hours, and some lighting may be required during the winter months, dependent upon what construction activities are taking place. Outside of these hours, lighting would be required at night for site security. Temporary construction lighting would be controlled to minimise light spill on surrounding habitats. This would minimise impacts on nocturnal species such as bats that may use the nearby tree lines or habitats for commuting, roosts or foraging. The lighting design would use light fittings chosen to limit stray light and minimise impacts on sensitive species. The lighting would also be designed to minimise the visibility from sensitive receptors off-site. <p><u>RAMS:</u></p> <p><u>Toolbox talk:</u></p>

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			<ul style="list-style-type: none"> Prior to commencement of the vegetation clearance works, all site contractors will be briefed by the ECoW as part of the site induction to provide them with a basic overview of the life history, habitat requirements, identification and legal protection granted to bats. Site-specific toolbox talks will also be undertaken as necessary to identify the habitats present within the site that have the potential to be used by bats and outline the environmental measures to be followed in order to avoid breaches of legislation and / or adverse effects on reptiles that could occur within or in the vicinity of the working area. <p><u>Precautionary working methods:</u></p> <ul style="list-style-type: none"> Little Nursery Wood would be retained in its entirety with a buffer distance of 20m between the woodland and the proposed development. Close-boarded fencing where the proposed development site abuts Little Nursery woodland. The three trees within the development site with the potential to support roosting bats would be retained. No trees will be felled as part of this scheme.

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			<ul style="list-style-type: none"> Construction lighting would be designed to prevent spill and exposure on to Little Nursery Wood. The lighting design for the proposed development would comply with the lighting strategy and use light fittings chosen to limit stray light. Guidance within the latest Institution of Lighting Professionals (ILP) Guidance Note would be followed as far as possible. These measures would minimise impacts on nocturnal species such as bats that may use the nearby tree lines or habitats for roosting or foraging. In addition, although some activities may require 24-hour working, the majority of construction would take place Monday to Saturday 07:00 to 19:00 hours. This means night-time works would be avoided, which is when bats are most active. Incidental mortality associated with traffic movements would therefore not have a significant effect on the bat assemblage. A10m buffer from the development would be maintained along the northeast, south-east and south-west borders. <p><u>Vegetation clearance:</u></p> <ul style="list-style-type: none"> As set out above, vegetation clearance works are required in order to facilitate the development of the site. Whilst this

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			<p>document has been produced in relation to bats, further information has been provided to ensure legal compliance in relation to other protected species.</p> <ul style="list-style-type: none"> Given that the works are to take place outside of the active bird breeding season (early March and late August inclusive), it is considered that no nesting bird checks are required prior to the commencement of works. Nevertheless, should vegetation clearance works take place within the core bird breeding season, a qualified ECoW will need to carry out a nesting bird check at least 48 hours before the commencement of works effecting the vegetation within the site. Once nesting birds have been confirmed absent, then the vegetation clearance contractors will carry out a habitat manipulation exercise in the form of a two-stage vegetation cut, with the initial cut reducing the vegetation to a height of 150mm before a second cut subsequently reduces it to ground level, with a minimum of two hours between cuts to allow reptiles or amphibians to move out of the cutting area. Vegetation clearance which does not disturb the ground or vegetation below 150mm can be conducted year-round with a low risk of impacting upon reptiles. Any vegetation clearance likely to impact vegetation below 150mm or the

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			<p>removal of places of shelter/hibernation features would be undertaken outside of the reptile and amphibian hibernating period (October to February inclusive), during periods of warm, dry weather. If this is not possible, vegetation would be cut to the ground (to remove potential bird nesting habitat), but the roots would remain intact until hibernation is complete. The root system of vegetation would then be removed once the hibernation season is over. Clearing of vegetation would be undertaken under the supervision of the suitably experienced Ecological Clerk of Works (ECoW).</p> <ul style="list-style-type: none"> • The vegetation arisings will be collected and used to create habitat piles in areas adjacent to the site (which are to be retained during the development works). • The habitats present within the site are largely sub-optimal for bats, being intensively managed for arable farming purposes. The sub-optimal arable land supports few invertebrates on which bats can forage. • Works will be undertaken outside of all tree and hedgerow root protection zones that would not be removed as part of the proposed development. Tree protective fencing as described in section 6.2 of British Standard 5837:2012 will be installed (distance of fencing from tree trunk = 12x trunk

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			diameter, distance from hedgerows =1m from the spread of hedgerow canopy), where required, prior to plant and machinery arriving on site and construction works commencing. The fencing will remain intact throughout the duration of the works and only be removed upon completion. Weather-proof notices will be attached to any protective fencing located adjacent to retained trees displaying the words 'Construction Exclusion Zone'. All personnel must be made aware of these restrictions. If works need to be undertaken within the root protection zones an Arboricultural survey would be required and any advice provided adhered to, to secure the long-term survival of the tree/hedgerow.
S41 bat species: noctule, soprano pipistrelle, barbastelle and brown long-eared bat.	Southern park and ride	<p>Volume 4, Chapter 7: Terrestrial Ecology and Ornithology [APP-394]</p> <p>Volume 4, Chapter 7, Appendix 7A</p>	<p><u>Primary mitigation:</u></p> <ul style="list-style-type: none"> Operational lighting would be designed so that light spill beyond the site boundary would be minimal (lighting levels would be less than between 1.0 lux), and there would be no substantive light spillage into adjacent habitats and woodland blocks including Whin Belt. The lighting design for the proposed development would use light fittings chosen to limit stray light. Guidance within the latest Institution of Lighting Professionals Guidance Note would be followed as far as possible. These

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		<p>Annex 7A.5A RAMS Bats [APP-395]</p> <p>Terrestrial Ecology Monitoring and Mitigation Plan [REP1-016]</p>	<p>measures would minimise impacts on nocturnal species such as bats that may use the nearby tree lines or habitats for roosts or foraging.</p> <p><u>Tertiary mitigation:</u></p> <ul style="list-style-type: none"> Construction work would take place during Monday to Saturday 07:00–19:00 hours, and some lighting in winter may be required dependent upon what construction activities are taking place. Outside of these hours, lighting may be required at night for safety or security. Temporary construction lighting would be controlled to minimise light spill on surrounding habitats. This would minimise impacts on nocturnal species such as bats that may use the nearby tree lines, or habitats for commuting, roosts or foraging. The lighting design would use light fittings chosen to limit stray light, and minimise impacts on sensitive species. The lighting would also be designed to minimise the visibility from sensitive receptors off-site. The proposed development includes the removal of several trees including three trees identified as having the potential to support roosting bats. Therefore, tree

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			<p>inspections to determine evidence of use as roosts would be undertaken sufficiently in advance of tree-felling to enable licence application(s) to be submitted to Natural England and develop an appropriate mitigation strategy, if required. Management measures would likely include:</p> <ul style="list-style-type: none"> ○ A final inspection of these trees would be undertaken as close to the timing of felling as possible to take into account the regular roost-switching behaviour displaced by tree-roosting bat species. Should bats (or evidence of use by bats) be identified, the mitigation strategies laid out in the licence application(s) would be implemented (for example, the fitting of exclusion devices). ○ Felling of trees would generally be undertaken in September or October, to avoid both the maternity and hibernation periods during which bats are more vulnerable to disturbance (this timing also avoids the breeding bird season). • To mitigate for the loss of the tree and potential roost resources, bat boxes would be installed on retained trees in suitable locations within the site boundary, prior to felling. One bat box would be installed per tree with

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			<p>medium or high bat roost potential that is due to be lost, whether or not a roost has been identified. A variety of bat boxes would be used to support different species.</p> <p><u>Monitoring:</u></p> <ul style="list-style-type: none"> • There would be regular checks of construction lighting to monitor and correct for any extraneous light spill into surrounding habitats. • Bat boxes would be monitored post-construction to confirm the presence/absence of bats and use of the bat boxes. If bat boxes have not been occupied by year 5 following installation, consideration would be given to moving them to alternative sites nearby, to be determined by a licensed bat ecologist. • There would also be regular checks of operational lighting to monitor and correct for any extraneous light spill into surrounding habitats. • The TEMMP [REP1-016] outlines the proposed monitoring activities identified for bats during the construction and operational phases. <p><u>RAMS:</u></p>

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			<p><u>Toolbox talk:</u></p> <ul style="list-style-type: none"> Prior to commencement of the vegetation clearance works, all site contractors will be briefed by the ECoW as part of the site induction to provide them with a basic overview of the life history, habitat requirements, identification and legal protection granted to bats. Site-specific toolbox talks will also be undertaken as necessary to identify the habitats present within the site that have the potential to be used by bats and outline the environmental measures to be followed in order to avoid breaches of legislation and / or adverse effects on reptiles that could occur within or in the vicinity of the working area. <p><u>Precautionary working methods:</u></p> <ul style="list-style-type: none"> Construction lighting would be designed so that light spill beyond the site boundary would be minimal and there would be no substantive light spillage into adjacent habitats and woodland blocks including Whin Belt. The lighting design for the proposed development would use light fittings chosen to limit stray light. Guidance within the latest Institution of Lighting Professionals Guidance Note would be followed as far as possible. These measures would minimise impacts on

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			<p>nocturnal species such as bats that may use the nearby tree lines or habitats for roosts or foraging.</p> <ul style="list-style-type: none"> • In addition, although some activities may require 24 hour working, the majority of construction would take place Monday to Saturday 07:00 to 19:00 hours. This means night-time works would be avoided, which is when bats are most active. Incidental mortality associated with traffic movements would therefore not have a significant effect on the bat assemblage. • Close-boarded fencing where the proposed development site abuts areas of woodland to provide additional protection from vehicle headlights and noise. • Initially all trees to be removed will be reassessed for bat roosting potential. • Any trees identified as having low bat roosting potential will be removed using a soft felling methodology outlined below with a suitability experienced, appropriately licensed, bat worker or bat worker assistant present. Trees will generally be removed in October, thereby avoiding the sensitive maternity (April-September) and hibernation (November-February) periods for bats.

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			<ul style="list-style-type: none"> For any trees with moderate or high roosting potential, a thorough pre works check for roosting bats will be undertaken. The methodology and required survey effort for these pre works checks will depend upon the status of the roosting features within the trees, but may include: <ul style="list-style-type: none"> a climbed or ground based tree inspection using an endoscope and / or torch; and emergence / re-entry surveys. Should any of the trees to be removed be found to support bat roosts, an EPS licence is likely to be required. The documents associated with this licence will outline the required mitigation, and the required measures are not discussed further within this report. Should additional emergence re-entry surveys be required these will be undertaken between April and September inclusive. If no roosts are found, the approach outlined below will be undertaken. All trees with potential roost features for bats will be soft felled using the following precautionary measures: <ul style="list-style-type: none"> trees classed as having low potential to support roosting bats, shall be felled under the watching brief of the ECoW;

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			<ul style="list-style-type: none"> ○ where potential roost features for bats cannot be exhaustively checked they will be section felled, with each section carefully lowered to the ground. Cuts will be made at least 50 cm beyond the extent of the potential roost feature; ○ if limbs or large branches require felling, consideration will be given to cracks which may close (crushing any bats inside) once the weight of the limb has been removed. If the crack cannot be thoroughly inspected to ensure bats are not present, the crack will be wedged open prior to removal of the limb/branch; ○ the stems of dense ivy will be cut at ground level at least 48 hours before the tree is felled; and ○ once the trees have been felled the potential roost features will be re-checked on the ground by a suitably experienced bat ecologist. If any potential roost feature can still not be exhaustively checked that section will be allowed a rest period of at least 24 hours to ensure that any individual bats that may have been missed are given the opportunity to relocate. <ul style="list-style-type: none"> ● If any bats are encountered during the felling operations all works and activity must cease immediately, until the ECoW

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			<p>has advised on the most appropriate manner to deal with the situation.</p> <ul style="list-style-type: none"> To mitigate for the loss of the tree and potential roost resources, bat boxes would be installed on retained trees in suitable locations within the site boundary, prior to felling. One bat box would be installed per tree with medium or high bat roost potential that is due to be lost, whether or not a roost has been identified. A variety of bat boxes would be used to support different species. <p><u>Facilitating work requirements</u></p> <p><u>a) Vegetation clearance methods</u></p> <ul style="list-style-type: none"> As set out above, vegetation clearance works are required in order to facilitate the development of the site. Given that the works are to take place outside of the active bird breeding season (early March and late August inclusive), it is considered that no nesting bird checks are required prior to the commencement of works. Nevertheless, should vegetation clearance works take place within the core bird breeding season, a qualified ECoW will need to carry out a nesting bird check at least 48 hours before the commencement of works effecting the vegetation within the

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			<p>site. Once nesting birds have been confirmed absent, then the vegetation clearance contractors will carry out a habitat manipulation exercise in the form of a two stage vegetation cut, with the initial cut reducing the vegetation to a height of 150mm before a second cut subsequently reduces it to ground level, with a minimum of two hours between cuts to allow reptiles or amphibians to move out of the cutting area.</p> <ul style="list-style-type: none"> Vegetation clearance which does not disturb the ground or vegetation below 150mm can be conducted year-round with a low risk of impacting upon reptiles. Any vegetation clearance likely to impact vegetation below 150mm or the removal of places of shelter/hibernation features would be undertaken outside of the reptile hibernating period (October to February inclusive), during periods of warm, dry weather. If this is not possible, vegetation would be cut to the ground (to remove potential bird nesting habitat), but the roots would remain intact until hibernation is complete. The root system of vegetation would then be removed once the reptile and amphibian hibernation season is over. Clearing of vegetation would be undertaken under the supervision of the suitably experienced Ecological Clerk of Works (ECOW).

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			<ul style="list-style-type: none"> The vegetation arisings will be collected and used to create habitat piles in areas adjacent to the site (which are to be retained during the development works). Works will be undertaken outside of all tree and hedgerow root protection zones that would not be removed as part of the proposed development. Tree protective fencing as described in section 6.2 of British Standard 5837:2012 will be installed (distance of fencing from tree trunk = 12x trunk diameter, distance from hedgerows = 1m from the spread of hedgerow canopy), where required, prior to plant and machinery arriving on site and construction works commencing. The fencing will remain intact throughout the duration of the works and only be removed upon completion. Weather-proof notices will be attached to any protective fencing located adjacent to retained trees displaying the words 'Construction Exclusion Zone'. All personnel must be made aware of these restrictions. If works need to be undertaken within the root protection zones an Arboricultural survey would be required and any advice provided adhered to, to secure the long-term survival of the tree/hedgerow.

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S41 bat species: soprano pipistrelle, brown long-eared.	Freight management facility	<p>Volume 8, Chapter 7: Terrestrial Ecology and Ornithology [APP-523]</p> <p>Volume 8, App 7A, Annex 7A04A RAMS Bats</p> <p>Terrestrial Ecology Monitoring and Mitigation Plan [REP1-016]</p>	<p><u>Primary mitigation:</u></p> <ul style="list-style-type: none"> Lighting would be provided at the perimeter, and parking areas, for security and safety reasons. Lanterns would utilise LED based light fittings to ensure energy efficiency with zero-degree tilt, and lighting columns along the perimeter would use demountable shields to reduce backward spill of light. To further assist on mitigating obtrusive light, a Central Management System has been proposed for the lighting which would be capable of dimming of parts of the site independently from other parts (with the site envisaged to be divided in 6-8 main sections), as usage changes through the day. Guidance within the latest Institution of Lighting Professionals Guidance Note would be followed as far as possible. These measures would minimise impacts on nocturnal species such as bats that use the nearby tree lines or habitats for roosting or foraging. <p><u>Tertiary mitigation:</u></p> <ul style="list-style-type: none"> Construction work would take place during Monday to Saturday 07:00 to 19:00 and some lighting may be required during the Winter months, dependent upon the construction activities which are taking place; however, some activities

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			<p>may require 24 hour working and some targeted lighting would be required for site security. Temporary construction lighting would be controlled to minimise light spill on surrounding habitats. This would minimise impacts on nocturnal species such as bats that may use the nearby tree lines or habitats for commuting, roosts or foraging. The lighting design would use light fittings chosen to limit stray light and minimise impacts on sensitive species. The lighting would also be designed to minimise the visibility from sensitive receptors off-site.</p> <ul style="list-style-type: none"> • The proposed development includes the removal of several trees identified as having the potential to support roosting bats. Therefore, tree inspections to determine evidence of use as roosts would be undertaken sufficiently in advance of tree-felling to enable licence application(s) to be submitted to Natural England and develop an appropriate mitigation strategy, if required. Management measures would likely include: <ul style="list-style-type: none"> ○ A final inspection of these trees would be undertaken as close to the timing of felling as possible to account for the regular roost-switching behaviour displaced by tree-roosting bat species. Should bats (or evidence of

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			<p>use by bats) be identified, the mitigation strategies laid out in the licence application(s) would be implemented (for example, the fitting of exclusion devices).</p> <ul style="list-style-type: none"> ○ Felling would be undertaken in September/October and so would avoid the maternity and hibernation periods during which bats are more vulnerable to disturbance (this timing also avoids the breeding bird season). However, timing requirements would be confirmed following a pre-felling inspection, which could include a climbed inspection, if required. ○ To mitigate for the loss of the tree and potential roost resources, bat boxes would be installed on retained trees in suitable locations within the site boundary. One bat box would be installed per tree with medium or high bat roost potential that is due to be lost, whether or not a roost has been identified. A variety of bat boxes would be used to support different species. <p><u>Monitoring:</u></p> <ul style="list-style-type: none"> • There would be regular checks of construction lighting to monitor and correct for any excessive light spill into the

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			<p>surrounding habitats and particularly into the adjacent hedgerows and habitats.</p> <ul style="list-style-type: none"> • There would be regular checks of operational lighting to monitor and correct for any excessive light spill into the surrounding habitats and particularly into the hedgerows. • Bat boxes would be monitored post-construction to confirm the presence/absence of bats and use of the bat boxes. If bat boxes have not been occupied by year 5 following installation, consideration would be given to moving them to alternative sites nearby, to be determined by a licensed bat ecologist. • The TEMMP [REP1-016] outlines the proposed monitoring activities identified for bats during the construction and operational phases. <p><u>RAMS:</u> <u>Toolbox talk:</u></p> <ul style="list-style-type: none"> • Prior to commencement of the vegetation clearance works, all site contractors will be briefed by the ECoW as part of the site induction to provide them with a basic overview of the life history, habitat requirements, identification and legal protection granted to bats. Site-

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			<p>specific toolbox talks will also be undertaken as necessary to identify the habitats present within the site that have the potential to be used by bats and outline the environmental measures to be followed in order to avoid breaches of legislation and / or adverse effects on reptiles that could occur within or in the vicinity of the working area.</p> <p><u>Precautionary working methods:</u></p> <ul style="list-style-type: none"> Lighting would be provided at the perimeter, and parking areas, for security and safety reasons. Lanterns would utilise LED based light fittings to ensure energy efficiency with zero-degree tilt, and lighting columns along the perimeter would use focused optics to reduce backward spill of light. To further assist on mitigating obtrusive light, a Central Management System has been proposed for the lighting which would be capable of dimming of parts of the site independently from other parts (with the site envisaged to be divided in 6-8 main sections), as usage changes through the day. Guidance within the latest Institution of Lighting Professionals Guidance Note would be followed as far as possible. These measures would

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			<p>minimise impacts on nocturnal species such as bats that use the nearby tree lines or habitats for roosting or foraging;</p> <ul style="list-style-type: none"> • In addition, although some activities may require 24 hour working, the majority of construction would take place Monday to Saturday 07:00 to 19:00 hours. This means night-time works would be avoided, which is when bats are most active. Incidental mortality associated with traffic movements would therefore not have a significant effect on the bat assemblage. • Initially all trees to be removed will be reassessed for bat roosting potential. • Any trees identified as having low bat roosting potential will be removed using a soft felling methodology with a suitability experienced, appropriately licensed, bat worker or bat worker assistant present. This is outlined below. Trees will generally be removed in October, thereby avoiding the sensitive maternity (April-September) and hibernation (November-February) periods for bats. • For any trees with moderate or high roosting potential, a pre works inspection for roosting bats will be undertaken. The methodology and required survey effort for these pre

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			<p>works checks will depend upon the status of the roosting features within the trees, but may include: a climbed or ground based tree inspection using an endoscope and / or torch; and emergence / re-entry surveys.</p> <ul style="list-style-type: none"> • Should any of the trees to be removed be found to support bat roosts, an European Protected Species licence is likely to be required. The documents associated with this licence will outline the required mitigation, and the required measures are not discussed further within this report. • If no roosts are found, the approach outlined below will be undertaken. • All trees with potential roost features for bats will be soft felled using the following precautionary measures: • trees classed as having low potential to support roosting bats, shall be felled under the watching brief of the ECoW; • where potential roost features for bats cannot be exhaustively checked they will be section felled, with each section carefully lowered to the ground. Cuts will be made at least 50 cm beyond the extent of the potential roost feature;

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			<ul style="list-style-type: none"> • if limbs or large branches require felling, consideration will be given to cracks which may close (crushing any bats inside) once the weight of the limb has been removed. If the crack cannot be thoroughly inspected to ensure bats are not present, the crack will be wedged open prior to removal of the limb/branch; • the stems of dense ivy will be cut at ground level at least 48 hours before the tree is felled; and • once the trees have been felled the potential roost features will be checked on the ground by a suitably experienced bat ecologist. If any potential roost feature can still not be exhaustively checked that section will be allowed a rest period of at least 24 hours to ensure that any individual bats that may have been missed are given the opportunity to relocate. • If any bats are encountered during the felling operations all works and activity must cease immediately, until the ECoW has advised on the most appropriate manner to deal with the situation. • To mitigate for the loss of the tree and potential roost resources, bat boxes would be installed on retained trees in suitable locations within the site boundary. One bat box

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			<p>would be installed per tree with medium or high bat roost potential that is due to be lost, whether or not a roost has been identified. A variety of bat boxes would be used to support different species.</p> <p><u>Facilitating work requirements</u></p> <p><u>a) Vegetation clearance methods</u></p> <ul style="list-style-type: none"> As set out above, vegetation clearance works are required in order to facilitate the development of the site. Whilst this document has been produced in relation to bats, other species do need to be considered to ensure legal compliance. Given that the works are to take place outside of the active bird breeding season (early March and late August inclusive), it is considered that no nesting bird checks are required prior to the commencement of works. Nevertheless, should vegetation clearance works take place within the core bird breeding season, a qualified ECoW will need to carry out a nesting bird check at least 48 hours before the commencement of works effecting the vegetation within the site. Once nesting birds have been confirmed absent, then the vegetation clearance contractors will carry out a habitat manipulation

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			<p>exercise in the form of a two stage vegetation cut, with the initial cut reducing the vegetation to a height of 150mm before a second cut subsequently reduces it to ground level, with a minimum of two hours between cuts to allow reptiles or amphibians to move out of the cutting area.</p> <ul style="list-style-type: none"> Vegetation clearance which does not disturb the ground or vegetation below 150mm can be conducted year-round with a low risk of impacting upon reptiles. Any vegetation clearance likely to impact vegetation below 150mm or the removal of places of shelter/hibernation features would be undertaken outside of the reptile hibernating period (October to February inclusive), during periods of warm, dry weather. If this is not possible, vegetation would be cut to the ground (to remove potential bird nesting habitat), but the roots would remain intact until hibernation is complete. The root system of vegetation would then be removed once the hibernation season is over. Clearing of vegetation would be undertaken under the supervision of the suitably experienced Ecological Clerk of Works (ECoW).

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			<ul style="list-style-type: none"> The vegetation arisings will be collected and used to create habitat piles in areas adjacent to the site (which are to be retained during the development works). Works will be undertaken outside of all tree and hedgerow root protection zones that would not be removed as part of the proposed development. Tree protective fencing as described in section 6.2 of British Standard 5837:2012 will be installed (distance of fencing from tree trunk = 12x trunk diameter, distance from hedgerows = 1m from the spread of hedgerow canopy), where required, prior to plant and machinery arriving on site and construction works commencing. The fencing will remain intact throughout the duration of the works and only be removed upon completion. Weather-proof notices will be attached to any protective fencing located adjacent to retained trees displaying the words 'Construction Exclusion Zone'. All personnel must be made aware of these restrictions. If works need to be undertaken within the root protection zones an Arboricultural survey would be required and any advice provided adhered to, to secure the long-term survival of the tree/hedgerow.

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S41 bat species: noctule, soprano pipistrelle, barbastelle, brown long-eared bat, big bat', <i>Myotis</i> spp. and <i>Plecotus</i> spp	Sizewell link road	<p>Volume 6 Chapter 7: Terrestrial Ecology and Ornithology [APP-461]</p> <p>Volume 6, Appendix 7A, Annex 7A-6B RAMS Bats [APP-462]</p> <p>Terrestrial Ecology Monitoring and Mitigation Plan [REP1-016]</p>	<p><u>Primary mitigation:</u></p> <ul style="list-style-type: none"> The route of the proposed development would be mostly unlit, thereby maintaining a dark corridor, minimising the potential impacts to nocturnal species. To ensure road safety, lighting would be provided at the A12 and B1122 roundabouts. The remaining junctions would have low minor road flows and be similar to existing unlit rural junctions and would be unlit to minimise light spill. Operational lighting design would be compliant with relevant highway standards, and where possible would be chosen to limit stray light. Guidance within the latest Institution of Lighting Professionals Guidance Note: Bats and artificial lighting in the UK would be followed as far as possible. These measures would minimise impacts on nocturnal species, such as bats that may use the nearby tree lines, or habitats for roosting or foraging, and would also maximise the use of reinstated 'bat crossing points'. Crossing points (bat hop-overs) to facilitate the passage of bats across the road alignment have been incorporated in the design where foraging or commuting routes have been identified, to reduce the potential for incidental mortality as a result of bats crossing the road and

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			<p>colliding with vehicles. These features would comprise hedgerow planting with tall standards planted where hedgerows meets the road to encourage bats to pass up and over the newly constructed road.</p> <p><u>Tertiary mitigation:</u></p> <ul style="list-style-type: none"> Construction lighting, where required, would be provided at the minimum luminosity and would be designed, positioned and/or directed so as not to unnecessarily intrude on adjacent ecological receptors or habitats. Such measures could include (but not limited to) shielding of luminaires to reduce backward spill of light or use of sensors or timing devices to automatically switch off lighting where appropriate and provision of closed boarded fencing where the site abuts retained woodland. This would minimise impacts on nocturnal species such as bats that may use the nearby tree lines or habitats for commuting, roosting or foraging. The proposed development includes the removal of 46 trees identified as having the potential to support roosting bats. Tree inspections would be undertaken sufficiently in advance of tree-felling to determine evidence of use as

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			<p>roosts to enable licence application(s) to be submitted to Natural England and develop an appropriate mitigation strategy, if required. Management measures would likely include:</p> <ul style="list-style-type: none"> ○ final inspection of these trees would be undertaken as close to the timing of felling as possible to take into account the regular roost-switching behaviour displaced by tree-roosting bat species. Should bats (or evidence of use by bats) be identified, the mitigation strategies laid out in the licence application(s) would be implemented (for example, the fitting of exclusion devices); ○ felling of trees would generally be undertaken in September or October, to avoid both the maternity and hibernation periods during which bats are more vulnerable to disturbance (this timing also avoids the breeding bird season). ● To mitigate for the loss of the trees and potential roost resources, bat boxes would be installed on retained trees in suitable locations within the site boundary. Bat boxes would be installed in trees with medium or high bat roost potential that is due to be lost, whether or not a roost has

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			<p>been identified. A variety of bat boxes would be used to support different species.</p> <p><u>Monitoring:</u></p> <ul style="list-style-type: none"> • There would be regular checks of construction lighting to monitor and correct for any excessive light spill into the surrounding habitats and particularly into the adjacent woodland. • Operational lighting would be checked to monitor and correct for any excessive light spill into the surrounding habitats, and particularly into the adjacent woodland. • Any bat boxes installed as mitigation would be monitored post-construction to confirm the presence/absence of bats and use of the bat boxes. If bat boxes have not been occupied by year 5 following installation, consideration would be given to moving them to alternative sites nearby, to be determined by a licensed bat ecologist. • There would also be maintenance checks of operational lighting to monitor and correct for any extraneous light spill into surrounding habitats.

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			<ul style="list-style-type: none"> The TEMMP [REP1-016] outlines the proposed monitoring activities identified for bats during the construction and operational phases. <p><u>RAMS:</u> <u>Toolbox talk:</u></p> <ul style="list-style-type: none"> Prior to commencement of the vegetation clearance works, all site contractors will be briefed by the ECoW as part of the site induction to provide them with a basic overview of the life history, habitat requirements, identification and legal protection granted to bats. Site-specific toolbox talks will also be undertaken as necessary to identify the habitats present within the site that have the potential to be used by bats and outline the environmental measures to be followed in order to avoid breaches of legislation and / or adverse effects on reptiles that could occur within or in the vicinity of the working area. <p><u>Precautionary working methods:</u></p>

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			<ul style="list-style-type: none"> • Presence of 10m buffer areas between the edge of the proposed development and lowland mixed deciduous woodland • Presence of 10m buffer areas between the edge of the proposed development and watercourses where practicable • Close-boarded fencing where the proposed development site abuts woodland. • Construction lighting would be designed to minimise light spill and the potential for light disturbance on adjacent land. The lighting design for the proposed development would comply with the lighting strategy and use light fittings chosen to limit stray light. Guidance within the latest Institution of Lighting Professionals Guidance Note would be followed as far as possible. These measures would minimise impacts on nocturnal species such as bats that may use the nearby tree lines or habitats for roosting or foraging. • In addition, although limited activities may require 24 hour working, the majority of construction would take place Monday to Saturday 07:00 to 19:00 hours. This means night-time works would be avoided, which is when bats

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			<p>are most active. Incidental mortality associated with traffic movements would therefore not have a significant effect on the bat assemblage.</p> <ul style="list-style-type: none"> Initially all trees to be removed will be reassessed for bat roosting potential. Any trees identified as having low bat roosting potential will be removed using a soft felling methodology with a suitability experienced, appropriately licensed, bat worker or bat worker assistant present. This is outlined below. Trees will generally be removed in October, thereby avoiding the sensitive maternity (April-September) and hibernation (November-February) periods for bats. For any trees with moderate or high roosting potential, a pre works inspection for roosting bats will be undertaken. The methodology and required survey effort for these pre works checks will depend upon the status of the roosting features within the trees, but may include: <ol style="list-style-type: none"> a climbed or ground based tree inspection using an endoscope and / or torch; and emergence / re-entry surveys.

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			<ul style="list-style-type: none"> Should any of the trees to be removed be found to support bat roosts, an EPS licence is likely to be required. The documents associated with this licence will outline the required mitigation, and the required measures are not discussed further within this report. If no roosts are found, the approach outlined below will be undertaken. All trees with PRFs will be soft felled using the following precautionary measures: <ol style="list-style-type: none"> where PRFs cannot be exhaustively checked they will be section felled, with each section carefully lowered to the ground. Cuts will be made at least 50 cm beyond the extent of the potential roost feature; if limbs or large branches require felling, consideration will be given to cracks which may close (crushing any bats inside) once the weight of the limb has been removed. If the crack cannot be thoroughly inspected to ensure bats are not present, the crack will be wedged open prior to removal of the limb/branch; the stems of dense ivy will be cut at ground level at least 48 hours before the tree is felled; and

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			<p>4. once the trees have been felled the potential roost features will be checked on the ground by a suitably experienced bat ecologist. If any potential roost feature can still not be exhaustively checked that section will be allowed a rest period of at least 24 hours to ensure that any individual bats that may have been missed are given the opportunity to relocate.</p> <ul style="list-style-type: none"> • If any bats are encountered during the felling operations all works and activity must cease immediately, until the ECoW has advised on the most appropriate manner to deal with the situation. • To mitigate for the loss of the trees and potential roost resources, bat boxes would be installed on retained trees in suitable locations within the site boundary. One bat box would be installed per tree with moderate or high bat roost potential that is due to be lost, whether or not a roost has been identified. A variety of bat boxes would be used to support different species. <p><u>Facilitating work requirements</u> <u>Vegetation clearance methods:</u></p>

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			<ul style="list-style-type: none"> As set out above, vegetation clearance works are required in order to facilitate the development of the site. Vegetation clearance works would take place outside of the active bird breeding season (early March and late August inclusive) and no nesting bird checks would be required prior to the commencement of works. Nevertheless, if any vegetation clearance works was required within the core bird breeding season, a qualified ECoW will need to carry out a nesting bird check at least 48 hours before the commencement of works effecting the vegetation within the site. Once nesting birds have been confirmed absent, then the vegetation clearance contractors will carry out a habitat manipulation exercise in the form of a two stage vegetation cut, with the initial cut reducing the vegetation to a height of 150mm before a second cut subsequently reduces it to ground level, with a minimum of two hours between cuts to allow reptiles or amphibians to move out of the cutting area. Vegetation clearance which does not disturb the ground or vegetation below 150mm can be conducted year-round with a low risk of impacting upon reptiles. Any vegetation clearance likely to impact vegetation below 150mm or the removal of places of shelter/hibernation features would be

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			<p>undertaken outside of the reptile and amphibian hibernating period (October to February inclusive), during periods of warm, dry weather. If this is not possible, vegetation would be cut to the ground (to remove potential bird nesting habitat), but the roots would remain intact until hibernation is complete. The root system of vegetation would then be removed once the hibernation season is over. Clearing of vegetation would be undertaken under the supervision of the suitably experienced Ecological Clerk of Works (ECoW).</p> <ul style="list-style-type: none"> • The vegetation arisings will be collected and used to create habitat piles in areas adjacent to the site (which are to be retained during the development works). • The habitats present within the site are largely sub-optimal for bats, being intensively managed for arable farming purposes. The sub-optimal arable land supports few invertebrates on which bats can forage. • Works will be undertaken outside of all tree and hedgerow root protection zones that would not be removed as part of the proposed development. Tree protective fencing as described in section 6.2 of British Standard 5837:2012 will be installed (distance of fencing from tree trunk = 12x trunk diameter, distance from hedgerows = 1m from the spread of

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			hedgerow canopy), where required, prior to plant and machinery arriving on site and construction works commencing. The fencing will remain intact throughout the duration of the works and only be removed upon completion. Weather-proof notices will be attached to any protective fencing located adjacent to retained trees displaying the words 'Construction Exclusion Zone'. All personnel must be made aware of these restrictions. If works need to be undertaken within the root protection zones an Arboricultural survey would be required and any advice provided adhered to, to secure the long-term survival of the tree/hedgerow.
S41 bat species: noctule, soprano pipistrelle, barbastelle and brown long-eared bat	Two village bypass	<p>Volume 5, Chapter 7: Terrestrial Ecology and Ornithology [APP-425]</p> <p>Volume 5, App 7A, Annex 7A-6A RAMS Bats</p>	<p><u>Primary mitigation:</u></p> <ul style="list-style-type: none"> The route of the proposed development would be mostly unlit, thereby maintaining a dark corridor and minimising the potential impacts to nocturnal species. To ensure road safety lighting would be provided at the A12 western roundabout and the A12/A1094 eastern roundabout extending north to highlight the junction to approaching vehicles. The remaining junctions would have low minor road flows, and be similar to existing unlit rural junctions, and would therefore be unlit to minimise light spill. Operational

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		Terrestrial Ecology Monitoring and Mitigation Plan [REP1-016]	<p>lighting design would be compliant with relevant highway standards and where possible would be chosen to limit light spill. Guidance within the latest Institution of Lighting Professionals Guidance Note: Bats and artificial lighting in the UK would be followed as far as possible. These measures would minimise impacts on nocturnal species such as bats that may use the nearby tree lines or habitats for roosting or foraging.</p> <ul style="list-style-type: none"> To reduce the potential for incidental mortality through collisions with vehicles, the design of the proposed development includes safe crossing points for bats and terrestrial mammal species such as oversized culverts as well as bat hop-over features whereby tree planting would be installed as close the carriageway edge as possible to encourage an inter-linking canopy, that in the long-term that would keep bats at height and away from the path of vehicles using the road. <p><u>Tertiary mitigation:</u></p> <ul style="list-style-type: none"> Construction lighting, where required, would be provided at the minimum luminosity and would be designed, positioned and/or directed so as not to unnecessarily intrude on

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			<p>adjacent ecological receptors or habitats. Such measures could include (but not limited to) shielding of luminaires to reduce backward spill of light or use of sensors or timing devices to automatically switch off lighting where appropriate and provision of closed boarded fencing where the site abuts retained woodland. This would minimise impacts on nocturnal species such as bats that may use the nearby tree lines or habitats for commuting, roosting or foraging.</p> <ul style="list-style-type: none"> • During the construction stage, close-boarded fencing would be erected along the side of woodland blocks, where the site abuts these (e.g. TN2, Whin Covert, Nuttery Belt, The Belt and Foxburrow Wood CWS). This would help to minimise impacts from construction lighting and noise from construction activity. • The proposed development includes the removal of 56 trees identified as having the potential to support roosting bats. Tree inspections would need to be undertaken sufficiently in advance of tree-felling to determine evidence of use as roosts to enable licence application(s) to be submitted to Natural England, and develop an appropriate mitigation strategy, if required. Management measures would likely include:

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			<ul style="list-style-type: none"> ○ A final inspection of these trees would be undertaken as close to the timing of felling as possible to take into account the regular roost-switching behaviour displaced by tree-roosting bat species. Should bats (or evidence of use by bats) be identified, the mitigation strategies set out in the licence application(s) would be implemented (for example, the fitting of exclusion devices). ○ Felling would ideally be undertaken in September or October, to avoid the maternity and hibernation periods during which bats are more vulnerable to disturbance (this timing also avoids the breeding bird season). ○ To mitigate for the loss of the tree and potential roost resources, bat boxes would be installed on retained trees in suitable locations within the site boundary. ● Bat boxes would be installed in trees with medium or high bat roost potential if they are due to be lost, whether or not a roost has been identified. A variety of bat boxes would be used to support different species. <p><u>Monitoring:</u></p>

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			<ul style="list-style-type: none"> • There would be regular checks of construction lighting to monitor and correct for any excessive light spill into the surrounding habitats and particularly into the adjacent woodland, floodplain grassland and watercourses. • There would be regular operational checks of lighting to monitor and correct for any excessive light spill into the surrounding habitats, and in particular into the adjacent woodland, floodplain grassland and watercourses. • Any bat boxes installed as mitigation would be monitored post-construction to confirm the presence/absence of bats and use of the bat boxes. If bat boxes have not been occupied by year 5 following installation, consideration would be given to moving them to alternative sites nearby, to be determined by a licensed bat ecologist. • The TEMMP [REP1-016] document outlines the proposed monitoring activities identified for bats during the construction and operational phases. <p>RAMS document will be adhered to (same RAMS as the other AD sites) with the addition of;</p>

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			<ul style="list-style-type: none"> In order to control impacts, 15m buffer areas between the edge of the proposed development and Foxburrow Wood CWS and watercourse. Erection of close-board fencing where the proposed development abuts woodland (such as along Whin Covert, Nuttery Belt, The Belt, Pond Wood and Foxburrow Wood CWS).
S41 bat species: Soprano pipistrelle and brown long-eared	Yoxford	<p>Volume 7, Chapter 7: Terrestrial Ecology and Ornithology [APP-494]</p> <p>Terrestrial Ecology Monitoring and Mitigation Plan [REP1-016]</p>	<p><u>Primary mitigation:</u></p> <ul style="list-style-type: none"> Existing trees and hedgerows adjoining the site boundary would be retained where possible. This includes the retention of a tree belt to the north-west of the site, along the boundary of Satis House Hotel and hedgerow along the southern side of the B1122 (Middleton Road). Operational phase lighting would be designed to achieve a balance between providing lighting appropriate for all road users whilst seeking to minimise light-spill into adjacent habitats. Operational lighting design will be compliant with relevant highway standards and use light fittings chosen to limit stray light. Guidance within the latest Institution of Lighting Professionals (ILP) Guidance Note: Bats and artificial lighting in the UK would be followed as far as possible.

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			<p><u>Tertiary mitigation:</u></p> <ul style="list-style-type: none"> Construction work would take place during Monday to Saturday 07:00 to 19:00, and there may be a requirement for lighting at night in the winter or for safety and security. In addition, there may be the need for 24-hour working and therefore would require lighting. Where temporary construction lighting is required, it would be controlled to minimise light spill on surrounding habitats and minimise the visibility from sensitive receptors off-site, where reasonably practicable. This would minimise impacts on nocturnal species such as bats that may use the nearby tree lines or habitats for commuting, roosting or foraging. The proposed development includes the removal of two trees identified as having the potential to support roosting bats. Therefore, tree inspections to determine evidence of use as roosts would be undertaken sufficiently in advance of tree-felling to enable licence application(s) to be submitted to Natural England and develop an appropriate mitigation strategy, if required. Management measures are likely to include:

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			<ol style="list-style-type: none"> 1. A final inspection of these trees to be undertaken as close to the timing of felling as possible to account for the regular roost-switching behaviour displaced by tree-roosting bat species. Should bats (or evidence of use by bats) be identified, the mitigation strategies laid out in the licence application(s) would be implemented (for example, the fitting of exclusion devices). 2. Felling would ideally be undertaken in September/October, to avoid the maternity and hibernation periods during which bats are more vulnerable to disturbance (this timing also avoids the bird-nesting season). <ul style="list-style-type: none"> • To mitigate for the loss of the tree and potential roost resources, bat boxes would be installed on retained trees in suitable locations within the site boundary. For every tree with moderate or high bat roost potential that is due to be lost bat boxes would be installed in retained trees to maintain roosting resources within the site boundary. A variety of bat boxes would be used to support different species.

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			<p><u>Monitoring:</u></p> <ul style="list-style-type: none"> • There would be regular checks of construction lighting to monitor and correct for any excessive light spill into the surrounding habitats and particularly into the adjacent woodland and watercourses. • There would be regular operational checks of lighting to monitor and correct for any excessive light spill into the surrounding habitats and in particular into the adjacent woodland and watercourses. • If required, bat boxes would be monitored post-construction to confirm the presence/absence of bats and use of the bat boxes. If bat boxes have not been occupied by year 5 following installation, consideration would be given to moving them to alternative sites nearby, to be determined by a licensed bat ecologist. • The TEMMP [REP1-016] outlines the proposed monitoring activities identified for bats during the construction and operational phases.
S41 bat species: noctule, soprano pipistrelle,	Green rail route	Volume 9, Chapter 7: Terrestrial	<p><u>Primary mitigation:</u></p> <ul style="list-style-type: none"> • Operational lighting would be limited to the B1122 (Abbey Road) level crossing and the level crossing at

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barbastelle and brown long-eared bat		Ecology and Ornithology [APP-555] Terrestrial Ecology Monitoring and Mitigation Plan [REP1-016]	<p>Buckleswood Road. The remaining rail route extension would be unlit. The lighting design for the proposed development would use light fittings chosen to limit stray light. These measures would minimise impacts on nocturnal species such as bats that may use the nearby tree lines or habitats for roosting or foraging.</p> <p><u>Tertiary mitigation:</u></p> <ul style="list-style-type: none"> Where required, temporary construction lighting would be controlled to minimise light spill on surrounding habitats. The lighting design would use light fittings chosen to limit stray light and minimise impacts on sensitive species. The lighting would also be designed to minimise the visibility from sensitive receptors off-site. This would minimise impacts on nocturnal species such as bats that may use the nearby tree lines or habitats for commuting, roosting or foraging. The proposed vegetation clearance includes the removal of trees with the potential to support roosting bats. Tree inspections to determine evidence of use as roosts would be undertaken sufficiently in advance of tree-felling to enable licence application(s) to be submitted to Natural

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			<p>England, if required. A final inspection of these trees would be undertaken as close to the timing of felling as possible to take into account the regular roost-switching behaviour displaced by tree-roosting bat species. Should bats (or evidence of use by bats) be identified, the mitigation strategies laid out in the licence application(s) would be implemented (for example, the fitting of exclusion devices). Should evidence of bat roosting be found, felling would ideally be undertaken under licence in September/October, to avoid the maternity and hibernation periods during which bats are more vulnerable to disturbance (this timing would also avoid the bird-nesting season).</p> <ul style="list-style-type: none"> To mitigate for the loss of the tree and potential roost resources, bat boxes would be installed on retained trees in suitable locations within the site boundary. One bat box would be installed per tree with medium or high bat roost potential that is due to be lost, whether or not a roost has been identified. A variety of bat boxes would be used to support different species. <p><u>Monitoring:</u></p>

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			<ul style="list-style-type: none"> There would be regular checks of construction lighting to monitor and correct any excessive light spill into the surrounding habitats and particularly into the adjacent woodland. There would be regular checks of operational lighting to monitor and correct for any excessive light spill into the surrounding habitats and particularly into the adjacent woodland. Bat boxes would be monitored over a five-year period post-construction, to confirm the presence/absence of bats and use of the bat boxes. If bat boxes have not been occupied within three years of erection, consideration would be given to moving them to alternative sites nearby, to be determined by a licensed bat ecologist. The TEMMP [REP1-016] outlines the proposed monitoring activities identified for bats during the construction and operational phases.
Otter	Main development site	Volume 2, Chapter 14: Terrestrial Ecology and	<u>Primary mitigation:</u> <ul style="list-style-type: none"> A barrier (e.g. sheet piling) would be installed to provide separation from the main platform and Sizewell Marshes

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		Ornithology [AS-033] Terrestrial Ecology Monitoring and Mitigation Plan [REP1-016]	<p>SSSI with engineered drainage installed to limit the disturbance to the hydrology and geology of Sizewell Marshes SSSI (see Chapter 19: Groundwater and Surface Water of the ES (Book 6).</p> <ul style="list-style-type: none"> The establishment of new reedbed and ditches at Aldhurst Farm (completed in 2016) has provided replacement for the land take of these habitats within Sizewell Marshes SSSI. The replacement habitats have established successfully, and mobile aquatic plant and invertebrate species would colonise over time from the adjacent areas of the Sizewell Marshes SSSI. Otters have already been sighted in the newly created wetlands at Aldhurst Farm. The SSSI crossing will consist of a 30m open single span bridge. This will facilitate the passage of otter. Pre-construction surveys to avoid disturbance or destruction of otter holts, and habitat creation at Aldhurst Farm. Primary mitigation includes a Lighting Management Plan for Construction and Operational Sites (Volume 2, Appendix 2B [APP-182]) and boundary treatments. <p><u>Tertiary mitigation:</u></p>

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			<ul style="list-style-type: none"> An Otter Method Statement (Volume 2, Appendix 14C10 [APP-252]) has been prepared detailing the approach to be used, including the removal of vegetation and ground clearance in areas where commencement of construction activities have the potential to damage or destroy otter holts. Pre-construction surveys would be required to provide up-to-date information as to whether any holts are present within the construction footprint or in the Zol. A European Protected Species Licence application and Method Statement may be required to permit works that would otherwise disturb, injure or kill otter, and/or damage or restrict access to their holts, should an active holt be identified. If required, a detailed mitigation strategy for otter would be provided in a method statement, based on Natural England's standing advice and guidance in relation to otter and mitigation for development projects and Highways Agency's design Manual for Roads and Bridges. If any holts would be impacted by the works, it may be necessary to create artificial holt(s) to mitigate for their loss.

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			<ul style="list-style-type: none"> Monitoring of otter activity would take place before, during and after construction, and would include methods to assess use of the SSSI crossing culvert by otter. The TEMMP [REP1-016] outlines the proposed monitoring activities identified for otter during the construction and operational phases.
	Northern park and ride	Volume 3, Chapter 7: Terrestrial Ecology and Ornithology [APP-363]	Scoped out as not present on site, no further measures implemented as no significant effect is considered likely.
	Southern park and ride	Volume 4, Chapter 7: Terrestrial Ecology and Ornithology [APP-394]	Scoped out as not present on site, no further measures implemented as no significant effect is considered likely.
	Freight management facility	Volume 8, Chapter 7: Terrestrial	Otter are not considered likely to be present within the site boundary, no further measures implemented as no significant effect is considered likely.

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		Ecology and Ornithology [APP-523]	
	Sizewell link road	Volume 6 Chapter 7: Terrestrial Ecology and Ornithology [APP-461]	There is no predicted effect upon otter population, so no specific measures are proposed. <u>Tertiary mitigation:</u> No storage of equipment or material would be allowed within 10m of a watercourse, and no materials would be stored in areas of high flood risk to avoid sediment loss during flooding. All soils would be stored away from watercourses (or potential pathways to watercourses), and any potentially contaminated soil would be stored on an impermeable surface and covered to reduce leachate generation and potential migration to surface waters.
	Two village bypass	Volume 5, Chapter 7: Terrestrial Ecology and Ornithology [APP-425]	<u>Primary mitigation:</u> Proposed River Alde overbridge: <ul style="list-style-type: none"> The crossing of the River Alde would comprise an overbridge, approximately 60m in length which would preserve the natural integrity of the banks of the river, bed and bankside, and minimise shading effects. This would be

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		<p>Volume 5, App 7A, Annex 7A-6C RAMS otter</p> <p>Terrestrial Ecology Monitoring and Mitigation Plan [REP1-016] [REP1-016]</p>	<p>of sufficient size to enable passage for otters and water voles to be maintained during construction and operation. An otter ledge would be installed on bridge abutments, if required, to allow passage at times of high flows. Otter fencing would be incorporated where appropriate to guide otters to the crossing point.</p> <ul style="list-style-type: none"> There would be eight 5.4m long, 3m wide flood relief culverts proposed (four on either side of the River Alde overbridge). There would also be two further culverts within the embankment outside the floodplain extent; on the western side of the River Alde overbridge (approximately 200m south-east from the existing A12), the culvert would be approximately 5.4m by 3m and would allow an existing watercourse and livestock access track to pass beneath the road (on their existing alignment of an existing accommodation access track which would be diverted under the proposed bridge). A mammal mitigation culvert would be provided on the east side of the River Alde overbridge outside of the floodplain extent (approximately 5.4m by 1.2m) Field drains located at the western end of the bypass, either side of the proposed River Alde overbridge, would be diverted along the base of the embankment to the River Alde

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			<p>where possible with additional/excess water culverted through the embankments.</p> <ul style="list-style-type: none"> Any required flood compensation areas would be designed to minimise impacts to ditches and watercourses to avoid interfering with suitable otter and water vole habitat. The banks of the River Alde and the associated ditches would be protected during construction of any flood compensation areas. It is currently not thought likely that flood compensations areas will be required. <u>Tertiary mitigation:</u> Prior to any works taking place in watercourses and ditches, the following approaches would be used for otter and water vole: <ul style="list-style-type: none"> Otter: a pre-construction survey for otters would be conducted. If an otter lying up site or holt is recorded that would be impacted by the works, then an appropriate mitigation strategy would be developed and completed under agreement and, where necessary, licence to Natural England. <p><u>RAMS:</u> <u>Toolbox talk:</u></p>

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			<ul style="list-style-type: none"> Prior to commencement of the vegetation clearance works, all site contractors will be briefed by the ECoW as part of the site induction to provide them with a basic overview of the life history, habitat requirements, identification and legal protection granted to otters. Site-specific toolbox talks will also be undertaken as necessary to identify the habitats present within the site that have the potential to be used by these species and outline the environmental measures to be followed in order to avoid breaches of legislation and / or adverse effects on the species that could occur within or in the vicinity of the working area. <p><u>Precautionary working methods:</u></p> <ul style="list-style-type: none"> Pre-construction surveys will be undertaken to provide up-to-date information on otter activity and as to whether any holts or other resting places are present within the construction footprint. Otter breeding and resting places (“holts”) are typically tunnels under waterside trees, and are legally protected. Natal or breeding holds may be used at any time of the year. Although no natal holts have been found within the site boundary, there remains the possibility that otter may set up a new natal den site.

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			<ul style="list-style-type: none"> • A European Protected Species Licence application and Method Statement would be required to permit works that would otherwise disturb, injure or kill otter, and/or damage or restrict access to their holts, should an active holt be identified. If required, a detailed mitigation strategy for otter would be provided in a method statement, based on Natural England's standing advice and guidance in relation to otter and mitigation for development projects. • The locations of all holts and couches must be identified to contractors in confidence to ensure that they are not accidentally disturbed during the construction process. • Demarcation and of a 30m exclusion zone around otter holts. • Where possible, a minimum of a 20m buffer will be maintained between the construction activities and the toe of the bank of the River Alde and ditches to attenuate the impacts of lighting and noise from the construction activities. • Works compounds, storage sites and access roads must not be located between important areas of otter habitat. Potential water quality issues associated with the terrestrial (i.e. non-marine) environment, would be dealt with through embedded (primary) mitigation measures.

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			<ul style="list-style-type: none"> Prior to works commencing an appropriately experienced ECoW will undertake a toolbox talk to site staff covering the Precautionary Working Methods to be adhered to. Where works are required in areas of otter activity (but not a place of shelter) the ECoW will demarcate and agree on site in which areas which activity is permitted. If night-time working is required, the works around the areas with suitable habitat for otter, light spill would be minimised to reduce any possible impacts to the species. Such precautions will be put in place to avoid an offence being committed during the proposed works and subsequent development with respect to otter. <p><u>Vegetation clearance:</u></p> <ul style="list-style-type: none"> As set out above, vegetation clearance works are required in order to facilitate the development of the site. These works have the potential to impact the local otter population. Should vegetation clearance work occur within the proximity of the River Alde, a qualified ECoW will need to carry out a pre-construction check for signs of otter and otter activity within the footprint of the works.

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			<ul style="list-style-type: none"> A European Protected Species Licence application and Method Statement would be required to permit works that would otherwise disturb, injure or kill otter, and/or damage or restrict access to their holts, should an active holt be identified. Should otter signs be present the ECoW will demarcate and agree on site in which areas which activity is permitted. <p><u>Equipment:</u></p> <ul style="list-style-type: none"> The vegetation clearance contractors on site will utilise equipment specific to their clearance methods as per their RAMS. For example: <ul style="list-style-type: none"> John Deere 3 series compact with cut and collector flail; John Deere 4 series compact tractor with side arm flail; and brushcutter, rakes, pitchforks and other hand tools. <p><u>Ground-breaking works:</u></p> <ul style="list-style-type: none"> As set out above, ground-breaking works are required in order to facilitate the development of the site. These works have the potential to impact the local otter

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			<p>population. Should ground-breaking works take occur (20m of the River Alde and within 10m of other watercourses), a qualified ECoW will need to carry out a pre-construction check for signs of otter and otter activity within the footprint of the works.</p> <ul style="list-style-type: none"> • A European Protected Species Licence application and Method Statement would be required to permit works that would otherwise disturb, injure or kill otter, and/or damage or restrict access to their holts, should an active holt be identified. • Should otter signs be present the ECoW will demarcate and agree on site in which areas which activity is permitted. Demarcation and exclusion from holts within 30m of working areas, potentially with the use of Heras fencing. • Any excavations made during construction activities would be closed at the end of the day to prevent access by otter and other terrestrial nocturnal animals. If it is not be possible for excavations to be closed at night, a means of egress (i.e. a wooden plank or soil ramp) would be provided to ensure that any animals that may access these excavations have a means of escape.

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	Yoxford	Volume 7, Chapter 7: Terrestrial Ecology and Ornithology [APP-494]	<p><u>Primary mitigation:</u></p> <ul style="list-style-type: none"> A 5m buffer would be maintained between the proposed Yoxford roundabout and the adjacent River Yox to protect the integrity of the banks as well as the associated ecological features. <p><u>Tertiary mitigation:</u> Prior to works taking place adjacent to the River Yox, a pre-construction survey would be conducted for otter and water voles:</p> <ul style="list-style-type: none"> Otter: a pre-construction survey would be conducted to confirm the absence/presence of any otter holt. Should an otter holt be identified that would be directly impact by the proposed works, a licence from Natural England would be obtained. Should breeding otter be recorded, then all works would cease until both adult and young otter have left the holt.
	Green rail route	Volume 9, Chapter 7: Terrestrial Ecology and	<p>Otter are not considered likely to be present within the site boundary, no further measures implemented as no significant effect is considered likely.</p>

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		Ornithology [APP-555]	
Water Vole	Main development site	Volume 2, Chapter 14: Terrestrial Ecology and Ornithology [AS-033] Appendix 14C6A - Water Vole Mitigation Strategy [APP-252] Terrestrial Ecology Monitoring and Mitigation Plan [REP1-016]	<u>Primary mitigation:</u> <ul style="list-style-type: none"> The SSSI crossing will consist of a 30m open single span bridge. This will facilitate the passage water vole through the structure. The establishment of new reedbed and ditches at Aldhurst Farm (completed in 2016) has provided replacement for the land take of these habitats within Sizewell Marshes SSSI. The replacement habitats have established successfully, and mobile aquatic plant and invertebrate species have colonised over time from the adjacent areas of the Sizewell Marshes SSSI. These new habitats are suitable for water voles and Aldhurst Farm would act as the main receptor site for water voles, if they need to be translocated from the footprint of the main development site. One of the four lagoons at Aldhurst Farm was fenced to minimise the risk of water vole colonising naturally ahead of translocation however contained a moderate population when surveyed in 2020. <u>Tertiary mitigation:</u>

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			<ul style="list-style-type: none"> Tertiary mitigation measures are outlined in the mitigation strategy which was updated as part of the Jan 2021 submission to PINS and described in the 'Details from the mitigation strategy' section below. <p><u>Details from the mitigation strategy:</u></p> <ul style="list-style-type: none"> Displacement techniques and monitoring requirements are proposed where there is a working area with maximum length of 50m (for watercourse this equates to 50m on each bank). However, should displacement be unsuccessful (i.e. programme, season, signs continuously recorded following vegetation clearance), trapping will be undertaken within those areas. Displacement is proposed to mitigate habitat loss/disturbance within the 31m section of the east-west running drains west of Sizewell Drain by SZB that is due to be impacted. Trapping out water vole from the Sizewell Marshes SSSI crossing construction footprint will be undertaken if displacement is no longer a viable alternative i.e. water vole are recorded present in areas currently unoccupied. The preference is for animals to be released directly into the receptor area at Aldhurst Farm. Should trapping be

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			<p>necessary and depending on the time of year, if the weather is cold (night-time temperature below freezing (0oC)) in the autumn, a contingency option for water vole captured during the 15 September to 30 November trapping is to be over-wintered in captivity. The water voles would then be released into the receptor area the following spring (between 1 March and 15 April).</p> <ul style="list-style-type: none"> As soon as water voles have been displaced/removed from the Sizewell Marshes SSSI crossing footprint, their habitat would be rendered unsuitable for re-colonisation. <p>Overall, in the long term, as a result of the proposed SZC main development site works, it is considered that there will be an overall increase in the conservation status of water vole, as a result of an increase in habitat availability.</p> <p><u>Monitoring:</u> The TEMMP [REP1-016] outlines the proposed monitoring activities identified for water vole during the construction and operational phases.</p>

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	Northern park and ride	Volume 3, Chapter 7: Terrestrial Ecology and Ornithology [APP-363]	Water vole are not considered likely to be present within the site boundary, no further measures implemented as no significant effect is considered likely.
	Southern park and ride	Volume 4, Chapter 7: Terrestrial Ecology and Ornithology [APP-394]	Water vole are not considered likely to be present within the site boundary, no further measures implemented as no significant effect is considered likely.
	Freight management facility	Volume 8, Chapter 7: Terrestrial Ecology and Ornithology [APP-523]	Water vole are not considered likely to be present within the site boundary, no further measures implemented as no significant effect is considered likely.
	Sizewell link road	Volume 6 Chapter 7: Terrestrial Ecology and	Water vole are not considered likely to be present within the site boundary, no further measures implemented as no significant effect is considered likely.

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		Ornithology [APP-461]	
	Two village bypass	Volume 5, Chapter 7: Terrestrial Ecology and Ornithology [APP-425] Sizewell C Draft Water Vole Method Statement and Supporting Information – Two Village Bypass Terrestrial Ecology Monitoring and	<u>Primary mitigation:</u> <ul style="list-style-type: none"> There would be eight 5.4m long, 3m wide flood relief culverts proposed (four on either side of the River Alde overbridge). There would also be two further culverts within the embankment outside the floodplain extent; on the western side of the River Alde overbridge (approximately 200m south-east from the existing A12), the culvert would be approximately 5.4m by 3m and would allow an existing watercourse and livestock access track to pass beneath the road (on their existing alignment of an existing accommodation access track which would be diverted under the proposed bridge). A mammal mitigation culvert would be provided on the east side of the River Alde overbridge outside of the floodplain extent (approximately 5.4m by 1.2m) Field drains located at the western end of the bypass, either side of the proposed River Alde overbridge, would be diverted along the base of the embankment to the River Alde where possible with additional/excess water culverted through the embankments.

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		Mitigation Plan [REP1-016]	<ul style="list-style-type: none"> Any required flood compensation areas would be designed to minimise impacts to ditches and watercourses to avoid interfering with suitable otter and water vole habitat. The banks of the River Alde and the associated ditches would be protected during construction of any flood compensation areas. It is currently not thought likely that flood compensations areas will be required. <p><u>Tertiary mitigation:</u></p> <ul style="list-style-type: none"> No equipment or material would be stored within 10m of a watercourse, and no materials would be stored in areas of high flood risk to avoid sediment loss during flooding. All soils would be stored away from watercourses (or potential pathways to watercourses), and any potentially contaminated soil would be stored on an impermeable surface and covered to reduce leachate generation and potential migration to surface waters. <p>Prior to any works taking place in watercourses and ditches, the following approaches would be used for otter and water vole:</p> <ul style="list-style-type: none"> Water voles: a pre-construction survey for water voles would be conducted. In the event of works being required that

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			<p>affect the banks of watercourses and ditches/ within the wetted channel and where water voles are known to be present, then a licence from Natural England would be required. All survey work would be in line with best practice guidelines. If the proposed works do not require more than 50m of vegetation clearance from either bank of the ditch, then works would be conducted under a class licence WML-CL31. If works would require vegetation clearance exceeding 50m, then a conservation licence would be required.</p> <p><u>Monitoring:</u> The protected species licence, which will be agreed with Natural England, will detail the monitoring requirements for water vole. The requirement for licensing has also been noted in the TEMMP [REP1-016].</p>
	Yoxford	Volume 7, Chapter 7: Terrestrial Ecology and	<p><u>Primary mitigation:</u></p> <ul style="list-style-type: none"> A 5m buffer would be maintained between the proposed Yoxford roundabout and the adjacent River Yox to protect the integrity of the banks as well as the associated ecological features.

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		Ornithology [APP-494]	<p><u>Tertiary mitigation:</u> Prior to works taking place adjacent to the River Yox, a pre-construction survey would be conducted for otter and water voles:</p> <ul style="list-style-type: none"> Water vole: a pre-construction survey would be undertaken the year prior to construction to determine if any water voles or features which indicate water vole are present within the footprint of the work or within 3m. If water voles are confirmed within the footprint of works or within 3m, to inform a licence application, detailed surveys would need to be conducted. The results of these surveys will inform a mitigation licence application to Natural England. Mitigation to displace water vole under licence can only take place between 15 February to 15 April. Surveys would be conducted in line with The Water Vole Mitigation Handbook.
	Green rail route	Volume 9, Chapter 7: Terrestrial Ecology and	Water vole are not considered likely to be present within the site boundary, no further measures implemented as no significant effect is considered likely.

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		Ornithology [APP-555]	
Brown Hare	Main development site	Volume 2, Chapter 14: Terrestrial Ecology and Ornithology [AS-033]	<u>Tertiary mitigation:</u> The phased approach to site clearance and topsoil stripping (as described previously to safeguard reptiles) would discourage brown hare and hedgehogs away from the site and into the surrounding suitable habitat.
	Northern park and ride	Volume 3, Chapter 7: Terrestrial Ecology and Ornithology [APP-363]	<u>Tertiary mitigation:</u> The phased approach to site clearance and topsoil stripping (as described previously to safeguard reptiles) would discourage brown hare and hedgehogs away from the site and into the surrounding suitable habitat.
	Southern park and ride	Volume 4, Chapter 7: Terrestrial Ecology and Ornithology [APP-394]	<u>Tertiary mitigation:</u> The phased approach to site clearance and topsoil stripping (as described previously to safeguard reptiles) would discourage brown hare and hedgehogs away from the site and into the surrounding suitable habitat.

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	Freight management facility	Volume 8, Chapter 7: Terrestrial Ecology and Ornithology [APP-523]	<u>Tertiary mitigation:</u> During the preliminary works and site preparatory works, the phased approach to site clearance (as described above to safeguard reptiles) would discourage brown hare and hedgehog away from the site of activity and into the surrounding suitable habitat.
	Sizewell link road	Volume 6 Chapter 7: Terrestrial Ecology and Ornithology [APP-461]	<u>Tertiary mitigation:</u> The phased approach to site clearance and topsoil stripping (as described previously to safeguard reptiles) would discourage brown hare, and hedgehogs away from the site of activity and into the surrounding suitable habitat.
	Two village bypass	Volume 5, Chapter 7: Terrestrial Ecology and Ornithology [APP-425]	<u>Tertiary mitigation:</u> The phased approach to site clearance and topsoil stripping (as described previously to safeguard reptiles) would discourage brown hare, and hedgehogs away from the site of activity and into the surrounding suitable habitat.

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	Yoxford	Volume 7, Chapter 7: Terrestrial Ecology and Ornithology [APP-494]	<u>Tertiary mitigation:</u> The phased approach to site clearance and topsoil stripping (as described previously to safeguard reptiles) would discourage brown hare, and hedgehogs away from the site of activity and into the surrounding suitable habitat.
	Green rail route	Volume 9, Chapter 7: Terrestrial Ecology and Ornithology [APP-555]	<u>Tertiary mitigation:</u> During the preliminary works and site preparatory works, a phased approach to site clearance and topsoil stripping would discourage brown hares and hedgehogs away from the site of activity and into the surrounding suitable habitat.
Hedgehog	Main development site	Volume 2, Chapter 14: Terrestrial Ecology and Ornithology [AS-033]	<u>Tertiary mitigation:</u> Removal of vegetation, ground clearance and the commencement of construction activities have the potential to risk killing or injuring hedgehogs, either in summer or “day” nests or winter hibernation nests (hibernation occurs between November to April). Ground clearance works would generally be undertaken outside of the hibernation period. Prior to ground clearance, an inspection for hedgehog nests would be

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			undertaken by a suitably experienced ECoW prior to the removal of vegetation; this is likely to be undertaken in parallel with removal of reptiles from the construction footprint.
	Northern park and ride	Volume 3, Chapter 7: Terrestrial Ecology and Ornithology [APP-363]	<u>Tertiary mitigation:</u> The phased approach to site clearance and topsoil stripping (as described previously to safeguard reptiles) would discourage brown hare and hedgehogs away from the site and into the surrounding suitable habitat.
	Southern park and ride	Volume 4, Chapter 7: Terrestrial Ecology and Ornithology [APP-394]	<u>Tertiary mitigation:</u> The phased approach to site clearance and topsoil stripping (as described previously to safeguard reptiles) would discourage brown hare and hedgehogs away from the site and into the surrounding suitable habitat.
	Freight management facility	Volume 8, Chapter 7: Terrestrial Ecology and	<u>Tertiary mitigation:</u> During the preliminary works and site preparatory works, the phased approach to site clearance (as described above to safeguard reptiles) would discourage brown hare and hedgehog

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		Ornithology [APP-523]	away from the site of activity and into the surrounding suitable habitat.
	Sizewell link road	Volume 6 Chapter 7: Terrestrial Ecology and Ornithology [APP-461]	<u>Tertiary mitigation:</u> The phased approach to site clearance and topsoil stripping (as described previously to safeguard reptiles) would discourage brown hare, and hedgehogs away from the site of activity and into the surrounding suitable habitat.
	Two village bypass	Volume 5, Chapter 7: Terrestrial Ecology and Ornithology [APP-425]	<u>Tertiary mitigation:</u> The phased approach to site clearance and topsoil stripping (as described previously to safeguard reptiles) would discourage brown hare, and hedgehogs away from the site of activity and into the surrounding suitable habitat.
	Yoxford	Volume 7, Chapter 7: Terrestrial Ecology and Ornithology [APP-494]	<u>Tertiary mitigation:</u> The phased approach to site clearance and topsoil stripping (as described previously to safeguard reptiles) would discourage brown hare, and hedgehogs away from the site of activity and into the surrounding suitable habitat.

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	Green rail route	Volume 9, Chapter 7: Terrestrial Ecology and Ornithology [APP-555]	<u>Tertiary mitigation:</u> During the preliminary works and site preparatory works, a phased approach to site clearance and topsoil stripping would discourage brown hares and hedgehogs away from the site of activity and into the surrounding suitable habitat.
Harvest Mouse	Main development site	Volume 2, Chapter 14: Terrestrial Ecology and Ornithology [AS-033]	Scoped out, no further measures implemented as no significant effect is considered likely.
	Northern park and ride	Volume 3, Chapter 7: Terrestrial Ecology and Ornithology [APP-363]	Scoped out, no further measures implemented as no significant effect is considered likely.

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	Southern park and ride	Volume 4, Chapter 7: Terrestrial Ecology and Ornithology [APP-394]	Scoped out, no further measures implemented as no significant effect is considered likely.
	Freight management facility	Volume 8, Chapter 7: Terrestrial Ecology and Ornithology [APP-523]	Scoped out, no further measures implemented as no significant effect is considered likely.
	Sizewell link road	Volume 6 Chapter 7: Terrestrial Ecology and Ornithology [APP-461]	Scoped out, no further measures implemented as no significant effect is considered likely.
	Two village bypass	Volume 5, Chapter 7: Terrestrial Ecology and	Scoped out, no further measures implemented as no significant effect is considered likely.

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		Ornithology [APP-425]	
	Yoxford	Volume 7, Chapter 7: Terrestrial Ecology and Ornithology [APP-494]	Scoped out, no further measures implemented as no significant effect is considered likely.
	Green rail route	Volume 9, Chapter 7: Terrestrial Ecology and Ornithology [APP-555]	Scoped out, no further measures implemented as no significant effect is considered likely.
Polecat	Main development site	Volume 2, Chapter 14: Terrestrial Ecology and Ornithology [AS-033]	Scoped out, no further measures implemented as no significant effect is considered likely.

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	Northern park and ride	Volume 3, Chapter 7: Terrestrial Ecology and Ornithology [APP-363]	Scoped out, no further measures implemented as no significant effect is considered likely.
	Southern park and ride	Volume 4, Chapter 7: Terrestrial Ecology and Ornithology [APP-394]	Scoped out, no further measures implemented as no significant effect is considered likely.
	Freight management facility	Volume 8, Chapter 7: Terrestrial Ecology and Ornithology [APP-523]	Scoped out, no further measures implemented as no significant effect is considered likely.
	Sizewell link road	Volume 6 Chapter 7: Terrestrial	Scoped out, no further measures implemented as no significant effect is considered likely.

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		Ecology and Ornithology [APP-461]	
	Two village bypass	Volume 5, Chapter 7: Terrestrial Ecology and Ornithology [APP-425]	Scoped out, no further measures implemented as no significant effect is considered likely.
	Yoxford	Volume 7, Chapter 7: Terrestrial Ecology and Ornithology [APP-494]	Scoped out, no further measures implemented as no significant effect is considered likely.
	Green rail route	Volume 9, Chapter 7: Terrestrial Ecology and Ornithology [APP-555]	Scoped out, no further measures implemented as no significant effect is considered likely.

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Reptiles – adder, slow-worm, grass snake and common lizard.	Main development site	<p>Volume 2, Chapter 14: Terrestrial Ecology and Ornithology [AS-033]</p> <p>Appendix 14C2A – Reptile Mitigation Strategy [APP-252]</p> <p>Terrestrial Ecology Monitoring and Mitigation Plan [REP1-016]</p>	<p><u>Primary mitigation:</u></p> <ul style="list-style-type: none"> Large areas of habitats for reptiles have been established, in advance of construction, to enable the translocation of reptiles from the site (further detailed in the Reptile Mitigation Strategy (Volume 2, Appendix 14C2 [APP-252])). This has also created areas of sand-dominated habitat likely to be beneficial to invertebrate species such as those identified in the coastal and woodland ride habitats. <p><u>Tertiary mitigation:</u></p> <ul style="list-style-type: none"> A Reptile Mitigation Strategy (Volume 2, Appendix 14C2 [APP-252]) has been prepared detailing capture and translocation of reptiles from the footprint of the proposed development to the receptor sites. It also includes measures (installation of reptile-proof fencing, searching refugia and moving individuals outside of the development footprint into receptor site) to avoid incidental mortality associated with construction work phase. Active management of receptor sites is ongoing and would ensure these features are maintained and enhanced, so that the receptor sites have adequate carrying capacity to receive translocated reptiles.

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			<p>The locations of the receptor sites were selected to maximise connectivity with the wider landscape using existing ecological features and corridors.</p> <p><u>Mitigation detail from Reptile Mitigation Strategy document:</u> In summary, the proposed strategy involves:</p> <ul style="list-style-type: none"> • preparation and management of receptor sites to receive translocated reptiles (primary mitigation); • catching and translocation of reptiles from the construction footprint into the receptor sites (tertiary mitigation); • measures to avoid incidental mortality associated with construction (tertiary mitigation); and • pre-, during- and post-construction monitoring of reptile populations (tertiary mitigation). <p>All works that have the potential to impact reptiles would be undertaken following the agreed Method Statement and would be overseen by an ECoW.</p> <p>Managed reptile receptor sites have been provided to mitigate the loss of reptile habitat. The receptor sites cover a larger area than reptile-suitable habitat lost and have enhanced features for reptiles (e.g. provision of cover, management to ensure prey availability, and hibernacula).</p>

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			<ul style="list-style-type: none"> The final restoration plans as shown in the indicative Outline Landscape and Ecology Management Plan (oLEMP) will provide a long-term gain in suitable reptile habitat and connectivity on a wider, landscape scale, as a result of the creation of dry Sandlings grassland from the arable fields east of Upper Abbey Farm (the marsh harrier habitat compensation area), at Aldhurst Farm and in the areas south of Sandy Lane (including Broom Covert), the 'Studio Field complex'. Although the construction period would result in temporary habitat fragmentation across the EDF Energy estate, this would be mitigated in the long term by greater landscape-wide opportunities for enhanced connectivity, including to the north of the EDF Energy estate (through management of Great Mount Walk); the middle of the estate (through management of the receptor sites at Kenton Hills); to the south-west (through management of Aldhurst Farm); and to the south (through management of Broom Covert and the Studio Field complex). The TEMMP [REP1-016] outlines the proposed monitoring activities identified for reptiles and their habitats during the construction and operational phases.

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Reptile potential	<p>All AD Sites including:</p> <p>Northern park and ride</p> <p>Southern park and ride</p>	<p>Volume 3, Chapter 7: Terrestrial Ecology and Ornithology [APP-363]</p> <p>Volume 3, Chapter 7, Appendix 7A, Annex 7A.6B RAMS Reptiles [APP-364]</p> <p>Volume 4, Chapter 7: Terrestrial Ecology and</p>	<p><u>Tertiary mitigation:</u></p> <p>A small proportion of habitat within the site, primarily around the field margins, was identified as having some limited potential to support a small population of reptiles. The following measures would be undertaken prior to the commencement of construction:</p> <ul style="list-style-type: none"> • an inspection would be undertaken by a suitably experienced ecologist of any potential reptile refugia, after which the reptiles would be removed; and • a phased vegetation clearance process would be undertaken to displace any reptiles from the site, under the supervision of a suitably experienced ecologist. Removal of vegetation and of places of shelter/hibernation features would be undertaken outside of the reptile hibernating period (October to February inclusive), during periods of warm, dry weather (with due consideration of the seasonal constraints of clearance works during breeding bird season). If this is not possible, vegetation would be cut to the ground (to remove potential bird nesting habitat), but the roots would remain intact until hibernation is complete. The root system of vegetation would then be removed once the reptile hibernation season is over. Clearing of vegetation would be

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	Two village bypass	Ornithology [APP-394] Volume 4, Chapter 7, Appendix 7A, Annex 7A.5B RAMS Reptiles [APP-395] Volume 5, Chapter 7: Terrestrial Ecology and Ornithology [APP-425]	<p>undertaken under the supervision of the suitably experienced ECoW.</p> <p><u>RAMS:</u> <u>Toolbox talk:</u></p> <ul style="list-style-type: none"> Prior to commencement of the vegetation clearance works, all site contractors will be briefed by the ECoW as part of the site induction to provide them with a basic overview of the life history, habitat requirements, identification and legal protection granted to reptiles and outline the environmental measures to be followed in order to avoid breaches of legislation and / or adverse effects on reptiles that could occur within or in the vicinity of the working area. The toolbox talk will stress that potential reptile refugia / hibernation features will be left undisturbed; and reptiles will not be handled by contractors. There is a declaration for those present to sign to confirm they have understood the constraints and actions presented.
	Sizewell link road	Volume 5, Appendix 7A, Annex 7A-6D RAMS Reptiles [APP-426]	<p><u>Vegetation clearance:</u></p> <ul style="list-style-type: none"> Any vegetation clearance likely to impact vegetation below 150mm or which is likely to impact the ground layer

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	Yoxford	<p>Volume 6 Chapter 7: Terrestrial Ecology and Ornithology [APP-461]</p> <p>Volume 6, Appendix 7A, Annex 7A-6B RAMS Reptiles [APP-462]</p> <p>Volume 7, Chapter 7: Terrestrial Ecology and Ornithology [APP-494]</p>	<p>or features which offer reptiles shelter or protection will take place during the active reptile period (March to October (inclusive), although the exact timings are weather dependant). In order to avoid disturbing reptiles during hibernation (the period where reptiles are most vulnerable). Accordingly, with respect to the proposed clearance of suitable reptile habitat, it is proposed that a staged vegetation clearance exercise is undertaken under the direct supervision of the Ecological Clerk of Works (ECoW), in order to reduce the suitability of the habitats within the site.</p> <ul style="list-style-type: none"> • Where it is necessary to undertake vegetation clearance in and around suitable reptile habitat the following precautionary measures will be put in place to avoid encountering and accidentally injuring reptiles: • Vegetation clearance (below 150mm) and ground-breaking works will only be conducted in the active season (March to October inclusive seasonally dependent)¹ and when the weather is suitable (i.e. it is warm, approximately 8oC should be the minimum temperature). The works will not be conducted early in

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	Freight management facility	Volume 7, Chapter 7: Terrestrial Ecology and Ornithology [APP-494]	the morning before reptiles have had a chance to 'warm up';
	Green rail route	Volume 8, Chapter 7: Terrestrial Ecology and Ornithology [APP-523]	<ul style="list-style-type: none"> the ECoW will work with the contractor to determine a cutting regime whereby any animals present are encouraged away from the cutting into retained habitats and not isolated in an unsuitable area. This area will be walked by the ECoW to disturb reptiles prior to works commencing; the ECoW will also consider any impacts to ground nesting birds, if appropriate and assess any risk; initially, vegetation is to be cleared to reduce cover for reptiles (at a minimum 150mm from the ground in the first pass); subsequent to this, a suitable period of time as decided by the ECoW will be given to allow for any reptiles present at the time of works to move away from the cut areas; the grassland / remaining vegetation will then be cut to as close to ground level as possible; vegetation cuttings are to be piled within the site so as to create additional sheltering opportunities to reptiles within the site;
		Volume 8, Appendix 7A, Annex 7A04A, RAMS Reptiles [APP-524]	
		Volume 9, Chapter 7:	

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		Terrestrial Ecology and Ornithology [APP-555] Volume 9, Appendix 7a, Annex 7A-6B RAMS Reptiles [APP-556]	<ul style="list-style-type: none"> any suitable reptile sheltering features (e.g. log piles, compost heaps or debris) will be identified by the on-site ecologist. These will be avoided if possible, if not they will be checked by the ECoW before their removal (should this be required). Any removal of sheltering habitats will be supervised by the ECoW. These will be dismantled by hand; this will be overseen by the ecologist. If a reptile is found the ecologist will decide whether or not it is appropriate to relocate the animal; shelter features that require removal will be reinstated near the clearance area in a quiet, sheltered location. This will ensure that no net loss of potential reptile shelter features takes place. If possible, shelter features will be dismantled by hand and moved out of the working area, supervised by the ECoW where appropriate. Such materials will be lifted (not dragged) out of the working area; and if reptiles are found, the ECoW will move the animals out of the way to a place of safety. The exact location would be decided on a case-by-case basis by the ECoW, with any reptiles encountered moved to a safe location within a suitable refuge or hibernation feature, surrounded by

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			<p>suitable foraging and basking habitat and judged to be a safe distance from the ongoing vegetation clearance works. Reptiles will not be handled by contractors, as common lizards and slow worms may shed their tails if handled inappropriately.</p> <ul style="list-style-type: none"> • Should any reptiles be found on site during the works when the ECoW isn't present, the ECoW will be contacted immediately for advice. • A staged vegetation clearance exercise at a suitable time of year will be undertaken in order to safeguard any reptiles present at the time of works. Such works will take place under the supervision of the ECoW. Such an approach will minimise the potential harm caused to reptiles within the site as it will avoid disturbing this species group during the hibernation period. • Prior to commencement of the vegetation clearance works, the ECoW will liaise with the contractor to clearly demarcate the required working areas. • If shelter features are present (i.e. log and vegetation piles), those will be checked by the ECoW before their removal (should this be required).

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			<ul style="list-style-type: none"> If shelter features are present that require removal, those will be reinstated near the clearance area in a quiet, sheltered location. This will ensure that no net loss of potential reptile shelter features takes place. If possible, shelter features will be dismantled by hand and moved out of the working area, supervised by the ECoW where appropriate. Such materials will be lifted (not dragged) out of the working area. Should works be required in winter (November to February inclusive) or in cold weather (below 8 oC overnight temperature) the ECoW will advise upon bespoke working methods. Likely to require a hand search and a staged vegetation clearance approach under direct supervision. The vegetation arisings will be collected and used to create habitat piles in areas adjacent to the site (which are to be retained during the development works). The vegetation clearance contractors on site will utilise equipment specific to their clearance methods as per their reasonable avoidance measures. <p><u>Ground-breaking works:</u></p>

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			<ul style="list-style-type: none"> Given that vegetation clearance works are to take place within the site prior to the commencement of any ground-breaking works, it is likely that the risk of encountering reptiles will be reduced, due to the absence of suitable habitat within the areas proposed for ground-breaking works. Reptiles are known to enter hibernation by burrowing underground, by settling into tree root systems or by entering voids and crevices in the ground or surrounding material. Accordingly, should the works take place during the reptile hibernation period (the dormancy period runs from November to February (inclusive) and initially will be avoided where possible), it is considered necessary for the ground-breaking works to be undertaken under direct supervision of the ECoW. Small sections of the topsoil removed and inspected by the ECoW. Hand-digging under ECoW supervision may also be required. <p>Contractors will utilise the equipment as per their reasonable avoidance measures method, For example: JCB 16C-I new generation 1 tonne mini digger; spade; spill kits; and Chapter 8 barrier/ Heras fencing.</p>

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Natterjack Toad	Main development site	<p>Volume 2, Chapter 14: Terrestrial Ecology and Ornithology [AS-033]</p> <p>Appendix 14C7A – Natterjack Toad Mitigation Strategy [APP-252]</p> <p>Sizewell C Project Terrestrial Ecology Monitoring and Mitigation Plan [REP1-016]</p>	<p><u>Tertiary mitigation:</u></p> <p>A draft Natterjack Toad Protected Species Licence has been prepared for the proposed development [AS-209]. Removal of vegetation, ground clearance and the commencement of construction activities have the potential to risk killing or injuring natterjack toads. Amphibian-proof fencing would be installed prior to construction around the footprint of the proposed Water Management Zone (WMZ) in Retsom's Field, to prevent any natterjack toads from entering the construction footprint and would include a trapping out exercise using pitfall buckets. Pre-construction checks of any potential refugia in and alongside Retsom's Field would be required, with any natterjack toads found within the footprint of the proposed WMZ captured and relocated to the retained areas of Retsom's Field. Works would be undertaken outside of the hibernation season (considered to be October to April). Pre-construction checks would be completed by a licensed or accredited ecologist. In addition, a new pond would be created within the retained areas of Retsom's Field as well as the creation of hibernation features which would be suitable for use by natterjack toads.</p> <p><u>Mitigation details from Mitigation Strategy:</u></p>

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			<p>The following timeline describes key milestones in the delivery of this Mitigation Strategy:</p> <ul style="list-style-type: none"> • preconstruction: assessment of the impacts of construction based on current Construction Plan; • updated preconstruction surveys to assess the natterjack toad population status to inform the Natural England derogation licence; • at least one year before granting of a Development Consent Order (DCO) construction of additional refugia and other habitat improvements; • inclusion of a draft Natural England derogation licence application as part of the DCO application. If approved, Natural England will issue a Letter of No Impediment to be included with the DCO submission; • on granting of the DCO, submission of a final licence application to Natural England. • To avoid killing or injuring any natterjack toad, the WMZ will be ring fenced using amphibian fencing and a trapping and translocation exercise undertaken in advance of site clearance. Captured individuals will be released within a safe location adjacent to the breeding pond (N1). Ring fencing will

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			<p>remain in situ to prevent natterjack toads accessing the WMZ for the duration of its operation (10 years).</p> <ul style="list-style-type: none"> The WMZ would be constructed in daylight hours with no requirement for construction lighting. Similarly lighting is not likely to be required for the WMZ when it is in use and typical maintenance activities would involve a small number of personnel accessing the vicinity to monitor and maintain any equipment, filters and similar. To compensate for the temporary loss of foraging habitat, it is proposed that a new strategically placed natterjack toad pond is created and that refuge and overwintering opportunities within Retsom's Field are improved. Amphibian exclusion fencing (as per Figure 4 of the Great Crested Newt Mitigation Guidelines) will be installed around the perimeter of the working area of the WMZ, once the precise size and orientation of the WMZ is confirmed, within Retsom's Field to exclude and demarcate the trapping and translocation area. 'Permanent' type fencing is proposed as the fencing will remain in situ for between 9-12 years. The trapping and translocation area will then be compartmentalised with temporary amphibian proof fencing in order to increase capture effort. Pitfall traps will be

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			<p>installed on the inside of perimeter fencing and both sides of internal fencing to ensure a trapping density of 100 traps per hectare. Carpet tiles will also be placed between alternate pitfall traps (i.e. at a density of 50 per hectare) and adjacent to N1 to act as a receptor site.</p> <ul style="list-style-type: none"> Pitfall traps and carpet tiles will be checked daily before 11am and fencing will also be walked at night by torchlight to search for natterjack toads; any individuals encountered will be translocated to the receptor site adjacent to N1. This approach will continue for a minimum of 30 consecutive days/nights and until five consecutive nights of 'no capture' are observed. Following which, internal fencing will be removed, and the construction works for the WMZ would proceed within the exclusion zone. With the exception of an access track to the south, perimeter fencing will remain in situ for the duration of the WMZ (9-12 years). During this time, it will be maintained to ensure that it remains amphibian-proof. Fence installation and removal will be overseen by an Ecological Clerk of Works (ECoW) Given the success and active management already in place at N1 it is not proposed that this pond or the adjacent defunct N2 (which may provide terrestrial opportunities) are

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			<p>enhanced as part of these works. Breeding and resting sites (i.e. rabbit warrens and N2) will be safeguarded from the proposed works by the installation of amphibian proof fencing.</p> <ul style="list-style-type: none"> • Natterjack toad populations are usually limited by the number of suitable breeding ponds available rather than the extent of terrestrial habitat. Increasing the number of breeding ponds available is therefore likely to increase the size of the natterjack toad population in time. It is proposed that development is used as an opportunity to supplement natterjack toad conservation efforts by: • Creating a new pond/scrape (N5). The proposed pond would be strategically placed centrally between N1 and N3 with the aim of providing a stepping stone to aid with colonisation of N3 and N4. It will have a surface area of approximately 150m² and will mimic N1 in terms of creation, comprising a butyl liner with very gently sloping sides (1:10) dug down to a maximum water depth of 50-70 cm. The slope of the pond basin will have a wide drawdown zone and an almost imperceptible edge. The scrape will be pumped dry in late summer and allowed to naturally fill in winter.

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			<ul style="list-style-type: none"> Creating features such as linear mounds comprising sand and stone adjacent to N5 that will, in the short term increase terrestrial opportunities (resting and overwintering) and increase connectivity between N1 and N3/N4. In the long term the wall will aid rabbit warren excavation and further increase overwintering opportunities. The management regime of the remainder of Retsom's Field (i.e. outside of the WMZ construction area) would continue as present (i.e. with sheep grazing). N5 will be drained down annually in late summer and allowed to fill naturally over winter (as practiced with N1). After c. 10 years the WMZ will be decommissioned, infilled and this section of Retsom's Field would be reinstated to grazed pasture. The new pond N5 would be monitored annually along with N1 and N31 for the duration of WMZ operation (9-12 years). Thereafter, monitoring will continue biannually for 6 years (i.e. 3 years of surveys). The TEMMP [REP1-016] outlines the Natterjack toad monitoring scheme for the population and the habitats during the construction and operation period.

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	Northern park and ride	Volume 3, Chapter 7: Terrestrial Ecology and Ornithology [APP-363]	Scoped out as not present on site, no further measures implemented as no significant effect is considered likely.
	Southern park and ride	Volume 4, Chapter 7: Terrestrial Ecology and Ornithology [APP-394]	Scoped out as not present on site, no further measures implemented as no significant effect is considered likely.
	Freight management facility	Volume 8, Chapter 7: Terrestrial Ecology and Ornithology [APP-523]	Scoped out as not present on site, no further measures implemented as no significant effect is considered likely.
	Sizewell link road	Volume 6 Chapter 7: Terrestrial Ecology and	Scoped out as not present on site, no further measures implemented as no significant effect is considered likely.

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		Ornithology [APP-461]	
	Two village bypass	Volume 5, Chapter 7: Terrestrial Ecology and Ornithology [APP-425]	Scoped out as not present on site, no further measures implemented as no significant effect is considered likely.
	Yoxford	Volume 7, Chapter 7: Terrestrial Ecology and Ornithology [APP-494]	Scoped out as not present on site, no further measures implemented as no significant effect is considered likely.
	Green rail route	Volume 9, Chapter 7: Terrestrial Ecology and Ornithology [APP-555]	Scoped out as not present on site, no further measures implemented as no significant effect is considered likely.

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Great crested newt	Main development site	<p>Volume 2, Chapter 14: Terrestrial Ecology and Ornithology [AS-033]</p> <p>Appendix 14C9A – Great Crested Newt Non-Licensable Method Statement [APP-252]</p>	<p><u>Tertiary mitigation:</u></p> <ul style="list-style-type: none"> A Great Crested Newt Method Statement (Volume 2, Appendix 14C9A [APP-252]) has been prepared detailing the approach to be used, including the removal of vegetation and ground clearance in areas where commencement of construction activities have the potential to kill or injure Great Crested Newts during their terrestrial phase (there are no breeding ponds within the site). A RAMS method statement document has been created to outline the appropriate measures that will be undertaken to prevent any negative impacts on GCN: <ul style="list-style-type: none"> Any clearance within the active season must also consider the potential to impact upon nesting birds. Suitable measures to prevent impacts to nesting birds will be employed, which are likely to include pre-works checks for nests. These measures in relation to birds are not outlined in full within this document. Prior to commencement of the vegetation clearance works, the ECoW will liaise with the contractor to clearly demarcate the required working area.

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			<ul style="list-style-type: none"> • The precautionary working methods to safeguard great crested newts during vegetation clearance in the active season are set out below. The ECoW will work with the contractor to determine a cutting regime whereby any animals present are able to move away from the cutting into retained habitats and not isolated in an unsuitable area. This area will be walked by the ECoW to identify any areas offering great crested newt sheltering opportunities prior to works commencing. • Any suitable great crested newt sheltering features (e.g. log piles, compost heaps or debris) will be identified by the on-site ecologist. These will be avoided if possible, if not they will be checked by the ECoW before their removal (should this be required). Any removal of sheltering habitats will be supervised by the ECoW. These will be dismantled by hand; this will be overseen by the ecologist. • Shelter features that require removal will be reinstated near the clearance area in a quiet, sheltered location. This will ensure that no net loss

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			<p>of potential great crested newt shelter features takes place. If possible, shelter features will be dismantled by hand and moved out of the working area, supervised by the ECoW where appropriate. Such materials will be lifted (not dragged) out of the working area.</p> <ul style="list-style-type: none"> Vegetation is to be cleared at a minimum 150mm from the ground in the first pass. Subsequent to this, a suitable period of time as decided by the ECoW will be given to allow for any great crested newts present at the time of works to move away from the cut areas, this will also allow the ECoW to check the area for great crested newt, along with other species. The vegetation will then be cut to as close to ground level as possible. Vegetation cuttings are to be piled within the site so as to create additional sheltering opportunities to great crested newts within the site.
	Northern park and ride	Volume 3, Chapter 7:	<u>Primary mitigation:</u>

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		<p>Terrestrial Ecology and Ornithology [APP-363]</p> <p>Terrestrial Ecology Monitoring and Mitigation Plan [REP1-016]</p>	<ul style="list-style-type: none"> • Pond 78 would be retained, directly protecting the known great crested newt population within the site boundary, as well as the potential water shrew population. A 10m buffer would be maintained around the pond, within which no construction works would take place other than the erection of ecological fencing. Additionally, the pond would be protected from construction and operational impacts by the landscape bund along the eastern boundary of the site. • One-way directional newt fencing would be installed around the perimeter of the car parking areas, swales and landscape bunds, to prevent great crested newts from entering the site but allow them to leave should they accidentally gain access. • Fencing would be sited to ensure that Pond 78 is excluded in order to maintain connectivity with existing, suitable great crested newt habitats. This approach would eliminate the need to translocate great crested newts away from the landscaped margins of the site when these areas are returned to agriculture use. This fencing would be installed at the start of the first phase of construction, maintained throughout operation, and would remain in place until the end of the site restoration works.

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			<ul style="list-style-type: none"> Two small pipes or culverts would be placed beneath the new access road to allow the passage of great crested newts underneath the road. One of these would be on the north side of the landscape bund, and one would be at the point at which the new access road meets Willow Marsh Lane. Great crested newts would be directed to the culverts by one-way directional newt fencing. The planting of hedgerow along the southern side of Willow Marsh Lane with a rough, unmanaged grassland margin adjacent, and extending along the eastern and western site boundaries would minimise great crested newt habitat severance and habitat loss, facilitate continued access to foraging and hibernation sites within Little Nursery Wood, and allow connectivity between Ponds 78 to 82. <p><u>Tertiary mitigation:</u></p> <ul style="list-style-type: none"> Additionally, works with the potential to affect great crested newts would be carried out either under a reasonable avoidance methods statement, or under a licence from Natural England, as required, following agreement with Natural England on an appropriate mitigation strategy. In

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			<p>addition to the primary mitigation measures identified previously, this would likely include:</p> <ul style="list-style-type: none"> Seasonal constraints to the timing of the installation of the one-way directional newt fencing described in section 7.5a of this chapter. If the timing of fence installation means there would be a risk of encountering newts as they move between their ponds and terrestrial habitat (notably in February/March), then the fencing would be combined with pitfall traps, and any trapped newts would be collected, and transferred to one of the ponds to the west of the A12 where great crested newts are known to occur (e.g. Pond 78 or 101); If possible, the removal of hedgerow would be undertaken outside of the amphibian hibernation period (October to February inclusive). If this is not possible, vegetation would be cut to the ground (which would remove potential bird nesting habitat), but the roots would remain intact until hibernation is complete. The root system of vegetation would then be removed once the great crested newt hibernation season is over. This work would be overseen by a suitably experienced Ecological Clerk of Works (ECoW);

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			<ul style="list-style-type: none"> The habitat around Pond 78 would be improved, and tussocky grassland and scrub encouraged to grow for the benefit of great crested newts and hibernation features would be installed. This would improve the foraging habitat around Pond 78 and would provide suitable hibernation sites adjacent to the pond. Further details would be included within the great crested newt development licence and subject to agreement with Natural England. In addition, this commitment would need to be agreed with the landowner. In the event of the landowner not agreeing to the above approach, alternative measures would be adopted. <p><u>Monitoring:</u></p> <ul style="list-style-type: none"> During construction, there would be regular checks of the security fence, ecological fencing and close-boarded fence to check these remain intact, and that there is no encroachment of construction activities beyond the site boundary or into the buffer areas. The newt culverts, when installed, would also be monitored to ensure these remain intact and clear of debris. The one-way directional newt fencing would be checked regularly to ensure that this remains intact.

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			<ul style="list-style-type: none"> Throughout the operational phase, regular monitoring of the one-way directional newt fencing and newt culverts would be conducted to ensure that these remain intact and clear of debris. This would ensure the continued exclusion of newts from the operational facility on the site. The TEMMP [REP1-016] outlines the proposed monitoring activities identified for great crested newt during the construction and operational phases.
	Southern park and ride	Volume 4, Chapter 7: Terrestrial Ecology and Ornithology [APP-394]	<p>No great crested newts were recorded during surveys, however the following precautionary measures are proposed.</p> <p><u>Primary mitigation:</u> Pond 59 located within the site, close to the western boundary, would be retained, and so there would be no direct loss of this habitat, and its associated species. This pond would be further protected by a buffer area of a minimum of 10m between the pond, where with the exception of fencing, no above ground buildings or structures will be within this buffer zone.</p>

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	Freight management facility	Volume 8, Chapter 7: Terrestrial Ecology and Ornithology [APP-523]	Great crested newts considered absent from the zone of influence and no further measures implemented as no significant effect is considered likely.
	Sizewell link road	Volume 6 Chapter 7: Terrestrial Ecology and Ornithology [APP-461] Terrestrial Ecology Monitoring and Mitigation Plan [REP1-016]	<u>Primary mitigation:</u> <ul style="list-style-type: none"> The site boundary has been amended and reduced where possible to avoid direct and indirect impacts to ponds. Measures would be installed into the road design to maintain connectivity for great crested newts. The locations for crossing points will be finalised at the detailed design stage, however these would be as follows: The preferred option, where there is minimal fragmentation, and the development is at grade, as cited by Natural England, would be to allow newts to cross over the road. These measures would be incorporated into the proposed development design such as no kerbing or features that would inhibit the movement of newts to cross the road. In the event of gully pots (which could become traps for amphibians) being identified as a requirement, the design will ensure that amphibian friendly gully pot designs are used so

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			<p>that a means of egress is provided to ensure that any amphibians do not get trapped within them.</p> <ul style="list-style-type: none"> • The preferred option, where there is minimal fragmentation, and the development is at grade, as cited by Natural England, would be to allow newts to cross over the road. These measures would be incorporated into the proposed development design such as no kerbing or features that would inhibit the movement of newts to cross the road. In the event of gully pots (which could become traps for amphibians) being identified as a requirement, the design will ensure that amphibian friendly gully pot designs are used so that a means of egress is provided to ensure that any amphibians do not get trapped within them. • Replacement great crested breeding ponds are included within the design of the proposed development to compensate for the loss of existing ponds, although the precise number and location are to be determined. Replacement ponds would be created prior to destruction of the original ponds and appropriate terrestrial habitat would be created around the ponds. Indicative locations for replacement great crested newt ponds and great crested

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			<p>newts crossing points are shown on Figure 2.2 to 2.4 of this volume.</p> <p><u>Tertiary mitigation:</u></p> <ul style="list-style-type: none"> Works with the potential to affect great crested newts would be carried out either under a licence from Natural England, following agreement with Natural England or an appropriate mitigation strategy. The licensable works would encompass and clearance and construction works required within the intermediate and distant habitat zones of ponds within the site. <p><u>Monitoring:</u></p> <ul style="list-style-type: none"> The TEMMP [REP1-016] outlines the proposed monitoring activities identified for great crested newt during the construction and operational phases.
	Two village bypass	Volume 5, Chapter 7: Terrestrial Ecology and	Great crested newts are considered absent from the zone of influence and no further measures implemented as no significant effect is considered likely. However, the following measures would be undertaken to enhance the route and follow

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		Ornithology [APP-425] Volume 5, App 7A, Annex 7A- 6B RAMS GCN [APP-426]	<p>a precautionary approach to ensure GCN protection, should they move into the area.</p> <p><u>Enhancement:</u></p> <ul style="list-style-type: none"> The provision of up to four ponds is also proposed along the route, which would provide additional pond habitat in the area and contribute to bio-diversity net gain. <p><u>RAMS:</u></p> <p><u>Toolbox talk:</u></p> <ul style="list-style-type: none"> Prior to commencement of the works, all site contractors will be briefed by the ECoW as part of the site induction to provide them with a basic overview of the life history, habitat requirements, identification and legal protection granted to great crested newt. This applies to contractors working in all habitats across the site, not only habitats likely to support great crested newt in the terrestrial phase. Site-specific toolbox talks will also be undertaken as necessary to identify the habitats present within the site that have the potential to be used by great crested newt and outline the environmental measures to be followed in order to avoid breaches of legislation and / or adverse effects on

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			<p>great crested newt that could occur within or in the vicinity of the working area. The toolbox talk will stress that: potential great crested newt refugia / hibernation features will be left undisturbed; and great crested newt will not be handled by contractors.</p> <p><u>Precautionary working methods:</u></p> <ul style="list-style-type: none"> A different precautionary working method will be utilised dependent upon whether the works are being undertaken in the great crested newt active or hibernation period. These periods are dependent upon weather conditions (temperature and rainfall) but are likely to be in the region of November to February inclusive (hibernation season) and March to October (active season). The ECoW will be responsible for determining the appropriate working methodology. The prescriptions of this method statement will be followed during works in any areas with potential to support great crested newts. These areas include but are not limited to: tree roots, hedgerow bases, rough grassland areas, arable field margins, earth banks, log piles, rock piles and woodlands.

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			<ul style="list-style-type: none"> • If possible, all impacts to terrestrial areas which may offer hibernation potential (i.e. log piles, embankments etc.) will be removed outside of the hibernation period, as great crested newt are more likely to be active and associated with ponds during this period. However, there are restrictions on certain works due to the potential to impact upon nesting birds (during the bird nesting season, generally March to August inclusive), and all works timings will need to consider this. • No ponds supporting great crested newt are to be directly impacted by the works therefore an approach to pond removal is not required. For clarity, the precautionary working methodologies have been split down into three scenarios: • Vegetation clearance in the active season, vegetation clearance in the hibernation season, ground-breaking works in the active and hibernation season. <p><u>Vegetation clearance in the active season:</u></p> <ul style="list-style-type: none"> • Any clearance within the active season must also consider the potential to impact upon nesting birds. Suitable measures to prevent impacts to nesting birds will be employed, which are likely to include pre-works checks for nests. These

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			<p>measures in relation to birds are not outlined in full within this document.</p> <ul style="list-style-type: none"> • Prior to commencement of the vegetation clearance works, the ECoW will liaise with the contractor to clearly demarcate the required working area. <p>The precautionary working methods to safeguard great crested newt during vegetation clearance in the active season are set out below.</p> <ul style="list-style-type: none"> • The ECoW will work with the contractor to determine a cutting regime whereby any animals present are able to move away from the cutting into retained habitats and not isolated in an unsuitable area. This area will be walked by the ECoW to identify any areas offering great crested newt sheltering opportunities prior to works commencing. • Any suitable great crested newt sheltering features (e.g. log piles, compost heaps or debris) will be identified by the on-site ecologist. These will be avoided if possible, if not they will be checked by the ECoW before their removal (should this be required). Any removal of sheltering habitats will be supervised by the ECoW. These will be dismantled by hand; this will be overseen by the ecologist.

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			<ul style="list-style-type: none"> Shelter features that require removal will be reinstated near the clearance area in a quiet, sheltered location. This will ensure that no net loss of potential great crested newt shelter features takes place. If possible, shelter features will be dismantled by hand and moved out of the working area, supervised by the ECoW where appropriate. Such materials will be lifted (not dragged) out of the working area. Vegetation is to be cleared at a minimum 150mm from the ground in the first pass. Subsequent to this, a suitable period of time as decided by the ECoW will be given to allow for any great crested newt present at the time of works to move away from the cut areas, this will also allow the ECoW to check the area for great crested newt, along with other species. The vegetation will then be cut to as close to ground level as possible; Vegetation cuttings are to be piled within the site so as to create additional sheltering opportunities to great crested newt within the site. <p><u>Vegetation clearance in the hibernation season:</u></p>

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			<ul style="list-style-type: none"> Prior to commencement of the vegetation clearance works, the ECoW will liaise with the contractor to clearly demarcate the required working area. <p>The precautionary working methods to safeguard great crested newt during vegetation clearance in the hibernation season are set out below.</p> <ul style="list-style-type: none"> Any suitable great crested newt sheltering features (e.g. log piles, compost heaps or debris) will be identified by the on-site ecologist. These will be avoided if possible, if not they will be checked by the ECoW before their removal (should this be required). If possible, this removal will be undertaken by hand or slowly under close supervision by the ECoW. Shelter features that require removal will be reinstated near the clearance area in a quiet, sheltered location. This will ensure that no net loss of potential great crested newt shelter features takes place. If possible, shelter features will be dismantled by hand and moved out of the working area, supervised by the ECoW where appropriate. Such materials will be lifted (not dragged) out of the working area. The vegetation will then be cut to as close to ground level as possible.

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			<ul style="list-style-type: none"> Vegetation cuttings are to be piled within the site so as to create additional sheltering opportunities to great crested newt within the site. <p><u>Approach to ground-breaking works including top-soil stripping (active season and hibernation period):</u></p> <ul style="list-style-type: none"> If possible, all impacts to terrestrial areas which may offer hibernation potential (i.e. log piles, embankments etc) will be removed outside of the hibernation period, as great crested newt are more likely to be active and associated with ponds during this period. However, there are restrictions on certain works due to the potential to impact upon nesting birds (during the bird nesting season, generally March to August inclusive), and all works timings will need to consider this. Given that vegetation clearance works are to take place within the site prior to the commencement of any ground-breaking works, it is likely that the risk of encountering great crested newt will be reduced, due to the removal of suitable terrestrial habitat within the areas proposed for ground-breaking works. Ground-breaking works include

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			<p>any ground investigations, archaeology trenching, topsoil stripping etc.</p> <ul style="list-style-type: none"> • Prior to commencement of the ground-breaking works, the ECoW will liaise with the contractor to clearly demarcate the required working area. The methodology outlined below assumes that all vegetation has previously been removed. <p>The precautionary working methods to safeguard great crested newt during ground-breaking works in the active season are set out below.</p> <ul style="list-style-type: none"> • Any suitable great crested newt sheltering features (e.g. log piles, compost heaps or debris) will be identified by the on-site ecologist. These will be avoided if possible, if not they will be checked by the ECoW before their removal (should this be required). If possible, this removal will be undertaken by hand or slowly under close supervision by the ECoW. • Shelter features that require removal will be reinstated near the clearance area in a quiet, sheltered location. This will ensure that no net loss of potential great crested newt shelter features takes place. If possible, shelter features will be dismantled by hand and moved out of the working area,

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			<p>supervised by the ECoW where appropriate. Such materials will be lifted (not dragged) out of the working area.</p> <ul style="list-style-type: none"> The topsoil will then be carefully removed using a toothed bucket (if permitted under the contractors RAMS) under close ecological supervision by the ECoW. <p><u>Action to take if great crested newts are found:</u></p> <ul style="list-style-type: none"> Should any great crested newts be found during the facilitation works the following must be observed due to the strict level of protection afforded to this species: the works will stop; the great crested newt will not be handled or moved from its resting place; and the ECoW will assess the situation to determine whether a European Protected Species mitigation licence will be required before the works can continue; and if Natural England need to be informed.
	Yoxford	Volume 7, Chapter 7: Terrestrial Ecology and	Scoped out as not present on site, no further measures implemented as no significant effect is considered likely.

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		Ornithology [APP-494]	
	Green rail route	Volume 9, Chapter 7: Terrestrial Ecology and Ornithology [APP-555] Volume 9, Chapter 7, Appendix 7A Annex 7A-6 RAMS GCN [APP-556] Terrestrial Ecology Monitoring and Mitigation Plan [REP1-016]	<u>Tertiary mitigation:</u> <ul style="list-style-type: none"> • Works with the potential to affect great crested newts would be carried out either under a reasonable avoidance methods statement or under a licence from Natural England, as required, following agreement with Natural England on an appropriate mitigation strategy. • The sections of hedgerow to be removed would be cleared outside of the amphibian hibernation period (October to February inclusive). If this is not possible, vegetation would be cut to just above ground level (to remove potential bird nesting habitat), but the roots would remain intact until the newt hibernation season is complete. The root system of vegetation would then be removed once the great crested newt hibernation season is over. This work would be overseen by a suitably experienced Ecological Clerk of Works (ECOW), under licence from Natural England. Any great crested newts encountered would be translocated to an appropriate pond within the ZOI, known to support them, with suitable adjacent terrestrial habitats.

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			<ul style="list-style-type: none"> • To minimise the risk of incidental mortality, all vegetation within the site boundary would be maintained in a state unsuitable for great crested newts, i.e. vegetation would be maintained to ground level, this would also support mitigation for reptiles. A suitably experienced ECoW would oversee all ground-breaking activities and would inspect all excavations, if uncovered, on a daily basis. • During the removal and reinstatement phase, the removal of the railway ballast and bunds would be conducted outside of amphibian and reptile hibernation period (October to February inclusive) where possible. Otherwise a suitably experienced ECoW would oversee all dismantling and removals. • Should a great crested newt be found during the removal and reinstatement phase, a licence may be required from Natural England following agreement with Natural England on an appropriate mitigation strategy. • Adhere to GCN RAMS (see two village bypass measures for RAMS detail). <p><u>Monitoring:</u></p>

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			The TEMMP [REP1-016] outlines the proposed monitoring activities identified for great crested newt during the construction and operational phases.
Common toad	Main development site	Volume 2, Chapter 14: Terrestrial Ecology and Ornithology [AS-033]	There is no specific mitigation proposed for common toad, however tertiary reptile and amphibian mitigation measures will also benefit common toad.
	Northern park and ride	Volume 3, Chapter 7: Terrestrial Ecology and Ornithology [APP-363]	Scoped out, no further measures implemented as no significant effect is considered likely.
	Southern park and ride	Volume 4, Chapter 7: Terrestrial Ecology and Ornithology [APP-394]	Scoped out, no further measures implemented as no significant effect is considered likely.

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	Freight management facility	Volume 8, Chapter 7: Terrestrial Ecology and Ornithology [APP-523]	Scoped out, no further measures implemented as no significant effect is considered likely.
	Sizewell link road	Volume 6 Chapter 7: Terrestrial Ecology and Ornithology [APP-461]	Common toad has therefore been scoped out of the detailed assessment; however, mitigation measures employed to protect reptiles / and GCN would also protect this species.
	Two village bypass	Volume 5, Chapter 7: Terrestrial Ecology and Ornithology [APP-425]	Common toad has therefore been scoped out of the detailed assessment, No further measures implemented as no significant effect is considered likely.
	Yoxford	Volume 7, Chapter 7: Terrestrial Ecology and	Scoped out, no further measures implemented as no significant effect is considered likely.

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		Ornithology [APP-494]	
	Green rail route	Volume 9, Chapter 7: Terrestrial Ecology and Ornithology [APP-555]	<p>No species specific measures are proposed, but the following measures will apply to common toad:</p> <p><u>Tertiary mitigation:</u></p> <ul style="list-style-type: none"> The sections of hedgerow to be removed would be cleared outside of the amphibian hibernation period (October to February inclusive). If this is not possible, vegetation would be cut to just above ground level (to remove potential bird nesting habitat), but the roots would remain intact until the newt hibernation season is complete. The root system of vegetation would then be removed once the great crested newt hibernation season is over. This work would be overseen by a suitably experienced Ecological Clerk of Works (ECoW), under licence from Natural England. During the removal and reinstatement phase, the removal of the railway ballast and bunds would be conducted outside of amphibian and reptile hibernation period (October to February inclusive) where possible.

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			Otherwise a suitably experienced ECoW would oversee all dismantling and removals.
S41 bird species on main development site: Bittern, hen harrier, nightjar, woodlark, black-tailed godwit, lapwing, stone curlew, grey partridge, turtle dove, cuckoo, marsh tit, skylark, starling, song thrush, spotted flycatcher, house sparrow, yellow wagtail, linnet, yellow hammer	Main development site	Volume 2, Chapter 14: Terrestrial Ecology and Ornithology [AS-033]	<p>No species specific measures are proposed for any of the S41 species. General measures that apply to all bird species are as follows.</p> <p><u>Primary mitigation:</u></p> <ul style="list-style-type: none"> The Rights of Way and Access Strategy for the EDF Energy estate (see Chapter 15, Appendix 15I of the ES (Book 6)) has been developed to minimise the displacement of people away from the proposed development area to nearby European (National) sites to minimise disturbance to ground-nesting bird species and trampling of vegetation at those sites. In addition, the strategy outlines a monitoring programme for recreational displacement and identify local mitigation measures, to be agreed with local land managers, which could be introduced to further reduce recreational disturbance. The establishment of new reedbed and ditches at Aldhurst Farm (completed in 2016) has provided replacement for the land take of these habitats within Sizewell Marshes SSSI.

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			<p>The replacement habitats have established successfully, and mobile aquatic plant and invertebrate species would colonise over time from the adjacent areas of the Sizewell Marshes SSSI. These new habitats also provide nesting and foraging habitat for many bird species. Marsh Harriers have already started breeding in the new wetlands.</p> <ul style="list-style-type: none"> • The extensive grasslands created to provide reptile mitigation and marsh harrier compensation habitats as well as the grasslands at Aldhurst Farm already support populations of skylarks, meadow pipits, woodlark and linnet which would have been present at substantially lower densities when these habitats were intensively cultivated arable fields. • Removal of vegetation, ground clearance and the commencement of construction activities have the potential to risk killing or injuring nesting birds, and to damage or destroy nests, including those of ground-nesting species, should works be undertaken during the breeding bird season. Birds and their nests are protected under the Wildlife and Countryside Act (W&CA) and the removal of scrub and trees and ground clearance works would generally be undertaken outside of the breeding bird season. Where it is

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			not possible to undertake these works outside of the breeding bird season, an inspection for nests would be undertaken by a suitably experienced ECoW prior to the removal of vegetation. If nesting birds are identified during this process, works in the vicinity of the nest (estimated to be a 10m standoff or greater, depending upon species) would cease until the young have fledged.
S41 species: herring gull, house sparrow, linnet, marsh tit, skylark, yellowhammer, song thrush, starling, bullfinch.	Northern park and ride	Volume 3, Chapter 7: Terrestrial Ecology and Ornithology [APP-363]	<u>Tertiary mitigation:</u> <ul style="list-style-type: none"> The removal of vegetation, ground clearance, and the commencement of construction activities have the potential to risk killing or injuring nesting birds, and to damage or destroy nests, including those of ground-nesting species, should works be undertaken during the breeding bird season (considered to be late February to August). Birds and their nests are protected under the Wildlife and Countryside Act, and the removal of scrub and trees and ground clearance works would generally be undertaken outside of the breeding bird season. Measures could also be put in place to deter birds from nesting in any hedgerow to be removed (for example, cutting back vegetation and making the area less suitable), however, the ground would need to remain

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			undisturbed during the reptile hibernation period. Where it is not possible to undertake these works outside of the breeding bird season, an inspection for nests would be undertaken by a suitably experienced ECoW prior to the removal of vegetation. If nesting birds are identified during this process, works in the vicinity of the nest (estimated to be a 10m standoff) would cease until the young have fledged.
S41 bird species: Lapwing, linnet, skylark, song thrush, yellowhammer, grey partridge, herring gull	Southern park and ride	Volume 4, Chapter 7: Terrestrial Ecology and Ornithology [APP-394]	<p><u>Tertiary mitigation:</u></p> <ul style="list-style-type: none"> Construction activities have the potential to risk killing or injuring breeding birds, and damage or destroy nests, including those of ground-nesting species, should works be undertaken during the breeding bird season (late February to August inclusive). Birds and their nests are protected under the Wildlife and Countryside Act, therefore removal of scrub and trees and ground clearance works would generally be undertaken outside of the breeding bird season. Measures could also be put in place to deter birds from nesting in any hedgerow to be removed (for example, cutting back vegetation and making the area less suitable); however, the ground would need to remain undisturbed during the reptile hibernation period. Where it is not possible to undertake

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			these works outside of the breeding bird season, an inspection for nests would be undertaken by a suitably experienced ECoW prior to the removal of vegetation. If breeding birds are identified during this process, works in the vicinity of the nest (estimated to be a 10m standoff) would need to cease until the young have fledged.
S41 bird species: Desk study records - corn bunting, grey partridge, lapwing, linnet, turtle dove, tree sparrow, yellowhammer, yellow wagtail, skylark.	Freight management facility	Volume 8, Chapter 7: Terrestrial Ecology and Ornithology [APP-523]	<u>Tertiary mitigation:</u> <ul style="list-style-type: none"> Removal of vegetation, ground clearance, and the commencement of construction activities have the potential to risk killing or injuring nesting birds and to damage or destroy nests, including those of ground-nesting species, if works are undertaken during the breeding bird season (considered to be late February to August inclusive). Birds and their nests are protected under the Wildlife and Countryside Act and the removal of scrub and trees and ground clearance works would generally be undertaken outside of the breeding bird season. Measures could also be put in place to deter birds from nesting in any hedgerow to be removed (for example, cutting back vegetation and making the area less suitable); however, the ground would need to remain undisturbed during the reptile hibernation

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			period. Where it is not possible to undertake these works outside of the breeding bird season, an inspection for nests would be undertaken by a suitably experienced Ecological Clerk of Works (ECoW) prior to the removal of vegetation. If nesting birds are identified during this process, works in the vicinity of the nest (estimated to be a 10m standoff) would cease until the young have fledged.
S41 bird species: Skylark, yellowhammer linnet, song thrush, yellow wagtail, house sparrow and cuckoo, reed bunting and dunnock.	Sizewell link road	Volume 6 Chapter 7: Terrestrial Ecology and Ornithology [APP-461]	<u>Tertiary mitigation:</u> <ul style="list-style-type: none"> Construction activities have the potential to risk killing or injuring breeding birds, and damage or destroy nests, including those of ground-nesting species, should works be undertaken during the breeding bird season (late February to August inclusive). Birds and their nests are protected under the Wildlife and Countryside Act, therefore removal of scrub and trees and ground clearance works would generally be undertaken outside of the breeding bird season. Measures could also be put in place to deter birds from nesting in any hedgerow to be removed (for example, cutting back vegetation and making the area less suitable); however, the ground would need to remain undisturbed during the reptile hibernation period. Where it is not possible to undertake these works outside of the breeding bird season, an

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			inspection for nests would be undertaken by a suitably experienced ECoW prior to the removal of vegetation. If breeding birds are identified during this process, works in the vicinity of the nest (estimated to be a 10m standoff) would need to cease until the young have fledged
S41 bird species: herring gull, song thrush, marsh tit, dunnock, reed bunting, linnet, house sparrow, skylark, bullfinch.	Two village bypass	Volume 5, Chapter 7: Terrestrial Ecology and Ornithology [APP-425]	<u>Tertiary mitigation:</u> <ul style="list-style-type: none"> Construction activities have the potential to risk killing or injuring breeding birds, and damage or destroy nests, including those of ground-nesting species, should works be undertaken during the breeding bird season (late February to August inclusive). Birds and their nests are protected under the Wildlife and Countryside Act, therefore removal of scrub and trees and ground clearance works would generally be undertaken outside of the breeding bird season. Measures could also be put in place to deter birds from nesting in any hedgerow to be removed (for example, cutting back vegetation and making the area less suitable); however, the ground would need to remain undisturbed during the reptile hibernation period. Where it is not possible to undertake these works outside of the breeding bird season, an inspection for nests would be undertaken by a suitably experienced ECoW prior to the removal of vegetation. If

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			breeding birds are identified during this process, works in the vicinity of the nest (estimated to be a 10m standoff) would need to cease until the young have fledged.
S41 bird species: Desk study - grey partridge, lapwing, linnet, turtle dove, and yellowhammer and skylark.	Yoxford	Volume 7, Chapter 7: Terrestrial Ecology and Ornithology [APP-494]	<u>Tertiary mitigation:</u> <ul style="list-style-type: none"> The removal of vegetation, ground clearance and the commencement of construction activities have the potential to risk killing or injuring nesting birds, and to damage or destroy nests, including those of ground-nesting species, should works be undertaken during the breeding bird season (considered to be late February to August). Birds and their nests are protected under the Wildlife and Countryside Act and the removal of scrub and trees and ground clearance works would generally be undertaken outside of the breeding bird season. Measures could also be put in place to deter birds from nesting in any hedgerow to be removed (for example, cutting back vegetation and making the area less suitable); however, the ground would need to remain undisturbed during the reptile hibernation period, after which groundworks could commence. Where it is not possible to undertake these works outside of the breeding bird season, an inspection for nests would be undertaken by a suitably

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			experienced ECoW prior to the removal of vegetation. If nesting birds are identified during this process, works in the vicinity of the nest (estimated to be a 10m standoff) would cease until the young have fledged.
S41 bird species: herring gull, skylark, song thrush, yellowhammer, dunnock, bullfinch house sparrow, lapwing, starling.	Green rail route	Volume 9, Chapter 7: Terrestrial Ecology and Ornithology [APP-555]	<u>Tertiary mitigation:</u> <ul style="list-style-type: none"> Removal of vegetation, ground clearance and the commencement of construction activities have the potential to risk killing or injuring nesting birds, and to damage or destroy nests, including those of ground-nesting species, should works be undertaken during the breeding bird season (considered to be late February to August). Birds and their nests are protected under the Wildlife and Countryside Act and the removal of scrub and trees and ground clearance works would generally be undertaken outside of the breeding bird season. Measures could also be put in place to deter birds from nesting in any hedgerow to be removed (for example, cutting back vegetation and making the area less suitable); however, if conducted during the reptile hibernation period, the ground would need to remain undisturbed. Where it is not possible to undertake these works outside of the breeding bird season, an inspection for nests would be undertaken by a suitably experienced ECoW prior to the

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			removal of vegetation. If nesting birds are identified during this process, works in the vicinity of the nest (estimated to be a 10m standoff) would cease until the young have fledged.
S41 fish species: European eel	Main development site	Volume 2, Chapter 14: Terrestrial Ecology and Ornithology [AS-033] Eels Regulations Compliance Assessment	<u>Primary mitigation:</u> <ul style="list-style-type: none"> The realignment of the Sizewell Drain and the construction of associated water control features would enable manipulation of the water levels within Sizewell Marshes SSSI, to safeguard retained areas of fen meadow and reedbed habitats (see Chapter 19 Ground and Surface Water of the ES (Book 6)). Control structures would include passage for eels and other fish (see Eels Regulations Compliance Assessment, 2019). The SSSI crossing was designed to be an embankment and culvert. The design of the SSSI crossing was updated as part of the ES Addendum and will now consist of a 30m open single span bridge. This will be more porous than the original proposed culvert and similarly facilitate the passage of fish, including eels, through the structure. As outlined under section 14.7 of this chapter there would be a loss of approximately 2km of ditch habitat which has already been recreated within the habitat creation at Aldhurst

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			<p>Farm which is in direct hydrological connection with the ditch network of Sizewell Marshes SSSI and there would new habitat created when the Sizewell Drain is realigned. So overall no net loss of fish (ditch) habitat is anticipated. In addition, as outlined in section 14.4 of this chapter, the culvert crossing of the Leiston Drain would be of sufficient dimensions to leave the bed and bank of the Leiston Drain unmodified and the proposed control structure on the realigned Sizewell Drain would incorporate a fish pass so no obstruction to migratory fish and eels is anticipated. The installation of such a structure is in line with the Eel Regulations as demonstrated in the Eels Regulations Screening Report.</p> <ul style="list-style-type: none"> When the Sizewell Drain is realigned, a fish (and eel) rescue would be carried out by a specialist sub-consultant. The working methods would be secured via appending to the CoCP and thus via requirement 2 [AS-275], relocating stranded individuals across to the new realigned drain or undisturbed section of the Sizewell Drain. <p><u>Eels Regulations Compliance Assessment</u> <u>Freshwater Elements</u></p>

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			<ul style="list-style-type: none"> Eel rescue carried out (if required) prior to any in-stream works. No piling at night to be carried out. Incorporation of suitable bed and bank protection (using bioengineering solutions) either upstream and/or downstream of culverts. Careful operational management of water control structures to ensure adequate environment flows for in-stream eel habitat and survival. No permanent in-stream barriers to eel migration to be constructed and operated without full consideration of eel migration, including the installation of appropriate eel passes at water control structures. <p><u>Marine elements:</u></p> <ul style="list-style-type: none"> Low velocity side entry type intake head design; Fish Recovery and Return systems to be fully integrated within the cooling water infrastructure FRR to include fish-friendly elevator ledges or 'buckets' optimised for eels.

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			<u>Monitoring:</u> Ongoing entrainment and impingement monitoring of eels at Sizewell C to be undertaken to implement alternative measures if deemed necessary. Monitoring will include that of habitat quality and fish assemblage present. Further details have been provided in the TEMMP [REP1-016] .
	Northern park and ride	Volume 3, Chapter 7: Terrestrial Ecology and Ornithology [APP-363]	Scoped out as not present on site, no further measures implemented as no significant effect is considered likely.
	Southern park and ride	Volume 4, Chapter 7: Terrestrial Ecology and Ornithology [APP-394]	Scoped out as not present on site, no further measures implemented as no significant effect is considered likely.
	Freight management facility	Volume 8, Chapter 7: Terrestrial	Scoped out as not present on site, no further measures implemented as no significant effect is considered likely.

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		Ecology and Ornithology [APP-523]	
	Sizewell link road	Volume 6 Chapter 7: Terrestrial Ecology and Ornithology [APP-461]	Scoped out as not present on site, no further measures implemented as no significant effect is considered likely.
	Two village bypass	Volume 5, Chapter 7: Terrestrial Ecology and Ornithology [APP-425]	Scoped out as not present on site, no further measures implemented as no significant effect is considered likely.
	Yoxford	Volume 7, Chapter 7: Terrestrial Ecology and Ornithology [APP-494]	Scoped out as no significant effect is considered likely.

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	Green rail route	Volume 9, Chapter 7: Terrestrial Ecology and Ornithology [APP-555]	Scoped out as not present on site, no further measures implemented as no significant effect is considered likely.
Other S41 fish species: Atlantic cod, plaice, whiting, herring,	Main development site	Volume 2, Chapter 22, Marine Ecology and Fisheries [AS-035]	<u>Coastal defence feature mitigation:</u> <u>Tertiary Vessel Traffic and Pollution mitigation:</u> <ul style="list-style-type: none"> • The potential for chemical and oil spills whilst recognised will be mitigated by compliance with IMO regulations. • The potential for invasive non-native species (INNS) to be introduced during ballast water activities will be managed by compliance with the IMO Ballast Water Management Convention (adopted in 2004). • Waste management procedures outlined in site waste management plans. • Artificial lighting on the BLF and moored vessels would introduce light into the marine environment. Mitigation measures as part of the site Lighting Management Plan aims to minimise light spill into the adjacent environment.

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			<p><u>Cooling water infrastructure mitigation:</u></p> <ul style="list-style-type: none"> A tunnel boring machine (TBM) slurry method is the most likely scenario for tunnelling. Spoil from the cutting face would be transported to a temporary stockpile for onward management. This is primary mitigation as it avoids damage to the seabed from the alternative of a 'cut and fill' method. Groundwater would be generated from digging the galleries allowing access to the tunnels. To encompass worst-case water quality scenarios, assessments assume discharges of wastewater from the CDO. Effects from discharges from the CDO would be mitigated by treatment with a siltbuster or similar technology to minimise sediment inputs (primary mitigation). <p><u>Cooling water headworks:</u></p> <ul style="list-style-type: none"> The optimal location of the outfall heads was investigated using validated hydrodynamic modelling in consultation with the Environment Agency to ensure compliance with Environment Agency guidelines to reduce environmental impacts of the thermal plume as well as to minimise recirculation of heated water at the Sizewell B intakes.

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			<p>Embedded (primary) mitigation measures of the design of the intake and outfall headworks includes:</p> <ul style="list-style-type: none"> • The intakes and outfalls of the cooling water infrastructure would be located east of the Sizewell-Dunwich Bank approximately 3km offshore in deep water, thereby allowing greater dilution of cooling water discharges and reducing potential intersections with the shore. • The intakes would be fitted with low-velocity side-entry (LVSE) headworks designed to minimise water velocities across the face. • The long axis of the intakes would be positioned parallel to the current in a north-south orientation. Intake slits would be positioned on the side of the headworks perpendicular to the tidal flow. This reduces both vertical currents, which fish are susceptible to, and reduces the probability of fish being forced into the intakes by tidal currents. • Coarse bar screens at the intakes would prevent marine mammals and marine debris from entering the CWS. • The outfall headworks are designed to funnel thermally buoyant discharges away from the seabed thereby minimising effects on benthic receptors.

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			<ul style="list-style-type: none"> The offshore location of the CW intakes of the proposed development relative to the FRR systems means the potential for re-impingement of fish is negligible. Seismic qualification will be required for some of the headworks and depending on the ground conditions would be achieved through the installation of piles. Piles would be installed by drilling, rather than percussive methods to reduce the incidence of underwater noise. Chlorination of critical plant would be applied after the drum screens, meaning the FRR would not be chlorinated. This primary mitigation prevents exposure of impinged biota to chlorine. To reduce the annual duration of chlorinated discharges, seasonal chlorination would be applied (tertiary mitigation). However, spot-chlorination may be required to protect critical plant outside these periods. <p><u>Fish recovery and return system:</u></p> <ul style="list-style-type: none"> The FRR is a key element of embedded mitigation, allowing robust species of fish and invertebrates that are impinged to be recovered and returned to the sea thereby reducing mortality, see Volume 2, Appendix 22I of the ES [APP-326].

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			<p>Dead and moribund biota are also returned to sea via the FRRs, ensuring that biomass is not lost from the system.</p> <ul style="list-style-type: none"> A number of primary mitigation measure feature in the construction of the FRRs. The small diameter FRR tunnels (approximately 0.65m internal diameter) would be drilled beneath the seabed with arisings transported to landward for disposal. No marine impacts would arise apart, potentially, from a very small (non-significant) release of bentonite upon breakthrough to the sea. Primary mitigation would be to utilise a bentonite recovery system at the cutter face to reduce the potential for release. <p>The northing of the two FRR outfalls is designed to be closely aligned with the forebays of each reactor, minimising the required tunnel length and hence the time taken for fish to be returned to the marine environment. The optimal easterly position has been determined by several interacting factors, including:</p> <ul style="list-style-type: none"> The depth of the water at the point of discharge. Water depths must be sufficient at all stages of the tide to reduce predation by surface feeding birds.

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			<ul style="list-style-type: none"> Avoidance of mobile geomorphic features. The two nearshore bars at Sizewell are important to sand transport and move naturally in response to the prevailing wave climate. The bars must be cleared to avoid burial of the system. The outfalls have been positioned on the seaward flank of the outer longshore bar, where bed level fluctuations are less, due to lower rates of transport. This location minimises the effects of the structures on geomorphology to localised scour only. Minimising transit time of impinged biota. Avoiding the Sizewell B nearfield discharge plume. The Sizewell B outfall is positioned 150m offshore (from mid tide level). A short FRR tunnel would, therefore, release fish into the Sizewell B discharge plume on the ebb tide (which would have elevated temperature and contain TRO throughout year). Minimising the risk of fish re-entrapment into Sizewell B. The Sizewell B intake is 600m offshore and there is a risk that, on the flood tide, some of the fish discharged from the FRR outfall could be re-abstracted at the Sizewell B intake. The use of a dedicated FRR for each EPRTM avoids the need for a complex junction system with associated increase in

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			<p>transit times. Elevations and tidal heights allow direct discharge without the need for an Archimedes screw (necessary in the Hinkley Point C design), thus minimising the 'handling' of impinged fish and crustaceans. This is primary mitigation.</p> <ul style="list-style-type: none"> The FRR wash water would not be chlorinated, therefore, impinged biota would not be subjected to TRO exposure (primary mitigation). <p><u>Combined drainage outfall mitigation/design:</u></p> <ul style="list-style-type: none"> In accordance with the CoCP, discharges from the CDO would be treated with oil separators to minimise potential hydrocarbon contamination from mobile or fixed plant operations and a siltbuster or similar technology to reduce sediment loading (primary mitigation). Discharges would be subject to a WDA Environmental Permit and any conditions therein. The location of the CDO, approximately 400m offshore from the HCDF, limits the potential for discharges to interact with the coastline (primary mitigation). Chemicals used during the cold testing commissioning phase would be directed to storage and/or treatment tanks as

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			<p>appropriate prior to controlled release via the CDO. This embedded mitigation would allow the managed release of commissioning effluent to achieve environmentally acceptable standards. Discharges would be subject to a WDA Environmental Permit and any conditions therein.</p> <p><u>Monitoring:</u></p> <ul style="list-style-type: none"> Condition 50 on the Marine Licence requires a fish impingement monitoring plan to be prepared and approved prior to operation of Sizewell C. The plan will monitor the species, number, length and mass of fish impinged on the drum screens throughout the year at various states of the tide.
Fish species	Northern park and ride	Volume 3, Chapter 7: Terrestrial Ecology and Ornithology [APP-363]	Scoped out as not present on site, no further measures implemented as no significant effect is considered likely.
Fish species	Southern park and ride	Volume 4, Chapter 7: Terrestrial	Scoped out as not present on site, no further measures implemented as no significant effect is considered likely.

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		Ecology and Ornithology [APP-394]	
Fish species	Freight management facility	Volume 8, Chapter 7: Terrestrial Ecology and Ornithology [APP-523]	Scoped out as not present on site, no further measures implemented as no significant effect is considered likely.
Fish species	Sizewell link road	Volume 6 Chapter 7: Terrestrial Ecology and Ornithology [APP-461]	Scoped out as not present on site, no further measures implemented as no significant effect is considered likely.
Fish species	Two village bypass	Volume 5, Chapter 7: Terrestrial Ecology and Ornithology [APP-425]	Scoped out as not present on site, no further measures implemented as no significant effect is considered likely.

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Fish species	Yoxford	Volume 7, Chapter 7: Terrestrial Ecology and Ornithology [APP-494]	Scoped out as no significant effect is considered likely.
Fish species	Green rail route	Volume 9, Chapter 7: Terrestrial Ecology and Ornithology [APP-555]	Scoped out as not present on site, no further measures implemented as no significant effect is considered likely.
S41 marine mammals found in the Greater Sizewell Bay: Harbour porpoise and common seal	Main development site	Volume 2, Chapter 22, Marine Ecology and Fisheries [AS-035]	All general primary and tertiary mitigation measures are outlined above in Fish Species measures. Other specific measures include: Piling activities associated with the installation of the 18 intertidal and subtidal piles required for the permanent BLF and approximately 114 piles required to construct the BLF, will conform to best environmental practice in accordance with Joint

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			Nature Conservation Committee guidelines to mitigate effects on marine mammals. A marine mammal mitigation protocol was submitted as part of the Sizewell DCO Application, provided in Volume 2, Appendix 22N of the ES [APP-331] and a Site Integrity Plan For The Southern North Sea Special Area Of Conservation was included at Appendix 9A of the sHRA Addendum [AS-178] . This is tertiary mitigation.
Marine mammals	Northern park and ride	Volume 3, Chapter 7: Terrestrial Ecology and Ornithology [APP-363]	Scoped out as not present on site, no further measures implemented as no significant effect is considered likely.
Marine mammals	Southern park and ride	Volume 4, Chapter 7: Terrestrial Ecology and Ornithology [APP-394]	Scoped out as not present on site, no further measures implemented as no significant effect is considered likely.

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Marine mammals	Freight management facility	Volume 8, Chapter 7: Terrestrial Ecology and Ornithology [APP-523]	Scoped out as not present on site, no further measures implemented as no significant effect is considered likely.
Marine mammals	Sizewell link road	Volume 6 Chapter 7: Terrestrial Ecology and Ornithology [APP-461]	Scoped out as not present on site, no further measures implemented as no significant effect is considered likely.
Marine mammals	Two village bypass	Volume 5, Chapter 7: Terrestrial Ecology and Ornithology [APP-425]	Scoped out as not present on site, no further measures implemented as no significant effect is considered likely.
Marine mammals	Yoxford	Volume 7, Chapter 7: Terrestrial Ecology and	Scoped out as not present on site, no further measures implemented as no significant effect is considered likely.

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		Ornithology [APP-494]	
Marine mammals	Green rail route	Volume 9, Chapter 7: Terrestrial Ecology and Ornithology [APP-555]	Scoped out as not present on site, no further measures implemented as no significant effect is considered likely.
Crustacean: <i>Gammarus insensibilis</i> Polychaete: <i>Sabellaria spinulosa</i>	Main development site	Volume 2, Chapter 22, Marine Ecology and Fisheries [AS-035]	All general primary and tertiary mitigation measures are outlined above in Fish Species measures. No specific measures implemented for <i>Gammarus insensibilis</i> as no significant effect is considered likely Other specific measures for <i>Sabellaria spinulosa</i> include: Micro-siting (site selection) of intake structures to avoid reef areas as much as possible. Monitoring: A <i>Sabellaria</i> monitoring plan is secured at Condition 45 of the Marine Licence.

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Crustacean	Northern park and ride	Volume 3, Chapter 7: Terrestrial Ecology and Ornithology [APP-363]	Scoped out as not present on site, no further measures implemented as no significant effect is considered likely.
Crustacean	Southern park and ride	Volume 4, Chapter 7: Terrestrial Ecology and Ornithology [APP-394]	Scoped out as not present on site, no further measures implemented as no significant effect is considered likely.
Crustacean	Freight management facility	Volume 8, Chapter 7: Terrestrial Ecology and Ornithology [APP-523]	Scoped out as not present on site, no further measures implemented as no significant effect is considered likely.
Crustacean	Sizewell link road	Volume 6 Chapter 7: Terrestrial Ecology and	Scoped out as not present on site, no further measures implemented as no significant effect is considered likely.

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		Ornithology [APP-461]	
Crustacean	Two village bypass	Volume 5, Chapter 7: Terrestrial Ecology and Ornithology [APP-425]	Scoped out as not present on site, no further measures implemented as no significant effect is considered likely.
Crustacean	Yoxford	Volume 7, Chapter 7: Terrestrial Ecology and Ornithology [APP-494]	Scoped out as not present on site, no further measures implemented as no significant effect is considered likely.
Crustacean	Green rail route	Volume 9, Chapter 7: Terrestrial Ecology and Ornithology [APP-555]	Scoped out as not present on site, no further measures implemented as no significant effect is considered likely.

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S41 Invertebrates Norfolk Hawker, grayling, white- mantled Wainscot, white admiral, white-letter hairstreak	Main development site	Volume 2, Chapter 14: Terrestrial Ecology and Ornithology [AS-033] Terrestrial Ecological Monitoring and Mitigation Plan [REP1-016]	<u>Primary:</u> <ul style="list-style-type: none"> Permanent foraging habitat for marsh harriers, which will also benefit invertebrates, is being established and enhanced within the northern part of the EDF Energy estate, in advance of construction, to provide alternative habitats if any potential disturbance effects arise during construction which might discourage marsh harriers from foraging over parts of the Minsmere South Levels and Sizewell Marshes SSSI. These habitats will provide habitats for many invertebrate species including Grayling. The oLEMP outlines management actions to return existing arable land on the EDF Energy estate post-construction to Suffolk Sandlings habitat comprising dry acid grassland and with additional areas of woodland and scrub. In the operational phase of the development, this landscape-scale habitat creation approach would replace existing intensively managed arable farmland with habitats of greater biodiversity value and would increase habitat connectivity. The oLEMP includes also long-term management prescriptions and a monitoring programme for habitats created ensuring that these areas deliver the habitats proposed. These open habitats will provide

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			<p>habitats for many invertebrate species including Grayling whilst additional woodland will benefit White Admiral and white-letter hairstreak.</p> <ul style="list-style-type: none"> Large areas of habitats for reptiles have been established, in advance of construction, to enable the translocation of reptiles from the site (further detailed in the Reptile Mitigation Strategy (Volume 2, Appendix 14C2 [APP-252])). This has also created areas of sand-dominated habitat likely to be beneficial to invertebrate species such as those identified in the coastal and woodland ride habitats. These habitats will provide habitats for many invertebrate species including Grayling. <p>Norfolk hawk is a protected species under Schedule 5 of the Wildlife and Countryside Act (1981) and a mitigation plan to recover larvae of this species along with other macro-invertebrates in the impacted lengths of the Sizewell Drain, the Leiston Drain and related ditches has been developed [AS-275] and is appended to the CoCP and thus secured via requirement. This is integrated with a “fish rescue” for these watercourses during the relevant early construction works.</p>

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			<p>Creation of reedbed and ditch habitat at Aldhurst Farm as well as reedbed creation to the north eastern extent of the site. Habitat creation as part of the reptile and marsh harrier mitigation would also benefit the aquatic and terrestrial invertebrate assemblages including the white-mantled wainscot which is dependent on reedbeds.</p> <p>Creation of fen meadow habitat at three locations off-site at three locations in Suffolk (Halesworth, Benhall and Pakenham) at which at least 4.5ha of permanent fen meadow habitat would be developed to compensate for the permanent loss of about 0.46ha of fen meadow habitat from within Sizewell Marshes SSSI.</p> <p><u>Monitoring:</u></p> <ul style="list-style-type: none"> The reedbed and ditch habitat created within Aldhurst Farm, wet woodland and the acid grassland habitats created within the reptile mitigation areas as part of the primary mitigation measures, would become more diverse over time, as additional plant species colonise these areas as well as the additional reedbeds created at the north eastern extent of the site. In turn, these areas would support a greater diversity of

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			<p>invertebrate species. The oLEMP provides an overview of the approach which would be used to create and manage the habitats proposed across the EDF Energy estate as well as providing an outline of the monitoring which would be used to assess the success of the habitat establishment.</p> <ul style="list-style-type: none"> • The TEMMP [REP1-016] provides the proposed monitoring schedule and approaches to monitoring of invertebrates. • Monitoring would target invertebrate assemblages of national importance and high conservation value which are characteristic of the habitats to be lost, including populations of Norfolk Hawker and the white-mantled wainscot, to assess the extent to which these assemblages become established in the new habitats within the site boundary and across the wider EDF Energy estate. • The creation of Suffolk Sandlings dry acid grassland habitat during operation across the EDF Energy estate as well as the re-establishment of the coastal habitats would be subject to monitoring to determine the extent to which invertebrate assemblages become established and would be directly relevant to the establishment of Grayling across these areas of the estate.

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S41 invertebrates: (desk study) Stag beetle	Northern park and ride	Volume 3, Chapter 7: Terrestrial Ecology and Ornithology [APP-363]	No further measures implemented as no significant effect is considered likely.
S41 Invertebrates	Southern park and ride	Volume 4, Chapter 7: Terrestrial Ecology and Ornithology [APP-394]	No further measures implemented as no significant effect is considered likely.
S41 Invertebrates: Grayling, cinnabar, stag beetle,	Freight management facility	Volume 8, Chapter 7: Terrestrial Ecology and Ornithology [APP-523]	No further measures implemented as no significant effect is considered likely.
Invertebrates: (desk study) – white-letter	Sizewell link road	Volume 6 Chapter 7: Terrestrial	No further measures implemented as no significant effect is considered likely.

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hairstreak, silver-studded blue, small heath, grayling, wall, white admiral		Ecology and Ornithology [APP-461]	<u>Primary mitigation:</u> <ul style="list-style-type: none"> Replacement habitat for the loss of woodland and hedgerows would be incorporated into the proposed development and would use native species only. A total of 13,490m of new hedgerow would be planted, with a further 3,487m of hedgerow within the site boundary unaffected by the proposed development, resulting in a total of 16,980m of hedgerow within the site boundary. This planting would also provide habitat for reptiles, birds, bats and invertebrates Hedgerow planting along the length of the route and will include some Elm hedgerow (for white-letter hairstreak).
S41 invertebrates: Grayling, small heath.	Two village bypass	Volume 5, Chapter 7: Terrestrial Ecology and Ornithology [APP-425]	No further specific measures implemented, however the landscaping strategy for the site has been designed to minimise potential positive effects for invertebrate populations through the provision of planting. For example, <u>Primary mitigation:</u> <ul style="list-style-type: none"> Existing vegetation would be retained where possible, except where the route crosses field boundaries. Native hedgerow planting would integrate the road with the

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			<p>surrounding landscape, compensating for the loss of hedgerows severed by the route. These new hedgerows would connect into the existing hedgerow network, where possible.</p> <ul style="list-style-type: none"> • A12/Tinker Brook to Pond Wood planting: Grass verges are proposed along this section of the route (except on the overbridge). Additional grassed areas are proposed around the infiltration basins south of the A12 roundabout and east of Whin Covert. Native tree and shrub planting is proposed around the infiltration basins to integrate them into the surrounding landscape. • Pond Wood to north of Farnham Hall planting: native tree and shrub planting is proposed along the western side of the cutting as the route of the two village bypass passes Farnham Hall and residential properties, as well as along the western side of the proposed embankment up to the overbridge, to provide visual screening. Native tree and shrub planting is also proposed on the east side of the overbridge, adjacent to Foxburrow Wood and Farnham Hall Farmhouse to provide visual screening and enhance ecological connectivity. Grass verges are proposed along the length of the route on this section.

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			<ul style="list-style-type: none"> North of Farnham Hall to A12/A1094 (Friday Street) planting: grass verges are proposed along the length of the proposed development in this section as well as around the proposed roundabout. Additional native tree and shrub planting is also proposed around the infiltration basin, south-west of Friday Street Farm, to help integrate this feature into the landscape.
S41 species: Desk study – wall butterfly, small heath butterfly	Yoxford	Volume 7, Chapter 7: Terrestrial Ecology and Ornithology [APP-494]	Scoped out, no further measures implemented as no significant effect is considered likely.
S41 Inverts: white-letter hairstreak, small heath, grayling, wall, white admiral.	Green rail route	Volume 9, Chapter 7: Terrestrial Ecology and Ornithology [APP-555]	Scoped out, no further measures implemented as no significant effect is considered likely.

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S41 Habitats: Wet woodland, fen meadow, reedbed meadow, Eutrophic Standing Open Water (within Sizewell Marshes SSSI), Shingle and Sand Dune Vegetation (within Minsmere to Walberswick SSSI/SAC), acid grassland, and Shingle and Sand Dune Vegetation (within Suffolk Shingle Beaches CWS).	Main development site	Volume 2, Chapter 14: Terrestrial Ecology and Ornithology [AS-033] Terrestrial Ecology Monitoring and Mitigation Plan [REP1-016]	<u>Primary mitigation:</u> <ul style="list-style-type: none"> • A barrier (e.g. sheet piling) would be installed to provide separation from the main platform and Sizewell Marshes SSSI with engineered drainage installed to limit the disturbance to the hydrology and geology of Sizewell Marshes SSSI (see Chapter 19: Groundwater and Surface Water of the ES (Book 6)). • The realignment of the Sizewell Drain and the construction of associated water control features would enable manipulation of the water levels within Sizewell Marshes SSSI, to safeguard retained areas of fen meadow and reedbed habitats (see Chapter 19 Ground and Surface Water of the ES (Book 6)). • The establishment of new reedbed and ditches at Aldhurst Farm (completed in 2016) has provided replacement for the land take of these habitats within Sizewell Marshes SSSI. The replacement habitats have established successfully, and mobile aquatic plant and invertebrate species would colonise over time from the adjacent areas of the Sizewell Marshes SSSI. • A Fen Meadow Strategy [AS-209] has been prepared (which includes three locations in Suffolk at which permanent fen meadow habitat would be developed to compensate for the

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			<p>permanent loss of about 0.46ha of fen meadow habitat from within Sizewell Marshes SSSI, associated with the construction of the main platform and the diversion of the Sizewell Drain.</p> <ul style="list-style-type: none"> • An area of 0.7ha of wet woodland would be created within the north of the development, adjacent to the marsh harrier habitat improvement area and a further 2.36ha would be created at the two fen meadow sites at Benhall and Pakenham. This would provide compensatory habitat for the loss of 3.06ha of wet woodland to the development. • The oLEMP outlines management actions to return existing arable land on the EDF Energy estate post-construction to Suffolk Sandlings habitat comprising dry acid grassland and with additional areas of woodland and scrub. In the operational phase of the development, this landscape-scale habitat creation approach would replace existing intensively managed arable farmland with habitats of greater biodiversity value and would increase habitat connectivity. The oLEMP includes also long-term management prescriptions and a monitoring programme for habitats created ensuring that these areas deliver the habitats proposed.

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			<p><u>Wet woodland:</u></p> <p>A total of 0.7ha of new wet woodland is proposed to compensate for the loss of wet woodland associated with the SSSI crossing and the diversion of the Sizewell Drain (Primary mitigation). A Wet Woodland Strategy [REP1-020] to define further opportunities has been developed. The Wet Woodland Strategy [REP1-020] includes the following:</p> <ul style="list-style-type: none"> Additional areas of wet woodland at the Fen Meadow compensation sites, although not at the expense of fen meadow habitats proposed at these locations. At both Benhall and Pakenham areas of wet Alder woodland are immediately adjacent to the sites and could be extended into the sites by manipulating water levels or by some local shallow excavation of topsoil. <p><u>Reedbed, ditch, fen meadow:</u></p> <ul style="list-style-type: none"> Reedbed and ditch habitat creation at Aldhurst Farm is well-established and is already supporting plant and bird species characteristic of reedbed habitat. A management strategy for the site, which includes monitoring targets, is in place and is being updated.

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			<ul style="list-style-type: none"> • A Fen Meadow Strategy [AS-209] is in place which defines two sites in Suffolk on which permanent fen meadow habitat would be developed to compensate for the permanent loss of about 0.46ha of fen meadow habitat from within Sizewell Marshes SSSI. Uncertainties remain regarding the success of fen meadow habitat creation which may take time to be fully effective. • 0.7ha of wet woodland to be created in the north-east of the site. • As outlined in the Plants and Habitats Synthesis Report (Volume 2, Appendix 14B1 [APP-250]) the fen meadow habitats within the Sizewell Marshes SSSI have been subject to a long running monitoring programme undertaken on behalf of the SWT and SZC Co. During construction and operation this monitoring programme would continue, in particular recording the extent of the two sensitive plant assemblages within the Grade 1 and 2 fen meadow, namely low growing species and species indicative of nutrient poor conditions. • As at present, if monitoring indicates a measurable decline in the extent of these sensitive plant assemblages or indicates that habitat condition is deteriorating, for example due an

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			<p>increase in the extent and abundance of coarse grass and sedge species, then it would be appropriate to undertake additional mitigation. Additional mitigation could include additional stock grazing or a cutting regime to remove excess vegetation.</p> <p><u>Acid grassland:</u></p> <ul style="list-style-type: none"> Landscape-scale restoration to summer parched grassland with scrub across the wider EDF Energy estate under the operational masterplan is providing long-term replacement for any losses of acid grassland.
S41 habitats: Arable and horticulture: Arable field margins, boundary hedgerows, freshwater: pond	Northern park and ride	Volume 3, Chapter 7: Terrestrial Ecology and Ornithology [APP-363]	<p><u>Primary mitigation:</u></p> <p><u>Hedgerow habitat:</u></p> <ul style="list-style-type: none"> A 10m buffer would be maintained along the north-east boundary (along the rear of the existing houses), and south-west boundary (adjacent to the railway line south of Little Nursery Wood) to provide some protection to existing hedgerows. This would assist in minimising any impacts (such as noise, lighting and human disturbance) on other ecological receptors associated with the site. On-site hedgerows would be retained where appropriate, with the hedgerows along the eastern and northern site

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			<p>boundaries supplemented with further planting to permanently infill existing gaps which currently do not serve a purpose (for example, access).</p> <ul style="list-style-type: none"> Replacement habitat planting of a permanent hedgerow along the southern side of Willow Marsh Lane during construction (which would also provide suitable great crested newt habitat) would result in the planting of approximately 585m of hedgerow to compensate for the 220m lost during construction. <p><u>Pond:</u></p> <ul style="list-style-type: none"> Pond 78 would be retained. A 10m buffer would be maintained around the pond, within which no construction works would take place other than the erection of ecological fencing. Additionally, the pond would be protected from construction and operational impacts by the landscape bund along the eastern boundary of the site.
S41 habitats: lowland mixed	Southern park and ride	Volume 4, Chapter 7:	<p><u>Primary mitigation:</u></p> <p><u>Woodland habitat:</u></p>

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deciduous woodland, pond, hedgerows, arable field margins		Terrestrial Ecology and Ornithology [APP-394]	<ul style="list-style-type: none"> Woodland blocks on the perimeter, including Whin Belt, would be retained in their entirety, and so there would therefore be no direct loss of this habitat and its associated species. A buffer distance of 10m between the woodland, and the proposed perimeter fence would be maintained along sections of the boundary, namely along the southern, eastern and, where adjacent to woodland blocks, the western boundaries. With the exception of fencing, no above ground buildings or structures will be within this buffer zone. The Outline Drainage Strategy, provided in Appendix 2A of Volume 2 of the ES (Doc Ref. 6.3 2A (A)), for the site includes the provision of SuDS infrastructure which would be implemented to minimise surface water run-off, and prevent diffuse pollution from sediment and other pollutants arising. This buffer would assist in minimising any indirect impacts (e.g. from noise, lighting and human disturbance) on those species using habitats adjacent to the site. In addition to the measures previously, close-boarded fencing would be erected where the site boundary abuts woodland blocks to provide protection from vehicle

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			<p>headlights and noise. The close-boarded fencing would be maintained during operation and until reinstatement is complete to act as a screen for lighting and noise impacts.</p> <p><u>Hedgerow:</u></p> <ul style="list-style-type: none"> • All boundary hedgerows would be retained other than a short section of hedgerow, approximately 40m in length, which would be lost at the location of the access road. • Soft landscaping, including grassed areas, tree and shrub planting would be installed and maintained for the operation of the proposed development. There would also be temporary hedgerow planting along the access road, whilst the park and ride is operational, to replace hedgerows lost during construction, and would be re-planted along the original hedgerow line during the removal and reinstatement phase. It is considered that landscape planting would offset the loss of hedgerow qualifying as 'important' under the Hedgerows Regulations required to accommodate the access road. • Permanent supplementary hedgerows would be planted along the southern and eastern boundaries of the site. <p><u>Pond:</u></p>

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			<ul style="list-style-type: none"> Pond 59 located within the site, close to the western boundary, would be retained, and so there would be no direct loss of this habitat, and its associated species. This pond would be further protected by a buffer area of a minimum of 10m between the pond, where with the exception of fencing, no above ground buildings or structures will be within this buffer zone.
S41 habitats: arable field margins, hedgerow, ponds	Freight management facility	Volume 8, Chapter 7: Terrestrial Ecology and Ornithology [APP-523]	<p><u>Primary mitigation:</u></p> <ul style="list-style-type: none"> All species-rich hedgerows would be retained. planting of additional screen planting around all boundaries of the site, to supplement the existing boundary vegetation; a 10m landscaped buffer zone is proposed around the north, east and west boundaries of the site. Where possible, existing vegetation in these areas would be enhanced. Where agreed with landowners, this planting would be retained as permanent; Sustainable Drainage Systems infrastructure (proposed as a swale) would be constructed across the northern boundary and part of the eastern boundary to ensure that surface water run-off would be contained within the site and infiltrated into the underlying strata. Sustainable

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			<p>Drainage Systems would minimise surface water run-off and prevent diffuse pollution from sediment and other pollutants arising. Bypass separators would be incorporated within the drainage design where considered necessary. The swales would attenuate and convey surface water runoff at a rate not exceeding existing green field run-off rates;</p> <ul style="list-style-type: none"> during the removal and reinstatement phase, the screen planting which would be provided around all boundaries of the site would be left in situ, where agreed with landowners. Temporary hedgerow planting within the site would be removed and reinstated along the original hedgerow lines. Other planting that was provided within and around the parking areas would be removed. <p><u>Tertiary mitigation:</u></p> <ul style="list-style-type: none"> A 10m buffer area would be provided for the existing balancing pond, along the northern boundary, and also along the western and eastern boundaries. Works would be undertaken outside the root protection zones for the trees and the hedgerows that are to be retained as part of the proposed development. Tree

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			<p>protective fencing as described in section 6.2 of British Standard 5837:2012 should be installed (distance of fencing from tree trunk = 12x trunk diameter, distance from hedgerows = 1m from the spread of hedgerow canopy), where required, prior to plant and machinery arriving on site and construction works commencing. The fencing will remain intact throughout the duration of the works and only be removed upon completion. Weather-proof notices will be attached to any protective fencing located adjacent to retained trees displaying the words 'Construction Exclusion Zone'. All personnel must be made aware of these restrictions. If works need to be undertaken within the root protection zones, an arboricultural survey would be required and any advice provided adhered to, to secure the long-term survival of the trees and hedgerows.</p> <ul style="list-style-type: none"> The central hedgerow would be re-instated following completion of removal and reinstatement works in accordance with the proposed landscape planting.
S41 habitats: arable field margins, species	Sizewell link road	Volume 6 Chapter 7: Terrestrial	<u>Primary mitigation:</u>

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rich hedgerows, rivers, lowland mixed deciduous woodland, ponds		<p>Ecology and Ornithology [APP-461]</p> <p>Outline Landscape and Ecology Management Plan [AS-264]</p>	<ul style="list-style-type: none"> The retention of existing woodland and hedgerows, except where the proposed development crosses existing field boundaries or tree belts. The site boundary has been amended and reduced where possible to avoid direct and indirect impacts to ponds. <p>Replacement habitat for the loss of woodland and hedgerows has been incorporated into the proposed development and would use native species only. The landscaping strategy for the site has been designed to minimise potential effects through the provision of planting, and will follow the design principles set out in the Associated Development Design Principles document. This would provide benefits to ecology and help maintain potential bat corridors. Proposed planting includes:</p> <ul style="list-style-type: none"> hedgerow planting along the length of the route and will include some Elm hedgerow; tree and shrub planting around the proposed infiltration and flood relief basins to help integrate these features into the surrounding landscape; where field corners are severed from the rest of the field by the proposed development would be planted with tree and shrubs to replicate the pattern of small woodland blocks in

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			<p>the surrounding landscape and replace that lost during construction;</p> <ul style="list-style-type: none"> • tree and shrub planting on the south side of the route of the proposed Sizewell link road, east of the East Suffolk link; • tree and shrub planting at the junction with the proposed Middleton Moor Link; • tree planting south of the route to compensate for woodland lost in the vicinity of Fordley Road, and to minimise visibility of the route from nearby residential properties. • tree and shrub planting south of the route in the vicinity of Trust Farm to Hawthorn Road; • tree planting west of the route in the vicinity of Dovehouse Farm, to compensate for the loss of woodland in the belt west of Theberton Hall and to infill field corners severed by the proposed route. Further planting is proposed east of the route in this vicinity to minimise visibility from the Theberton Hall estate and to help integrate the proposed Pretty Road overbridge into the surrounding landscape. • tree planting north and south of the route between Theberton and Theberton Grange, to minimise visibility of the route from residential properties and to infill field corners severed by the proposed route.

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			<ul style="list-style-type: none"> Grassed areas are also proposed along the length of the route, including on embankment. These areas would help buffer any potential impacts to nearby ecological features. <p><u>Tertiary mitigation:</u></p> <ul style="list-style-type: none"> No storage of equipment or material would be allowed within 10m of a watercourse, and no materials would be stored in areas of high flood risk to avoid sediment loss during flooding. All soils would be stored away from watercourses (or potential pathways to watercourses), and any potentially contaminated soil would be stored on an impermeable surface and covered to reduce leachate generation and potential migration to surface waters. Where feasible, works would be undertaken outside of all tree and hedgerow root protection zones that would not be removed as part of the proposed development. Tree protective fencing as described in section 6.2 of British Standard 5837:2012 would be installed where required, prior to works commencing in the adjacent areas. If works need to be undertaken within the root protection zones an arboricultural survey would be required and any advice

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			provided adhered to, to support the long-term survival of the tree/hedgerow.
S41 habitats: Arable field margins, Coastal and floodplain grazing marsh, river, hedgerow, lowland mixed deciduous woodland, ponds	Two village bypass	Volume 5, Chapter 7: Terrestrial Ecology and Ornithology [APP-425] Two village bypass Outline Landscape and Ecology Management Plan [AS-263]	<u>Primary mitigation:</u> <ul style="list-style-type: none"> The temporary contractor compounds would be located to away from sensitive surface water habitats such as the floodplain grasslands and the River Alde. Sustainable Drainage Systems (SuDS) infrastructure (proposed as swales and infiltration basins) would be installed along the length of the highway. SuDS would minimise surface water run-off and prevent diffuse pollution from sediment and other pollutants arising. Separators and silt traps would be incorporated within the drainage design where considered necessary. The swales would attenuate and convey surface water run-off at a rate not exceeding existing green field run-off rates. Existing local drainage from fields would be culverted so that their use would continue unchanged. Foxburrow Wood CWS ancient woodland will be retained in its entirety. A buffer distance of 15m from earthworks would be applied to prevent impacts to the trees on the edge of the

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			<p>woodland. Some limited footpath works would however be required at the edge of this zone.</p> <p>The landscaping strategy for the site has been designed to minimise potential effects through the provision of planting:</p> <ul style="list-style-type: none"> Existing vegetation would be retained where possible, except where the route crosses field boundaries. Native hedgerow planting would integrate the road with the surrounding landscape, compensating for the loss of hedgerows severed by the route. These new hedgerows would connect into the existing hedgerow network, where possible. A12/Tinker Brook to Pond Wood planting: Grass verges are proposed along this section of the route (except on the overbridge). Additional grassed areas are proposed around the infiltration basins south of the A12 roundabout and east of Whin Covert. Native tree and shrub planting is proposed around the infiltration basins to integrate them into the surrounding landscape. Pond Wood to north of Farnham Hall planting: native tree and shrub planting is proposed along the western side of the cutting as the route of the two village bypass passes Farnham Hall and residential properties, as well as along the western side of the proposed embankment up to the

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			<p>overbridge, to provide visual screening. Native tree and shrub planting is also proposed on the east side of the overbridge, adjacent to Foxburrow Wood and Farnham Hall Farmhouse to provide visual screening and enhance ecological connectivity. Grass verges are proposed along the length of the route on this section.</p> <ul style="list-style-type: none"> • North of Farnham Hall to A12/A1094 (Friday Street) planting: grass verges are proposed along the length of the proposed development in this section as well as around the proposed roundabout. Additional native tree and shrub planting is also proposed around the infiltration basin, south-west of Friday Street Farm, to help integrate this feature into the landscape. • The provision of up to four ponds is also proposed along the route, which would provide additional pond habitat in the area and contribute to bio-diversity net gain <p><u>Tertiary mitigation:</u></p> <ul style="list-style-type: none"> • No equipment or material would be stored within 10m of a watercourse, and no materials would be stored in areas of high flood risk to avoid sediment loss during flooding. • All soils would be stored away from watercourses (or potential pathways to watercourses), and any potentially

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			<p>contaminated soil would be stored on an impermeable surface and covered to reduce leachate generation and potential migration to surface waters.</p> <ul style="list-style-type: none"> Where feasible, for the trees and hedgerows being retained, works would be undertaken outside of root protection zones. Tree protective fencing as described in section 6.2 of British Standard 5837:2012 would be installed, where required, prior to works commencing adjacent to these areas. If works need to be undertaken within the root protection zones, an arboricultural survey would be undertaken, and any advice provided adhered to, to support the long-term survival of the tree/hedgerow.
S41 habitats (including within 500m): river (River Yox), hedgerows,	Yoxford	Volume 7, Chapter 7: Terrestrial Ecology and Ornithology [APP-494]	<p><u>Primary mitigation:</u></p> <ul style="list-style-type: none"> Yoxford Roadside Nature Reserve (RNR 197) would be retained in its entirety and there would be no habitat loss to the RNR. Existing trees and hedgerows adjoining the site boundary would be retained where possible. This includes the retention of a tree belt to the north-west of the site, along the boundary of Satis House Hotel and hedgerow along the southern side of the B1122 (Middleton Road).

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			<ul style="list-style-type: none"> The landscaping strategy for the site has been designed to minimise potential effects through the provision of planting, and will follow the design principles set out in the Associated Development Design Principles document (Doc Ref. 8.3(A)). The proposed Yoxford roundabout would include grassed areas and new tree and hedgerow planting along the eastern edge of the realigned roads and around the proposed infiltration basin south of the new roundabout. Replacement planting would respect the new line of the A12. The drainage design would comprise channels, kerb drains or gullies that would remove surface water run-off in accordance with the Drainage Strategy (Volume 2, Appendix 2A) (Doc Ref. 6.3 2A (A)). Underground drains would convey the run-off to an infiltration basin located between the proposed roundabout and the proposed access road to the south. If required, runoff which does not infiltrate would discharge at a controlled flow rate lower than the current rate of run-off into Yoxford to the existing highway drainage network, the detailed design of which is to be agreed with the Highway Authority. Bypass separators and silt traps would be incorporated within the drainage design where considered necessary.

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			<ul style="list-style-type: none"> A 5m buffer would be maintained between the proposed Yoxford roundabout and the adjacent River Yox to protect the integrity of the banks as well as the associated ecological features. <p><u>Tertiary mitigation:</u></p> <ul style="list-style-type: none"> A temporary drainage strategy would be implemented early in the construction phase. Construction drainage would be contained within the site, with drainage to ground. Only if full infiltration is not possible would these systems discharge into the surface drainage network at greenfield runoff rates to minimise the potential for impact. This would preserve the hydrological regime of the adjacent River Yox and habitats and minimise the impacts to this feature. No storage of equipment or material would be stored within 5m of the River Yox. No materials would be stored in areas of high flood risk to avoid sediment loss during flooding. For trees and hedges to be retained within or immediately adjacent to the site boundary, tree and hedgerow root protection zones would be established. Tree protective fencing as described in section 6.2 of British Standard 5837:2012 would be erected, where required, prior to

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NERC Section 41 Habitats and Species	Sites of Relevance	Relevant document(s)	Measures to be implemented to conserve these species and habitats
			construction works commencing. If works need to be undertaken within the root protection zones, an arboricultural survey would be undertaken and the recommended measures would be implemented to support the long-term survival of the tree/hedgerow.
S41 habitats: Hedgerows, lowland mixed deciduous woodland, ponds,	Green rail route	Volume 9, Chapter 7: Terrestrial Ecology and Ornithology [APP-555]	<u>Primary mitigation:</u> <ul style="list-style-type: none"> Buckle's Wood CWS and surrounding blocks of broadleaved woodland (TN 6 and TN 9) would be retained in their entirety. Most hedgerows on-site would be retained and only four small sections of defunct, species-poor hedgerow and one section of species-rich 'important' hedgerow would be removed and there would therefore be only limited direct loss of hedgerow habitat. All hedgerows removed during construction would be replanted during the removal and reinstatement phase. Soft landscaping would be maintained during the operational lifetime of the proposed rail extension route before being removed when the agricultural use is reinstated. Sustainable Drainage Systems (SuDS) would be implemented to minimise surface water runoff.

NOT PROTECTIVELY MARKED

NOT PROTECTIVELY MARKED

NERC Section 41 Habitats and Species	Sites of Relevance	Relevant document(s)	Measures to be implemented to conserve these species and habitats
			<p><u>Tertiary mitigation:</u></p> <ul style="list-style-type: none"> • Temporary SuDS would be implemented early in the construction phase. Construction phase water management zones would intercept surface run-off, sediment and contaminants from the construction compound and laydown areas, and incorporate sustainable drainage measures such as swales, filter drains, infiltration basins and soakaways to promote infiltration. Construction drainage would be contained within the site, with drainage to ground. Only if full infiltration is not possible would these systems discharge into the surface drainage network (at greenfield runoff rates) to minimise the potential for impact; • a Dust Management Plan would be developed and implemented across the site. This would minimise impacts to neighbouring habitats, such as Buckle's Wood CWS; • standard pollution prevention control measures would be implemented to avoid any pollution risk to watercourses and sensitive habitats; • for trees and hedges to be retained within or immediately adjacent to the site boundary, tree and hedgerow root protection zones would be established. Tree protective

NOT PROTECTIVELY MARKED

NOT PROTECTIVELY MARKED

NERC Section 41 Habitats and Species	Sites of Relevance	Relevant document(s)	Measures to be implemented to conserve these species and habitats
			fencing as described in section 6.2 of British Standard 5837:2012 would be erected, where required, prior to plant and machinery arriving on site and construction works commencing. The fencing would remain intact throughout the duration of the works and would only be removed upon completion of construction. Weather-proof notices would be attached to any protective fencing located adjacent to retained trees displaying the words 'Construction Exclusion Zone'. If works need to be undertaken within the root protection zones, an arboricultural survey would be undertaken and the recommended measures implemented to secure the long-term survival of the tree/hedgerow.
S41 plant species: Deptford Pink	Main development site	Volume 2, Chapter 14: Terrestrial Ecology and Ornithology [AS-033] Main development site Draft Deptford	A draft Deptford Pink Method Statement [AS-209] has been prepared for Deptford Pink (<i>Dianthus armeria</i>). If the species is relocated in targeted searches, the collection of both seeds and plants would be undertaken with translocation to a suitable location on the existing sea defence seaward of the Sizewell B power station that would not be directly affected by the construction of the proposed development. The translocation would be monitored pre- and post-construction and would be conducted under licence from Natural England.

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NOT PROTECTIVELY MARKED

NERC Section 41 Habitats and Species	Sites of Relevance	Relevant document(s)	Measures to be implemented to conserve these species and habitats
		Pink Protected Species Licence and associated Method Statement	<p><u>Translocation:</u> Up to 100 non-flowering rosettes will be carefully moved from the donor site to the prepared receptor areas. The plants will be dug by hand using a trowel, attempting to keep the root ball intact. They will then be wrapped in damp newspaper and placed in a plastic bag to prevent drying out before replanting in the prepared receptor areas on the same day. The plants will be moved during cool damp weather in October the year of the DCO (Year 1). Plants will be watered into place.</p> <p><u>Monitoring:</u> The receptor areas will be monitored the following July/August for successful establishment. Flowering plants and non-flowering rosettes will be counted up to 1000 basal rosettes, estimates will be made beyond this number. This monitoring will be extended for 5 years following translocation. In the event that establishment has been poor or plants fail to persist, a proportion of seed stored in the Millennium Seed Bank may be grown on as plugs and transplanted to the site as previously described in an attempt to boost establishment. A detailed monitoring plan will be prepared and this will be reported annually.</p>

NOT PROTECTIVELY MARKED

NOT PROTECTIVELY MARKED

NERC Section 41 Habitats and Species	Sites of Relevance	Relevant document(s)	Measures to be implemented to conserve these species and habitats
Plant species	Northern park and ride	Volume 3, Chapter 7: Terrestrial Ecology and Ornithology [APP-363]	No further measures implemented as no significant effect is considered likely.
Plant species	Southern park and ride	Volume 4, Chapter 7: Terrestrial Ecology and Ornithology [APP-394]	No further measures implemented as no significant effect is considered likely.
Plant species	Freight management facility	Volume 8, Chapter 7: Terrestrial Ecology and Ornithology [APP-523]	No further measures implemented as no significant effect is considered likely.
Plant species	Sizewell link road	Volume 6 Chapter 7: Terrestrial Ecology and	No further measures implemented as no significant effect is considered likely.

NOT PROTECTIVELY MARKED

NOT PROTECTIVELY MARKED

NERC Section 41 Habitats and Species	Sites of Relevance	Relevant document(s)	Measures to be implemented to conserve these species and habitats
		Ornithology [APP-461]	
Plant species	Two village bypass	Volume 5, Chapter 7: Terrestrial Ecology and Ornithology [APP-425]	No further measures implemented as no significant effect is considered likely.
Plant species	Green rail route	Volume 9, Chapter 7: Terrestrial Ecology and Ornithology [APP-555]	No further measures implemented as no significant effect is considered likely.
Fungus species: Sandy Stilt Puffball	Yoxford	Volume 7, Chapter 7: Terrestrial Ecology and Ornithology [APP-494]	<u>Primary mitigation:</u> Sandy Stilt Puffball is located within Yoxford Roadside Nature Reserve 197 (RNR 197). RNR 197 would be retained in its entirety and there would be no habitat loss to the RNR.

NOT PROTECTIVELY MARKED

APPENDIX 7C SUMMARY OF TERTIARY MITIGATION IDENTIFIED WITHIN THE TERRESTRIAL ECOLOGY AND ORNITHOLOGY ASSESSMENTS PRESENTED IN THE ES

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1 INTRODUCTION

1.1 ExA Question BIO.1.17

“[APP-461] (Sizewell Link Road) Para 7.5.5 – “Tertiary mitigation relevant to terrestrial ecology and ornithology is detailed In the CoCP (Doc Ref. 8.11)”. This statement appears in a number of chapters.

(i) Does the CoCP describe the full extent of all tertiary mitigation relevant to terrestrial ecology and ornithology?

(ii) What is the position with tertiary mitigation as a result of legislative requirements?

(iii) If not all tertiary mitigation is included in the CoCP, please will the Applicant provide a list and details for each terrestrial ecology and ornithology chapter.”

2 APPLICANT'S RESPONSE

2.1 Main development site

2.1.1 Most of the tertiary mitigation identified in **Volume 2, Chapter 14** of the **Environmental Statement (ES)** [\[AS-033\]](#) is included within in Part B of the **Code of Construction Practice (CoCP)** (Doc Ref. 8.11(B)).

2.1.2 Paragraph 6.1.2 of the Part B of the CoCP (Doc Ref. 8.11(B)) identifies that a group of mitigation strategies, draft licences and non-licensable method statements were appended to **Volume 2, Chapter 14** of the **ES** [\[AS-033\]](#) and **Volume 2, Chapter 2, Section 2.9** of the **ES Addendum** [\[AS-181\]](#). As specified in the updated CoCP submitted at Deadline 2 (Doc Ref. 8.11(B)), an Environment Review Group (ERG) is proposed to be established and secured by the Draft Deed of Obligation (Doc Ref. 8.17(C)). The mitigation strategies would be submitted to the ERG for approval prior to relevant construction works commencing. Where protected species licences are required, SZC Co. will ensure that such licences are sought from Natural England prior to relevant works commencing. Therefore, full details are not included within the **CoCP**.

2.1.3 **Table 1** of this appendix presents a summary of the tertiary mitigation identified in **Volume 2, Chapter 14** of the **ES** [\[AS-033\]](#) and identifies where the measures are included with the application.

2.2 Associated development sites

- 2.2.1 Details of mitigation relevant to the associated development sites are included in **Parts A and C** of the **CoCP** (Doc Ref. 8.11(B)). As identified in paragraph 1.2.1 of **Part A, Part C**, “sets out the specific controls that apply to all the off-site associated development sites, which supplement and refine the controls set out in **Part A**”. On this basis the CoCP does not include any tertiary mitigation relevant to a specific associated development site.
- 2.2.2 **Section 6** of **Part C** of the **CoCP** (Doc Ref. 8.11(B)) has been updated to include reference to group of mitigation strategies, draft licences and non-licensable method statements were appended to **Chapter 7** of **Volumes 3 to 9** of the **ES** [[APP-363](#), [APP-394](#), [APP-425](#), [APP-461](#), [APP-494](#), [APP-523](#) and [APP-555](#)]. It also includes the same text as **Part B** which clarifies that the mitigation strategies would be submitted to the ERG for approval prior to relevant construction works commencing. Where protected species licences are required, SZC Co. will ensure that such licences are sought from Natural England prior to relevant works commencing. Therefore, full details are not included within the **CoCP**.
- 2.2.3 The following information, relevant to all associated development sites, was not included with **Part C** of the **CoCP** [AS-273] but has been included within the updated **CoCP** submitted at Deadline 2 (Doc Ref. 8.11(B)).
- Further detail on construction lighting, expanding on the guidance provided in **Section 1.1 b**);
 - Details related to works to hedgerows; and
 - Methods of assessing tree bat potential.
- 2.2.4 **Tables 2 to 8** of this appendix presents a summary of the tertiary mitigation identified in **Chapter 7** of **Volumes 3 to 9** of the **ES** [[APP-363](#), [APP-394](#), [APP-425](#), [APP-461](#), [APP-494](#), [APP-523](#) and [APP-555](#)] and identify where the measures are included with the application.

2.3 Main Development Site

2.3.1 **Table 1** provides a summary of the tertiary mitigation included within **Volume 2, Chapter 14** of the **ES** [[AS-033](#)] and confirms whether it was included within **Part B** the **CoCP** [[AS-273](#)].

Table 1: Tertiary mitigation identified within main development site terrestrial ecology and ornithology assessment [[AS-033](#)]

Section	Mitigation	Included within the CoCP?
14.4.15	The following general measures are included in the CoCP, The appointment of an Ecological Clerk of Works (ECoW) to manage ecological issues on site, undertaken or supervise ongoing works in relation to protected species, supervise works in sensitive areas and undertake monitoring as required	Yes
	Training for construction workers, in the form of tool box talks, on ecological constraints including retained habitats, designated sites and protected species considerations	Yes
14.4.16	Earth bunds with grassing/seeding, including a bund along the length of the southern temporary construction area boundary (5m height), would be used to screen sensitive boundaries from construction activities.	Yes
	Control of dust emissions as set out under Chapter 12: Air Quality [APP-212], and Outline Dust Management Plan (Volume 2, Appendix 12A [APP-213]) . A dust management plan would be implemented, including details of monitoring, mitigation and complaints procedures. Adequate water supply would be	Yes

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Section	Mitigation	Included within the CoCP?
	made available for dust/particulate matter suppression and house-keeping, and high-risk dust generation activities would be minimised or avoided where practicable during prolonged dry or windy conditions.	
	To enable the re-provision and realignment of the overhead lines, the existing woodland vegetation within this corridor would be coppiced to ground level (in accordance with relevant plans) and then bog matting or a similar approach would be used to protect the wet woodland ground surface and coppiced stumps. Appropriate measures would also be used to protect the retained fen meadow habitats under this corridor. The overhead lines would be installed once these protective measures are in place. These works would be overseen by the ECoW, or a suitably qualified ecologist, to ensure impacts to retained habitats are minimised.	Yes
	Sand and shingle substrates from the existing surface layers of the Sizewell C frontage will be stockpiled to preserve the seedbank of the coastal vegetation, prior to the construction of the new coastal defences. These substrates will be safeguarded and then incorporated into the final landscaping of the new sea defences and frontage to enable reinstatement of the coastal vegetation including vegetated shingle and sand dune habitats. These works will be overseen by the ECoW, or a suitably	Yes

NOT PROTECTIVELY MARKED

NOT PROTECTIVELY MARKED

Section	Mitigation	Included within the CoCP?
	qualified ecologist, to ensure appropriate layers, i.e. those likely to include seedbanks, are safeguarded.	
	<p>Section 14(1) of the Wildlife and Countryside Act 1981 makes it illegal to plant or otherwise cause to grow in the wild any plant which is included in Part II of Schedule 9 of the Act. There is the potential for non-native species to be introduced during the construction phase. The following measures are specified in the CoCP (Doc Ref 8.11(B)):</p> <ul style="list-style-type: none"> — Contractors will be required to undertake a biosecurity risk assessment and implement a management plan to avoid potentially facilitating the spread of non-native species during construction. — During construction, mitigation measures will be implemented as necessary to prevent the establishment of invasive plant species. A general strategy will be to establish a viable vegetation cover quickly, before invasive plant species can become established. — Any invasive species that colonise an area during construction will be removed and disposed of as required. — Any imported soils will be subject to appropriate control processes to ensure they are free of any 	Yes

NOT PROTECTIVELY MARKED

Section	Mitigation	Included within the CoCP?
	seeds/roots/stems of any invasive plant covered under the Wildlife and Countryside Act 1981.	
14.4.17	The main mechanism used to safeguard protected species is through a suite of mitigation strategies, draft protected species licenses and method statements. These are signposted throughout this chapter as relevant to individual species of species groups and appended to this chapter. The following protected species approaches are summarised both here and in the CoCP (Doc Ref 8.11 (B)):	No. Whilst these measures are not specifically referenced within Part B of the CoCP , paragraph 6.1.2 identifies that a series of licences and mitigation strategies are appended to Volume 2, Chapter 14 of the ES [AS-033]. Where protected species licences are required, SZC Co. will ensure that such licences are sought from Natural England prior to relevant works commencing.
	A draft Deptford Pink Method Statement [AS-209] has been prepared for Deptford Pink (<i>Dianthus armeria</i>). If the species is relocated in targeted searches, the collection of both seeds and plants would be undertaken with translocation to a suitable location on the existing sea defence seaward of the Sizewell B power station.	
	A draft Natural England Natterjack Toad Protected Species Licence [AS-209] as well as a Natterjack Toad Mitigation Strategy (Volume 2, Appendix 14C7A [APP-252]) has been prepared for the proposed development.	Yes
	Removal of vegetation, ground clearance and the commencement of construction activities have the potential to risk killing or injuring natterjack toads. Amphibian-proof fencing would be installed prior to construction around the footprint of the WMZ	No. Whilst these measures are not specifically referenced within Part B of the CoCP , paragraph 6.1.2 identifies that

Section	Mitigation	Included within the CoCP?
	in Retsom's Field, to prevent any natterjack toads from entering the construction footprint and would include a trapping out exercise using pitfall buckets. Pre-construction checks of any potential refugia in and alongside Retsom's Field would be required, with any natterjack toads found within the footprint of the proposed WMZ captured and relocated to the retained areas of Retsom's Field. Works would be undertaken outside of the hibernation season (considered to be October to April). Pre-construction checks would be completed by a licensed or accredited ecologist. In addition, a new pond would be created within the retained areas of Retsom's Field as well as the creation of hibernation features which would be suitable for use by natterjack toads.	a series of licences and mitigation strategies are appended to Volume 2, Chapter 14 of the ES [AS-033] . The mitigation strategies would be submitted to the ERG for approval prior to relevant construction works commencing. Where protected species licences are required, SZC Co. will ensure that such licences are sought from Natural England prior to relevant works commencing.
	A Great Crested Newt Method Statement [AS-209] has been prepared detailing the approach to be used, including the removal of vegetation and ground clearance in areas where commencement of construction activities have the potential to kill or injure Great Crested Newts during their terrestrial phase (there are no breeding ponds within the site).	Yes
	A Reptile Mitigation Strategy (Volume 2, Appendix 14C2 [APP-252]) has been prepared detailing capture and translocation of reptiles from the footprint of the proposed development to the receptor sites.	Yes

Section	Mitigation	Included within the CoCP?
	It also includes measures (installation of reptile-proof fencing, searching refugia and moving individuals outside of the development footprint into receptor site) to avoid incidental mortality associated with construction work phase. Active management of receptor sites is ongoing and would ensure these features are maintained and enhanced, so that the receptor sites have adequate carrying capacity to receive translocated reptiles. The locations of the receptor sites were selected to maximise connectivity with the wider landscape using existing ecological features and corridors.	No, Whilst not specifically referenced within the CoCP it does refer to “A <i>reptile translocation programme will be implemented in advance of the main construction works, moving reptiles to the receptor sites identified in the Reptile Mitigation Strategy provided in Appendix 14C2A of Volume 2 of the ES.</i> ” Where this information is contained. As identified in the CoCP (Doc Ref. 8.11 (B)) submitted at Deadline 2 this strategy is to be reviewed and finalised in collaboration with the ERG.
	An Otter Method Statement (Volume 2, Appendix 14C10 [APP-252]) has been prepared detailing the approach to be used, including the removal of vegetation and ground clearance in areas where commencement of construction activities have the potential to damage or destroy otter holts.	Yes
	Pre-construction surveys would be required to provide up-to-date information as to whether any holts are present within the	The CoCP does cover this in limited detail. Additional

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Section	Mitigation	Included within the CoCP?
	construction footprint or in the Zol. A European Protected Species Licence application and Method Statement may be required to permit works that would otherwise disturb, injure or kill otter, and/or damage or restrict access to their holts, should an active holt be identified. If required, a detailed mitigation strategy for otter would be provided in a method statement, based on Natural England's standing advice and guidance in relation to otter and mitigation for development projects (Ref 14.42) and Highways Agency's design Manual for Roads and Bridges (Ref 14.43). If any holts would be impacted by the works, it may be necessary to create artificial holt(s) to mitigate for their loss.	information is contained within the Otter Method Statement (Volume 2, Appendix 14C10 [APP-252]) . Where protected species licences are required, SZC Co. will ensure that such licences are sought from Natural England prior to relevant works commencing.
	A Water Vole Mitigation Strategy (Volume 2, Appendix 14C6A [APP-252]) has been prepared detailing the approach to be used, including the removal of vegetation and ground clearance in areas where construction activities have the potential to damage or destroy water vole burrows.	Yes
	A Natural England licence application and method statement would be required to permit works that would otherwise disturb water vole or destroy their burrows. The approach involves trapping out water voles from the footprint of the site within Sizewell Marshes SSSI and releasing them into a receptor area at Aldhurst Farm. As soon as water vole have been removed from the area of the proposed SSSI crossing and the Sizewell Drain realignment footprint, their habitat would be rendered unsuitable	No. This information is included within the Water Vole Mitigation Strategy (Volume 2, Appendix 14C6A [APP-252]) . Where protected species licences are required, SZC Co. will ensure that such licences are sought from Natural

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Section	Mitigation	Included within the CoCP?
	for re-colonisation by an initial destructive search of burrows (using hand-tools), followed by clearing ditches, removing vegetation, and scraping banks. Further details in relation to the approach to be adopted for water voles has been presented in the Draft Water Vole Protected Species Licence [AS-209] .	England prior to relevant works commencing.
	A confidential Badger Mitigation Strategy - Confidential [APP-225] has been provided as part of the ES .	Yes
	Pre-construction surveys would be required to provide up-to-date information on the badger setts within the site and its Zol. A Natural England licence application and method statement would be required to permit works that would otherwise kill or injure a badger; damage, destroy or obstruct a sett; or disturb a badger in a sett; and would be appended to the method statement.	This measure is included within Part C, but also relevant mitigation to be implemented at the MDS. Additional details are included within the Badger Mitigation Strategy - Confidential [APP-225] . Where protected species licences are required, SZC Co. will ensure that such licences are sought from Natural England prior to relevant works commencing
	A confidential draft Badger Licence is included at Volume 2, Appendix 14C3B of the ES [APP-225] .	No. Whilst this licence are not specifically referenced within Part B of the CoCP , paragraph

Section	Mitigation	Included within the CoCP?
		6.1.2 identifies that a series of licences and mitigation strategies are appended to Volume 2, Chapter 14 of the ES [AS-033] . Where protected species licences are required, SZC Co. will ensure that such licences are sought from Natural England prior to relevant works commencing.
	Mitigation would require: the construction of artificial setts to compensate for the loss of any main setts; excluding badgers from any setts due to be lost; suitable stand-off zones around retained setts to avoid damage to those setts or disturbance to badgers using them; provision of alternative foraging habitat (marsh harrier and reptile mitigation areas would provide better foraging habitat for badgers); and pre-, during- and post-construction monitoring of badgers.	No, this information is included within the Badger Mitigation Strategy [APP-225] .
	A Bat Mitigation Strategy (Volume 2, Appendix 14C1A [APP-252]) has been provided as part of this ES (as well as a draft Bat Method Statement (Volume 2, Appendix 14C1B [APP-252])). Tree inspections to determine evidence of use as roosts would be undertaken sufficiently in advance of tree-felling to enable any	Yes

Section	Mitigation	Included within the CoCP?
	<p>licence application(s) to be submitted to Natural England, if these are required.</p> <p>A final inspection of these trees would be undertaken as close to the timing of felling as possible to take into account the regular roost switching behaviour displayed by tree-roosting bat species. Should bats (or evidence of use by bats) be identified, the mitigation strategies laid out in any licence application(s) would be implemented (for example, the fitting of exclusion devices and/or soft-felling). The following approaches would be used:</p> <ul style="list-style-type: none"> – To mitigate for the confirmed and potential loss of tree roosts, replacement roosts would be installed on retained trees in suitable locations within the site boundary and within the wider EDF Energy estate. This provision would primarily take the form of a variety of bat boxes which would be used to support different species. However, the transfer of potential roost features, bark replacement and veteranisation of retained trees would be considered where appropriate. This is in addition to that already provided for barbastelle and detailed under primary mitigation. – Mitigation of roosts within buildings, particularly maternity and/or hibernation roosts that may be functionally lost would require more substantial mitigation. This may require more robust hibernation bat boxes, the improvement of retained locations that have the potential to 	<p>This measure is included within Part C, but also relevant mitigation to be implemented at the MDS. Additional details are included within the Badger Mitigation Strategy - Confidential [APP-225] which is to be reviewed and finalised in collaboration with the ERG.</p>

Section	Mitigation	Included within the CoCP?
	<p>support roosts of this nature and/or the provision of a new maternity or hibernation specific bat building, probably in the Lower Abbey Farm area.</p> <p>— Where habitat features would be retained within the site during construction, measures to ensure the protection of these features would be implemented (appropriate to the habitat concerned).</p>	
	<p>Removal of vegetation, ground clearance and the commencement of construction activities have the potential to risk killing or injuring hedgehogs, either in summer or “day” nests or winter hibernation nests (hibernation occurs between November to April). Ground clearance works would generally be undertaken outside of the hibernation period. Prior to ground clearance, an inspection for hedgehog nests would be undertaken by a suitably experienced ECoW prior to the removal of vegetation; this is likely to be undertaken in parallel with removal of reptiles from the construction footprint.</p>	Yes
	<p>Removal of vegetation, ground clearance and the commencement of construction activities have the potential to risk killing or injuring nesting birds, and to damage or destroy nests, including those of ground-nesting species, should works be undertaken during the breeding bird season. Birds and their nests are protected under the Wildlife and Countryside Act (W&CA)</p>	<p>This is mostly included and an update has been made to confirm a 10m offset is required within the Part B of the CoCP submitted at Deadline 2 (Doc Ref. 8.11(B)).</p>

Section	Mitigation	Included within the CoCP?
	(Ref 14.7) and the removal of scrub and trees and ground clearance works would generally be undertaken outside of the breeding bird season. Where it is not possible to undertake these works outside of the breeding bird season, an inspection for nests would be undertaken by a suitably experienced ECoW prior to the removal of vegetation. If nesting birds are identified during this process, works in the vicinity of the nest (estimated to be a 10m standoff or greater, depending upon species) would cease until the young have fledged.	
	Barn owl (<i>Tyto alba</i>) boxes would be installed within the reptile receptor areas to provide additional nesting/roosting opportunities for the local barn owl population.	Yes
	When the Sizewell Drain is realigned, the section to be infilled would be subject to a fish and invertebrate rescue, relocating stranded individuals across to the new realigned drain or undisturbed sections of the Sizewell Drain.	Yes

2.4 Northern Park Ride

2.4.1 **Table 2** provides a summary of the tertiary mitigation included within **Volume 3, Chapter 7** of the **ES** [[APP-363](#)] and confirms whether it was included within **Part C** the **CoCP** [[AS-273](#)]. Where the mitigation was not

included within the **CoCP** [AS-273] but is now included in the updated **CoCP** submitted at Deadline 2 (Doc Ref. 8.11(B)), justification has been provided.

Table 2: Tertiary mitigation identified within northern park and ride terrestrial ecology and ornithology assessment [APP-363]

Section	Mitigation	Detailed in CoCP?Y/N
7.5.8	Construction work would take place during Monday to Saturday 07:00 to 19:00 hours	Yes
	and some lighting may be required during the winter months, dependent upon what construction activities are taking place. Outside of these hours, lighting would be required at night for site security. Temporary construction lighting would be controlled to minimise light spill on surrounding habitats. This would minimise impacts on nocturnal species such as bats that may use the nearby tree lines or habitats for commuting, roosts or foraging. The lighting design would use light fittings chosen to limit stray light and minimise impacts on sensitive species. The lighting would also be designed to minimise the visibility from sensitive receptors off-site.	Yes, in part. The CoCP does not include information on the impacts the measures would mitigate or information on light fittings.
7.5.9	Additionally, works with the potential to affect great crested newts would be carried out either under a reasonable avoidance methods statement, or under a licence from Natural England, as required, following agreement with Natural England on an appropriate mitigation strategy. In addition to the primary mitigation measures identified previously, this would likely include:	This mitigation is site specific and would be included in future licence application (if required). Where protected species

Section	Mitigation	Detailed in CoCP?Y/N
	Seasonal constraints to the timing of the installation of the one-way directional newt fencing described in section 7.5a of this chapter. If the timing of fence installation means there would be a risk of encountering newts as they move between their ponds and terrestrial habitat (notably in February/March), then the fencing would be combined with pitfall traps, and any trapped newts would be collected, and transferred to one of the ponds to the west of the A12 where great crested newts are known to occur (e.g. Pond 78 or 101);	licences are required, SZC Co. will ensure that such licences are sought from Natural England prior to relevant works commencing.
	If possible, the removal of hedgerow would be undertaken outside of the amphibian hibernation period (October to February inclusive). If this is not possible, vegetation would be cut to the ground (which would remove potential bird nesting habitat), but the roots would remain intact until hibernation is complete. The root system of vegetation would then be removed once the great crested newt hibernation season is over. This work would be overseen by a suitably experienced Ecological Clerk of Works (ECoW);	No. This information would be included in any future licence application (if required) or mitigation strategy. The mitigation strategies would be submitted to the ERG for approval prior to relevant construction works commencing. Where protected species licences are required, SZC Co. will ensure that such licences are

Section	Mitigation	Detailed in CoCP?Y/N
		sought from Natural England prior to relevant works commencing.
7.5.10	A small proportion of habitat within the site, primarily around the field margins, was identified as having some limited potential to support a small population of reptiles. All reptile species are protected from killing or injury under the Wildlife and Countryside Act. Therefore, the following measures would be undertaken prior to the commencement of construction: an inspection would be undertaken by a suitably experienced ecologist of any potential reptile refugia, after which the reptiles would be removed; and	Yes
	a phased vegetation clearance process would be undertaken to displace any reptiles from the site, under the supervision of a suitably experienced ecologist. Removal of vegetation and of places of shelter/hibernation features would be undertaken outside of the reptile hibernating period (October to February inclusive), during periods of warm, dry weather (with due consideration of the seasonal constraints of clearance works during breeding bird season). If this is not possible, vegetation would be cut to the ground (to remove potential bird nesting habitat), but the roots would remain intact until hibernation is complete. The root system of vegetation would then be removed once the reptile hibernation season is over. Clearing of vegetation would be undertaken under the supervision of the suitably experienced ECoW.	Yes

Section	Mitigation	Detailed in CoCP?Y/N
7.5.11	The removal of vegetation, ground clearance, and the commencement of construction activities have the potential to risk killing or injuring nesting birds, and to damage or destroy nests, including those of ground-nesting species, should works be undertaken during the breeding bird season (considered to be late February to August). Birds and their nests are protected under the Wildlife and Countryside Act, and the removal of scrub and trees and ground clearance works would generally be undertaken outside of the breeding bird season. Measures could also be put in place to deter birds from nesting in any hedgerow to be removed (for example, cutting back vegetation and making the area less suitable), however, the ground would need to remain undisturbed during the reptile hibernation period. Where it is not possible to undertake these works outside of the breeding bird season, an inspection for nests would be undertaken by a suitably experienced ECoW prior to the removal of vegetation. If nesting birds are identified during this process, works in the vicinity of the nest (estimated to be a 10m standoff) would cease until the young have fledged.	This is included in part within Part C with additional details provided in Part B .
7.5.12	No evidence of badgers was recorded during the most recent surveys within the site and survey area, and the surrounding habitat is sub-optimal for this species; however, there is the potential for badgers to enter the site during construction. Therefore, the following measures would be undertaken during	Yes

Section	Mitigation	Detailed in CoCP?Y/N
	construction: prior to construction works commencing, a pre-construction walkover of the site would be conducted in order to identify whether there are any signs of badgers, and/or any newly established setts that may be impacted by the works. Should any setts be identified that would be disturbed by the construction works, or would require closure, then a licence from Natural England would be obtained. All licensable works would be undertaken between July to November (inclusive); and	
	any excavations made during construction activities would be closed at the end of the day to prevent access by badgers. Should it not be possible for excavations to be closed at night, a means of egress (i.e. a wooden plank) would be provided to ensure that any badgers that may access these excavations have a means of escape.	Yes
7.5.13	The phased approach to site clearance and topsoil stripping (as described previously to safeguard reptiles) would discourage brown hare and hedgehogs away from the site and into the surrounding suitable habitat.	Yes

2.5 Southern Park Ride

2.5.1 **Table 3** provides a summary of the tertiary mitigation included within **Volume 4, Chapter 7** of the **ES** [APP-394] and confirms whether it was included within **Part C** the **CoCP** [AS-273]. Where the mitigation was not included within the **CoCP** [AS-273] but is now included in the updated **CoCP** submitted at Deadline 2 (Doc Ref. 8.11(B)), justification has been provided.

Table 3: Tertiary mitigation identified within southern park and ride terrestrial ecology and ornithology assessment [APP-394]

Section	Mitigation Number in document	Detailed in CoCP?Y/N
7.5.8	Construction work would take place during Monday to Saturday 07:00–19:00 hours,	Yes
	and some lighting in winter may be required dependent upon what construction activities are taking place. Outside of these hours, lighting may be required at night for safety or security. Temporary construction lighting would be controlled to minimise light spill on surrounding habitats. This would minimise impacts on nocturnal species such as bats that may use the nearby tree lines, or habitats for commuting, roosts or foraging. The lighting design would use light fittings chosen to limit stray light, and minimise impacts on sensitive species. The lighting	Yes, in part. The CoCP does not include information on the impacts the measures would mitigate or information on light fittings.

Section	Mitigation Number in document	Detailed in CoCP?Y/N
	would also be designed to minimise the visibility from sensitive receptors off-site.	
7.5.9	The proposed development includes the removal of several trees including three trees identified as having the potential to support roosting bats. Therefore, tree inspections to determine evidence of use as roosts would be undertaken sufficiently in advance of tree-felling to enable licence application(s) to be submitted to Natural England and develop an appropriate mitigation strategy, if required	No. This information would be included in any future licence application (if required) or mitigation strategy. The mitigation strategies would be submitted to the ERG for approval prior to relevant construction works commencing. Where protected species licences are required, SZC Co. will ensure that such licences are sought from Natural England prior to relevant works commencing.
	A final inspection of these trees would be undertaken as close to the timing of felling as possible to take into account the regular roost switching behaviour displaced by tree-roosting bat species. Should bats (or evidence of use by bats) be identified, the mitigation strategies laid out in the licence application(s) would be implemented (for example, the fitting of exclusion devices).	No this information would be included in any future licence application and mitigation strategy. The mitigation strategies would be submitted to the ERG for approval prior to relevant construction works commencing. Where protected species licences are required, SZC Co. will ensure that

NOT PROTECTIVELY MARKED

Section	Mitigation Number in document	Detailed in CoCP?Y/N
		such licences are sought from Natural England prior to relevant works commencing.
	Felling of trees would generally be undertaken in September or October, to avoid both the maternity and hibernation periods during which bats are more vulnerable to disturbance (this timing also avoids the breeding bird season).	No this information would be included in any future licence application and mitigation strategy. The mitigation strategies would be submitted to the ERG for approval prior to relevant construction works commencing. Where protected species licences are required, SZC Co. will ensure that such licences are sought from Natural England prior to relevant works commencing.
	To mitigate for the loss of the tree and potential roost resources, bat boxes would be installed on retained trees in suitable locations within the site boundary, prior to felling. One bat box would be installed per tree with medium or high bat roost potential that is due to be lost, whether or not a roost has been identified. A variety of bat boxes would be used to support different species	No this information would be included in any future licence application and mitigation strategy. The mitigation strategies would be submitted to the ERG for approval prior to relevant construction works commencing. Where protected species licences are required, SZC Co. will ensure that

NOT PROTECTIVELY MARKED

NOT PROTECTIVELY MARKED

Section	Mitigation Number in document	Detailed in CoCP?Y/N
		such licences are sought from Natural England prior to relevant works commencing.
7.5.10	A small proportion of habitat within the site, primarily around the field margins, was identified as having some limited potential to support a small population of reptiles. All reptile species are protected from killing or injury under the Wildlife and Countryside Act. Therefore the following measures would be undertaken prior to the commencement of construction: An inspection would be undertaken by a suitably experienced ecologist of any potential reptile refugia, after which the reptiles would be removed.	Yes
	A phased vegetation clearance process would be undertaken to displace any reptiles from the site, under the supervision of a suitably experienced ecologist. Removal of vegetation and of places of shelter/hibernation features would be undertaken outside of the reptile hibernating period (October to February inclusive), during periods of warm, dry weather (with due consideration of the seasonal constraints of clearance works during breeding bird season). If this is not possible, vegetation would be cut	Yes

NOT PROTECTIVELY MARKED

NOT PROTECTIVELY MARKED

Section	Mitigation Number in document	Detailed in CoCP?Y/N
	to the ground (to remove potential bird nesting habitat), but the roots would remain intact until hibernation is complete. The root system of vegetation would then be removed once the reptile hibernation season is over. Clearing of vegetation would be undertaken under the supervision of the suitably experienced Ecological Clerk of Works (ECoW).	
7.5.11	Construction activities have the potential to risk killing or injuring breeding birds, and damage or destroy nests, including those of ground-nesting species, should works be undertaken during the breeding bird season (late February to August inclusive). Birds and their nests are protected under the Wildlife and Countryside Act, therefore removal of scrub and trees and ground clearance works would generally be undertaken outside of the breeding bird season. Measures could also be put in place to deter birds from nesting in any hedgerow to be removed (for example, cutting back vegetation and making the area less suitable); however, the ground would need to remain undisturbed during the reptile hibernation period. Where it is not possible to undertake these works outside of the breeding bird season, an inspection for nests would be undertaken by a suitably	This is included in part within Part C with additional details provided in Part B .

NOT PROTECTIVELY MARKED

NOT PROTECTIVELY MARKED

Section	Mitigation Number in document	Detailed in CoCP?Y/N
	experienced ECoW prior to the removal of vegetation. If breeding birds are identified during this process, works in the vicinity of the nest (estimated to be a 10m standoff) would need to cease until the young have fledged.	
7.5.12	There is the potential for badgers entering the proposed development site during construction, and so the following measures would be undertaken during construction: Prior to construction works commencing, a pre-construction walkover of the site would be conducted to identify any newly established setts that may be impacted by the works. Should any new setts be identified that would be disturbed by the construction works, or would require closure, then a licence from Natural England would be obtained. All licensable works would be undertaken between July to November (inclusive).	Yes
	Any excavations made during construction activities would be closed at the end of the day to prevent access by badgers. Should it not be possible for excavations to be closed at night, a means of egress (i.e. a wooden plank or soil ramp) would be provided	Yes

NOT PROTECTIVELY MARKED

NOT PROTECTIVELY MARKED

Section	Mitigation Number in document	Detailed in CoCP?Y/N
	to ensure that any badgers that may access these excavations have a means of escape.	
7.5.13	The phased approach to site clearance and topsoil stripping (as described previously to safeguard reptiles) would discourage brown hare and hedgehogs away from the site of activity and into the surrounding suitable habitat.	Yes

NOT PROTECTIVELY MARKED

2.6 Two Village Bypass

2.6.1 **Table 4** provides a summary of the tertiary mitigation included within **Volume 5, Chapter 7** of the **ES** [APP-425] and confirms whether it was included within **Part C** the **CoCP** [AS-273]. Where the mitigation was not included within the **CoCP** [AS-273] but is now included in the updated **CoCP** submitted at Deadline 2 (Doc Ref. 8.11(B)), justification has been provided.

Table 4: Tertiary mitigation identified within two village bypass terrestrial ecology and ornithology assessment [APP-425]

Section	List Out Mitigation & Section Number in document	Detailed in CoCP?Y/N
7.5.7	Construction lighting, where required, would be provided at the minimum luminosity and would be designed, positioned and/or directed so as not to unnecessarily intrude on adjacent ecological receptors or habitats. Such measures could include (but not limited to) shielding of luminaires to reduce backward spill of light or use of sensors or timing devices to automatically switch off lighting where appropriate and provision of closed boarded fencing where the site abuts retained woodland. This would minimise impacts on nocturnal species such as bats that may use the nearby tree lines or habitats for commuting, roosting or foraging.	These measures were partly detailed in [AS-273]. Additional details relating to construction lighting have been added to Part C of the updated CoCP submitted at Deadline 2 (Doc Ref. 8.11(B)).
	During the construction stage, close-boarded fencing would be erected along the side of woodland blocks, where the site abuts these (e.g. TN2, Whin Covert, Nuttery Belt, The Belt and Foxburrow Wood	No. This is considered to be primary mitigation and therefore has not been included in the

Section	List Out Mitigation & Section Number in document	Detailed in CoCP?Y/N
	CWS). This would help to minimise impacts from construction lighting and noise from construction activity.	CoCP (Doc Ref. 8.11 (B)). This has been corrected in the updated MRM (Doc Ref 8.12 (B)).
	No equipment or material would be stored within 10m of a watercourse, and no materials would be stored in areas of high flood risk to avoid sediment loss during flooding	Yes
	All soils would be stored away from watercourses (or potential pathways to watercourses), and any potentially contaminated soil would be stored on an impermeable surface and covered to reduce leachate generation and potential migration to surface waters.	Yes
7.5.8	<p>Prior to any works taking place in watercourses and ditches, the following approaches would be used for otter and water vole:</p> <p>Otter: a pre-construction survey for otters would be conducted. If an otter lying up site or holt is recorded that would be impacted by the works, then an appropriate mitigation strategy would be developed and completed under agreement and, where necessary, licence to Natural England.</p>	No. This information would be included in any future licence application (if required) and mitigation strategy. The mitigation strategies would be submitted to the ERG for approval prior to relevant construction works commencing.

NOT PROTECTIVELY MARKED

Section	List Out Mitigation & Section Number in document	Detailed in CoCP?Y/N
		Where protected species licences are required, SZC Co. will ensure that such licences are sought from Natural England prior to relevant works commencing.
	Water voles: a pre-construction survey for water voles would be conducted. In the event of works being required that affect the banks of watercourses and ditches/ within the wetted channel and where water voles are known to be present, then a licence from Natural England would be required. All survey work would be in line with best practice guidelines (Ref. 1) If the proposed works do not require more than 50m of vegetation clearance from either bank of the ditch, then works would be conducted under a class licence WML-CL31. If works would require vegetation clearance exceeding 50m, then a conservation licence would be required.	No. This information would be included in any future licence application (if required) and mitigation strategy. The mitigation strategies would be submitted to the ERG for approval prior to relevant construction works commencing. Where protected species licences are required, SZC Co. will ensure that such licences are sought

NOT PROTECTIVELY MARKED

Section	List Out Mitigation & Section Number in document	Detailed in CoCP?Y/N
		from Natural England prior to relevant works commencing.
7.5.9	<p>The proposed development includes the removal of 56 trees identified as having the potential to support roosting bats. Tree inspections would need to be undertaken sufficiently in advance of tree-felling to determine evidence of use as roosts to enable licence application(s) to be submitted to Natural England, and develop an appropriate mitigation strategy, if required. Management measures would likely include:</p> <p>A final inspection of these trees would be undertaken as close to the timing of felling as possible to take into account the regular roost-switching behaviour displaced by tree-roosting bat species. Should bats (or evidence of use by bats) be identified, the mitigation strategies set out in the licence application(s) would be implemented (for example, the fitting of exclusion devices).</p>	<p>No. This information would be included in any future licence application (if required) and mitigation strategy. The mitigation strategies would be submitted to the ERG for approval prior to relevant construction works commencing. Where protected species licences are required, SZC Co. will ensure that such licences are sought from Natural England prior to relevant works commencing.</p>
	Felling would ideally be undertaken in September or October, to avoid the maternity and hibernation periods during which bats are more	No. This information would be included in

Section	List Out Mitigation & Section Number in document	Detailed in CoCP?Y/N
	vulnerable to disturbance (this timing also avoids the breeding bird season).	any future licence application (if required) and mitigation strategy. The mitigation strategies would be submitted to the ERG for approval prior to relevant construction works commencing. Where protected species licences are required, SZC Co. will ensure that such licences are sought from Natural England prior to relevant works commencing.
	To mitigate for the loss of the tree and potential roost resources, bat boxes would be installed on retained trees in suitable locations within the site boundary.	No. This information would be included in any future licence application (if required) and mitigation strategy. The mitigation strategies would be

NOT PROTECTIVELY MARKED

Section	List Out Mitigation & Section Number in document	Detailed in CoCP?Y/N
		submitted to the ERG for approval prior to relevant construction works commencing. Where protected species licences are required, SZC Co. will ensure that such licences are sought from Natural England prior to relevant works commencing.
	Bat boxes would be installed in trees with medium or high bat roost potential if they are due to be lost, whether or not a roost has been identified. A variety of bat boxes would be used to support different species.	No. This information would be included in any future licence application (if required) and mitigation strategy. The mitigation strategies would be submitted to the ERG for approval prior to relevant construction works commencing. Where protected

NOT PROTECTIVELY MARKED

NOT PROTECTIVELY MARKED

Section	List Out Mitigation & Section Number in document	Detailed in CoCP?Y/N
		species licences are required, SZC Co. will ensure that such licences are sought from Natural England prior to relevant works commencing.
7.5.10	A small proportion of habitat within the site was identified as having limited potential to support a small population of reptiles. All reptile species are protected from killing or injury under the Wildlife and Countryside Act (Ref. 2). Therefore, the following measures would be undertaken prior to the commencement of construction: An inspection would be undertaken by a suitably experienced ecological clerk of works (ECoW) of any potential reptile refugia, after which the reptiles and refugia would be removed.	Yes
	A phased vegetation clearance process would be undertaken to displace any reptiles from the site, under the supervision of a suitably experienced ECoW. Removal of vegetation and of places of shelter/hibernation features would be undertaken outside of the reptile hibernating period (October to February inclusive), during periods of warm, dry weather (with due consideration of the seasonal constraints of clearance works during breeding bird season). If this is not possible, vegetation would be cut to the ground (to remove potential bird nesting habitat), but the roots would remain intact until	Yes

NOT PROTECTIVELY MARKED

Section	List Out Mitigation & Section Number in document	Detailed in CoCP?Y/N
	hibernation is complete. The root system of vegetation would then be removed once the reptile hibernation season is over. Clearing of vegetation would be undertaken under the supervision of the ECoW.	
7.5.11	Where feasible, for the trees and hedgerows being retained, works would be undertaken outside of root protection zones. Tree protective fencing as described in section 6.2 of British Standard 5837:2012 (Ref. 3) would be installed, where required, prior to works commencing adjacent to these areas. If works need to be undertaken within the root protection zones, an arboricultural survey would be undertaken, and any advice provided adhered to, to support the long-term survival of the tree/hedgerow.	Mitigation for tree protection is included but not hedgerow protection. Hedgerow protection measures have now been included in the updated CoCP submitted at Deadline 2 (Doc Ref. 8.11 (B)).
7.5.12	Construction activities have the potential to risk killing or injuring breeding birds, and damage or destroy nests, including those of ground-nesting species, should works be undertaken during the breeding bird season (late February to August inclusive). Birds and their nests are protected under the Wildlife and Countryside Act (Ref. 2), therefore removal of scrub and trees and ground clearance works would generally be undertaken outside of the breeding bird season. Measures could also be put in place to deter birds from nesting in any hedgerow to be removed (for example, cutting back vegetation and	This is included in part within Part C with additional details provided in Part B .

NOT PROTECTIVELY MARKED

Section	List Out Mitigation & Section Number in document	Detailed in CoCP?Y/N
	making the area less suitable); however, the ground would need to remain undisturbed during the reptile hibernation period. Where it is not possible to undertake these works outside of the breeding bird season, an inspection for nests would be undertaken by a suitably experienced ECoW prior to the removal of vegetation. If breeding birds are identified during this process, works in the vicinity of the nest (estimated to be a 10m standoff) would need to cease until the young have fledged.	
7.5.13	The following measures would be implemented in relation to badgers during construction: Prior to construction works commencing, a pre-construction walkover of the site would be conducted in order to identify whether there are any signs of badgers and/or any newly established setts that may be impacted by the works. If any setts are identified that would be disturbed by the construction works, or would require closures, then a licence from Natural England would be obtained. All licensable works would be undertaken between July to November (inclusive).	Yes
	Any construction excavations would be closed at the end of the day to prevent access by badgers (and any other nocturnal animals). Should it not be possible for excavations to be closed at night, a means of egress (i.e. a wooden plank or soil ramp) would be provided to ensure that any badgers that may access these excavations have a means of escape.	Yes

NOT PROTECTIVELY MARKED

NOT PROTECTIVELY MARKED

Section	List Out Mitigation & Section Number in document	Detailed in CoCP?Y/N
7.5.14	The phased approach to site clearance and topsoil stripping (as described previously to safeguard reptiles) would discourage brown hare, and hedgehogs away from the site of activity, and into the surrounding suitable habitat.	Yes

NOT PROTECTIVELY MARKED

2.7 Sizewell Link Road

2.7.1 **Table 5** provides a summary of the tertiary mitigation included within **Volume 6, Chapter 7** of the **ES** [APP-461] and confirms whether it was included within **Part C** the **CoCP** [AS-273]. Where the mitigation was not included within the **CoCP** [AS-273] but is now included in the updated **CoCP** submitted at Deadline 2 (Doc Ref. 8.11(B)), justification has been provided.

Table 5: Tertiary mitigation identified within Sizewell link road terrestrial ecology and ornithology assessment [APP-461]

Section	Mitigation	Detailed in CoCP?Y/N
7.5.8	Construction lighting, where required, would be provided at the minimum luminosity and would be designed, positioned and/or directed so as not to unnecessarily intrude on adjacent ecological receptors or habitats. Such measures could include (but not limited to) shielding of luminaires to reduce backward spill of light or use of sensors or timing devices to automatically switch off lighting where appropriate and provision of closed boarded fencing where the site abuts retained woodland. This would minimise impacts on nocturnal species such as bats that may use the nearby tree lines or habitats for commuting, roosting or foraging.	These measures were partly detailed in [AS-273]. Additional details relating to construction lighting have been added to Part C of the updated CoCP submitted at Deadline 2 (Doc Ref. 8.11(B)).
	No storage of equipment or material would be allowed within 10m of a watercourse, and no materials would be stored in areas of high flood risk to avoid sediment loss during flooding.	Yes
	All soils would be stored away from watercourses (or potential pathways to watercourses), and any potentially contaminated soil	Yes

Section	Mitigation	Detailed in CoCP?Y/N
	would be stored on an impermeable surface and covered to reduce leachate generation and potential migration to surface waters.	
	Close-boarded fencing would be erected along the side of woodland blocks, where the site abuts these (e.g. Target Note 3, Target Note 8, Plumtreehills Covert, Target Note 12 and Target Note 14; see Figures 7.3 to 7.7). This would provide additional mitigation for lighting impacts (including those from vehicle headlights) and noise impacts during the construction phase. The need for operational phase close-boarded fencing would be finalised at detailed design.	No. This is considered to be primary mitigation and therefore has not been included in the CoCP (Doc Ref. 8.11 (B)). This has been corrected in the updated MRM (Doc Ref 8.12 (B)).
7.5.9	Works with the potential to affect great crested newts would be carried out either under a licence from Natural England, following agreement with Natural England or an appropriate mitigation strategy. The licensable works would encompass and clearance and construction works required within the intermediate and distant habitat zones of ponds within the site.	No. This information would be included in any future licence application (if required) and mitigation strategy. The mitigation strategies would be submitted to the ERG for approval prior to relevant construction works commencing. Where protected species licences are required, SZC Co. will ensure that

Section	Mitigation	Detailed in CoCP?Y/N
		such licences are sought from Natural England prior to relevant works commencing.
7.5.10	Where feasible, works would be undertaken outside of all tree and hedgerow root protection zones that would not be removed as part of the proposed development. Tree protective fencing as described in section 6.2 of British Standard 5837:2012 (Ref. 3) would be installed where required, prior to works commencing in the adjacent areas. If works need to be undertaken within the root protection zones an arboricultural survey would be required and any advice provided adhered to, to support the long-term survival of the tree/hedgerow.	Mitigation for tree protection is included but not hedgerow protection. Hedgerow protection measures have now been included in the updated CoCP submitted at Deadline 2 (Doc Ref. 8.11 (B)).
7.5.11	The proposed development includes the removal of 46 trees identified as having the potential to support roosting bats. Tree inspections would be undertaken sufficiently in advance of tree-felling to determine evidence of use as roosts to enable licence application(s) to be submitted to Natural England and develop an appropriate mitigation strategy, if required. Management measures would likely include: Final inspection of these trees would be undertaken as close to the timing of felling as possible to take into account the regular roost-switching behaviour displaced by tree-roosting bat species. Should	No. This information would be included in any future licence application (if required) and mitigation strategy. The mitigation strategies would be submitted to the ERG for approval prior to relevant construction works

Section	Mitigation	Detailed in CoCP?Y/N
	bats (or evidence of use by bats) be identified, the mitigation strategies laid out in the licence application(s) would be implemented (for example, the fitting of exclusion devices);	commencing. Where protected species licences are required, SZC Co. will ensure that such licences are sought from Natural England prior to relevant works commencing.
	felling of trees would generally be undertaken in September or October, to avoid both the maternity and hibernation periods during which bats are more vulnerable to disturbance (this timing also avoids the breeding bird season).	No. This information would be included in any future licence application (if required) and mitigation strategy. The mitigation strategies would be submitted to the ERG for approval prior to relevant construction works commencing. Where protected species licences are required, SZC Co. will ensure that such licences are sought from Natural England

Section	Mitigation	Detailed in CoCP?Y/N
		prior to relevant works commencing.
	To mitigate for the loss of the trees and potential roost resources, bat boxes would be installed on retained trees in suitable locations within the site boundary. Bat boxes would be installed in trees with medium or high bat roost potential that is due to be lost, whether or not a roost has been identified. A variety of bat boxes would be used to support different species.	No. This information would be included in any future licence application (if required) and mitigation strategy. The mitigation strategies would be submitted to the ERG for approval prior to relevant construction works commencing. Where protected species licences are required, SZC Co. will ensure that such licences are sought from Natural England prior to relevant works commencing..
7.5.12	A small proportion of habitat within the site, primarily around the field margins, has some limited potential to support small populations of reptiles. All reptile species are protected from killing or injury under the Wildlife and Countryside Act (Ref. 2). Therefore,	Yes

NOT PROTECTIVELY MARKED

Section	Mitigation	Detailed in CoCP?Y/N
	the following measures would be undertaken prior to the commencement of construction: An inspection would be undertaken by a suitably experienced Ecological Clerk of Works (ECoW) of any potential reptile refugia, after which the reptiles and refugia would be removed.	
	A phased vegetation clearance process would be undertaken to displace any reptiles from the site, under the supervision of a suitably experienced ECoW. Removal of vegetation and of places of shelter/hibernation features would be undertaken outside of the reptile hibernating period (October to February inclusive), during periods of warm, dry weather (with due consideration of the seasonal constraints of clearance works during breeding bird season). If this is not possible, vegetation would be cut to the ground (to remove potential bird nesting habitat), but the roots would remain intact until hibernation is complete. The root system of vegetation would then be removed once the reptile hibernation season is over. Clearing of vegetation would be undertaken under the supervision of the ECoW.	Yes
7.5.13	Construction activities have the potential to risk killing or injuring breeding birds, and damage or destroy nests, including those of ground-nesting species, should works be undertaken during the breeding bird season (late February to August inclusive). Birds and their nests are protected under the Wildlife and Countryside Act	Yes, some information is included in Part C, but most of the details included in the CoCP in Part B for MDS in

NOT PROTECTIVELY MARKED

Section	Mitigation	Detailed in CoCP?Y/N
	(Ref. 2), therefore removal of scrub and trees and ground clearance works would generally be undertaken outside of the breeding bird season. Measures could also be put in place to deter birds from nesting in any hedgerow to be removed (for example, cutting back vegetation and making the area less suitable); however, the ground would need to remain undisturbed during the reptile hibernation period. Where it is not possible to undertake these works outside of the breeding bird season, an inspection for nests would be undertaken by a suitably experienced ECoW prior to the removal of vegetation. If breeding birds are identified during this process, works in the vicinity of the nest (estimated to be a 10m standoff) would need to cease until the young have fledged.	relation to this point are also relevant mitigation to be implemented at Sizewell link road.
7.5.14	The following measures would be implemented in relation to badgers during construction: Prior to construction works commencing, a pre-construction walkover of the site would be conducted in order to identify whether there are any signs of badgers and/or any newly established setts that may be impacted by the works. If any setts are identified that would be disturbed by the construction works, or would require closures, then a licence from Natural England would be obtained. All licensable works would be undertaken between July to November (inclusive).	Yes
	Any construction excavations would be closed at the end of the day to prevent access by badgers (and any other nocturnal animals).	Yes

Section	Mitigation	Detailed in CoCP?Y/N
	Should it not be possible for excavations to be closed at night, a means of egress (i.e. a wooden plank or soil ramp) would be provided to ensure that any badgers that may access these excavations have a means of escape.	
7.5.15	The phased approach to site clearance and topsoil stripping (as described previously to safeguard reptiles) would discourage brown hare, and hedgehogs away from the site of activity and into the surrounding suitable habitat.	Yes

2.8 Yoxford Roundabout and Other Highway Improvements

2.8.1 **Table 6** provides a summary of the tertiary mitigation included within **Volume 7, Chapter 7** of the **ES** [[APP-494](#)] and confirms whether it was included within **Part C** the **CoCP** [[AS-273](#)]. Where the mitigation was not included within the **CoCP** [[AS-273](#)] but is now included in the updated **CoCP** submitted at Deadline 2 (Doc Ref. 8.11(B)), justification has been provided.

Table 6: Tertiary mitigation identified within Yoxford roundabout and other highway improvements terrestrial ecology and ornithology assessment [[APP-494](#)]

Section	Mitigation	Detailed in CoCP?Y/N
	Construction work would take place during Monday to Saturday 07:00 to 19:00,	Yes
7.4.41	and there may be a requirement for lighting at night in the winter or for safety and security. In addition, there may be the need for 24-hour working and therefore would require lighting. Where temporary	Yes, in part. The CoCP does not include information on the

NOT PROTECTIVELY MARKED

Section	Mitigation	Detailed in CoCP?Y/N
	construction lighting is required, it would be controlled to minimise light spill on surrounding habitats and minimise the visibility from sensitive receptors off-site, where reasonably practicable. This would minimise impacts on nocturnal species such as bats that may use the nearby tree lines or habitats for commuting, roosting or foraging.	impacts the measures would mitigate or information on light fittings.
	A temporary drainage strategy would be implemented early in the construction phase. Construction drainage would be contained within the site, with drainage to ground. Only if full infiltration is not possible would these systems discharge into the surface drainage network at greenfield runoff rates to minimise the potential for impact. This would preserve the hydrological regime of the adjacent River Yox and habitats and minimise the impacts to this feature.	Generic measure are included, however there is no mention of the River Yox.
	No storage of equipment or material would be stored within 5m of the River Yox. No materials would be stored in areas of high flood risk to avoid sediment loss during flooding.	Generic measure are included, however there is no mention of the River Yox.
	For trees and hedges to be retained within or immediately adjacent to the site boundary, tree and hedgerow root protection zones would be established. Tree protective fencing as described in section 6.2 of British Standard 5837:2012 (Ref. 3) would be erected, where required, prior to construction works commencing. If works need to be undertaken within the root protection zones, an arboricultural survey would be undertaken and the recommended measures would	Mitigation for tree protection is included but not hedgerow protection. Hedgerow protection measures have now been included in the updated CoCP

NOT PROTECTIVELY MARKED

Section	Mitigation	Detailed in CoCP?Y/N
	be implemented to support the long-term survival of the tree/hedgerow.	submitted at Deadline 2 (Doc Ref. 8.11 (B)).
7.4.42	A final inspection of these trees to be undertaken as close to the timing of felling as possible to account for the regular roost-switching behaviour displaced by tree-roosting bat species. Should bats (or evidence of use by bats) be identified, the mitigation strategies laid out in the licence application(s) would be implemented (for example, the fitting of exclusion devices).	No. This information would be included in any future licence application (if required) and mitigation strategy. The mitigation strategies would be submitted to the ERG for approval prior to relevant construction works commencing. Where protected species licences are required, SZC Co. will ensure that such licences are sought from Natural England prior to relevant works commencing.
	Felling would ideally be undertaken in September/October, to avoid the maternity and hibernation periods during which bats are more	No. This information would be included in any future licence application

Section	Mitigation	Detailed in CoCP?Y/N
	vulnerable to disturbance (this timing also avoids the bird-nesting season).	(if required) and mitigation strategy. The mitigation strategies would be submitted to the ERG for approval prior to relevant construction works commencing. Where protected species licences are required, SZC Co. will ensure that such licences are sought from Natural England prior to relevant works commencing.
	To mitigate for the loss of the tree and potential roost resources, bat boxes would be installed on retained trees in suitable locations within the site boundary. For every tree with moderate or high bat roost potential that is due to be lost bat boxes would be installed in retained trees to maintain roosting resources within the site boundary. A variety of bat boxes would be used to support different species.	No. This information would be included in any future licence application (if required) and mitigation strategy. The mitigation strategies would be submitted to the ERG for approval prior to relevant

Section	Mitigation	Detailed in CoCP?Y/N
		construction works commencing. Where protected species licences are required, SZC Co. will ensure that such licences are sought from Natural England prior to relevant works commencing.
7.4.43	Otter: a pre-construction survey would be conducted to confirm the absence/presence of any otter holt. Should an otter holt be identified that would be directly impact by the proposed works, a licence from Natural England would be obtained. Should breeding otter be recorded, then all works would cease until both adult and young otter have left the holt.	No. This information would be included in any future licence application (if required) and mitigation strategy. The mitigation strategies would be submitted to the ERG for approval prior to relevant construction works commencing. Where protected species licences are required, SZC Co. will ensure that such licences are sought

Section	Mitigation	Detailed in CoCP?Y/N
		from Natural England prior to relevant works commencing.
	Water vole: a pre-construction survey would be undertaken the year prior to construction to determine if any water voles or features which indicate water vole are present within the footprint of the work or within 3m. If water voles are confirmed within the footprint of works or within 3m, to inform a licence application, detailed surveys would need to be conducted. The results of these surveys will inform a mitigation licence application to Natural England. Mitigation to displace water vole under licence can only take place between 15 February to 15 April. Surveys would be conducted in line with The Water Vole Mitigation Handbook (Ref. 1).	No. This information would be included in any future licence application (if required) and mitigation strategy. The mitigation strategies would be submitted to the ERG for approval prior to relevant construction works commencing. Where protected species licences are required, SZC Co. will ensure that such licences are sought from Natural England prior to relevant works commencing.
7.4.44	Prior to any site clearance works, a pre-construction survey for Rough Hawk's-beard would be conducted in June/July. Should this species be identified within the site, any specimens as well as any	No. This measure is site specific and would be covered as part the a

Section	Mitigation	Detailed in CoCP?Y/N
	mature seeds would be translocated / planted in an alternative, suitable habitat.	pre-construction walkover of the site.
7.4.45	An inspection would be undertaken by a suitably experienced ecologist of any potential reptile refugia, after which they should be removed.	Yes
	A phased vegetation clearance process would be undertaken to displace any reptiles from the site, under the supervision of a suitably experienced ecologist. Removal of vegetation and of places of shelter/hibernation features would be undertaken outside of the reptile (and amphibian) hibernating period (October to February inclusive), during periods of warm, dry weather (with due consideration of the seasonal constraints of clearance works during breeding bird season). If this is not possible, vegetation would be cut to the ground (to remove potential bird nesting habitat), but the roots would remain intact until hibernation is complete. The root system of vegetation would then be removed once the reptile hibernation season is over. Clearing of vegetation would be undertaken under the supervision of the suitably experienced ECoW.	Yes
7.4.46	The removal of vegetation, ground clearance and the commencement of construction activities have the potential to risk killing or injuring nesting birds, and to damage or destroy nests,	This is included in part within Part C with

Section	Mitigation	Detailed in CoCP?Y/N
	including those of ground-nesting species, should works be undertaken during the breeding bird season (considered to be late February to August). Birds and their nests are protected under the Wildlife and Countryside Act and the removal of scrub and trees and ground clearance works would generally be undertaken outside of the breeding bird season. Measures could also be put in place to deter birds from nesting in any hedgerow to be removed (for example, cutting back vegetation and making the area less suitable); however, the ground would need to remain undisturbed during the reptile hibernation period, after which groundworks could commence. Where it is not possible to undertake these works outside of the breeding bird season, an inspection for nests would be undertaken by a suitably experienced ECoW prior to the removal of vegetation. If nesting birds are identified during this process, works in the vicinity of the nest (estimated to be a 10m standoff) would cease until the young have fledged.	additional details provided in Part B .
7.4.47	Prior to construction works commencing, a pre-construction walkover of the site would be conducted in order to identify whether there are any signs of badgers and/or any newly established setts that may be impacted by the works. Should any setts be identified that would be disturbed by the construction works, or would require closure, then a licence from Natural England would be obtained. All licensable works would be undertaken between July to November (inclusive).	Yes

Section	Mitigation	Detailed in CoCP?Y/N
	If any excavations made during construction cannot be closed at night, a means of egress (i.e. a wooden plank) would be provided to ensure that any badgers that may access these excavations have a means of escape.	Yes
7.4.48	The phased approach to site clearance and topsoil stripping (as described above to safeguard reptiles) would discourage brown hare and hedgehogs away from the site of activity and into the surrounding suitable habitat.	Yes

2.9 Freight Management Facility

2.9.1 **Table 7** provides a summary of the tertiary mitigation included within **Volume 8, Chapter 7** of the **ES** [APP-523] and confirms whether it was included within **Part C** the **CoCP** [AS-273]. Where the mitigation was not included within the **CoCP** [AS-273] but is now included in the updated **CoCP** submitted at Deadline 2 (Doc Ref. 8.11(B)), justification has been provided.

Table 7: Tertiary mitigation identified within freight management facility terrestrial ecology and ornithology assessment [APP-523]

Section	Mitigation	Detailed in CoCP?Y/N
7.5.7	Early in the construction phase, geo-cellular storage structures (beneath two of the landscape bunds) and swales would be used as appropriate to ensure that surface water run-off would be contained within the site. During construction, surface water run-off would be contained within the site, with drainage to ground wherever feasible. This would prevent the supply of sediment and other contaminants to the surface drainage network during construction.	This is considered to be primary mitigation. This should not be included within the tertiary mitigation section of Volume 8, Chapter 7 of the ES [APP-523] and should be included within the 7th bullet point of Paragraph 7.5.4 where primary mitigation is listed. This has been corrected in the

Section	Mitigation	Detailed in CoCP?Y/N
		updated MRM (Doc Ref 8.12 (B)).
	Construction work would take place during Monday to Saturday 07:00 to 19:00	Yes
	some lighting may be required during the Winter months, dependent upon the construction activities which are taking place; however, some activities may require 24 hour working and some targeted lighting would be required for site security. Temporary construction lighting would be controlled to minimise light spill on surrounding habitats. This would minimise impacts on nocturnal species such as bats that may use the nearby tree lines or habitats for commuting, roosts or foraging. The lighting design would use light fittings chosen to limit stray light and minimise impacts on sensitive species. The lighting would also be designed to minimise the visibility from sensitive receptors off-site	Yes, in part. The CoCP does not include information on the impacts the measures would mitigate or information on light fittings.
	A 10m buffer area would be provided for the existing balancing pond, along the northern boundary, and also along the western and eastern boundaries.	No. This is considered to be primary mitigation and therefore has not been included in the CoCP (Doc Ref. 8.11 (B)). This has been corrected in the

Section	Mitigation	Detailed in CoCP?Y/N
		updated MRM (Doc Ref 8.12 (B)).
7.5.8	The proposed development includes the removal of several trees identified as having the potential to support roosting bats. Therefore, tree inspections to determine evidence of use as roosts would be undertaken sufficiently in advance of tree-felling to enable licence application(s) to be submitted to Natural England and develop an appropriate mitigation strategy, if required.	No. This information would be included in any future licence application (if required) and mitigation strategy. The mitigation strategies would be submitted to the ERG for approval prior to relevant construction works commencing. Where protected species licences are required, SZC Co. will ensure that such licences are sought from Natural England prior to relevant works commencing.
	A final inspection of these trees would be undertaken as close to the timing of felling as possible to account for the regular roost-switching behaviour displaced by tree-roosting bat species. Should bats (or	No. This information would be included in any future licence

Section	Mitigation	Detailed in CoCP?Y/N
	evidence of use by bats) be identified, the mitigation strategies laid out in the licence application(s) would be implemented (for example, the fitting of exclusion devices).	application (if required) and mitigation strategy. The mitigation strategies would be submitted to the ERG for approval prior to relevant construction works commencing. Where protected species licences are required, SZC Co. will ensure that such licences are sought from Natural England prior to relevant works commencing.
	Felling would be undertaken in September/October and so would avoid the maternity and hibernation periods during which bats are more vulnerable to disturbance (this timing also avoids the breeding bird season). However, timing requirements would be confirmed following a pre-felling inspection, which could include a climbed inspection, if required.	No. This information would be included in any future licence application (if required) and mitigation strategy. The mitigation strategies would be submitted to the ERG

NOT PROTECTIVELY MARKED

Section	Mitigation	Detailed in CoCP?Y/N
		for approval prior to relevant construction works commencing. Where protected species licences are required, SZC Co. will ensure that such licences are sought from Natural England prior to relevant works commencing.
	To mitigate for the loss of the tree and potential roost resources, bat boxes would be installed on retained trees in suitable locations within the site boundary. One bat box would be installed per tree with medium or high bat roost potential that is due to be lost, whether or not a roost has been identified. A variety of bat boxes would be used to support different species.	No. This information would be included in any future licence application (if required) and mitigation strategy. The mitigation strategies would be submitted to the ERG for approval prior to relevant construction works commencing. Where protected species licences are

NOT PROTECTIVELY MARKED

NOT PROTECTIVELY MARKED

Section	Mitigation	Detailed in CoCP?Y/N
		required, SZC Co. will ensure that such licences are sought from Natural England prior to relevant works commencing.
7.5.9	Removal of vegetation, ground clearance, and the commencement of construction activities have the potential to risk killing or injuring nesting birds and to damage or destroy nests, including those of ground-nesting species, if works are undertaken during the breeding bird season (considered to be late February to August inclusive). Birds and their nests are protected under the Wildlife and Countryside Act (Ref. 2) and the removal of scrub and trees and ground clearance works would generally be undertaken outside of the breeding bird season. Measures could also be put in place to deter birds from nesting in any hedgerow to be removed (for example, cutting back vegetation and making the area less suitable); however, the ground would need to remain undisturbed during the reptile hibernation period. Where it is not possible to undertake these works outside of the breeding bird season, an inspection for nests would be undertaken by a suitably experienced Ecological Clerk of Works (ECoW) prior to the removal of vegetation. If nesting birds are identified during this process, works in the vicinity of the nest	This is included in part within Part C with additional details provided in Part B .

NOT PROTECTIVELY MARKED

Section	Mitigation	Detailed in CoCP?Y/N
	(estimated to be a 10m standoff) would cease until the young have fledged.	
7.5.10	Works would be undertaken outside the root protection zones for the trees and the hedgerows that are to be retained as part of the proposed development. Tree protective fencing as described in section 6.2 of British Standard 5837:2012 (Ref. 3) should be installed (distance of fencing from tree trunk = 12x trunk diameter, distance from hedgerows = 1m from the spread of hedgerow canopy), where required, prior to plant and machinery arriving on site and construction works commencing. The fencing should remain intact throughout the duration of the works and only be removed upon completion. Weather-proof notices should be attached to any protective fencing located adjacent to retained trees displaying the words 'Construction Exclusion Zone'. All personnel must be made aware of these restrictions. If works need to be undertaken within the root protection zones, an arboricultural survey would be required and any advice provided adhered to, to secure the long-term survival of the trees and hedgerows.	Mitigation for tree protection is included but not hedgerow protection. Hedgerow protection measures have now been included in the updated CoCP submitted at Deadline 2 (Doc Ref. 8.11 (B)).
7.5.11	The central hedgerow would be re-instated following completion of removal and reinstatement works in accordance with the proposed landscape planting.	No. This is considered to be primary mitigation and therefore has not been included in the CoCP (Doc Ref. 8.11 (B)). This has been

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Section	Mitigation	Detailed in CoCP?Y/N
		corrected in the updated MRM (Doc Ref 8.12 (B)).
7.5.12	A small proportion of habitat within the site, primarily around the field margins, was identified as having some limited potential to support a small population of reptiles and amphibians. All reptile and amphibian species are protected from killing or injury under the Wildlife and Countryside Act. An inspection would be undertaken by a suitably experienced ECoW of any potential refugia, after which they should be removed.	Yes
	A phased vegetation clearance process would be undertaken to displace any reptiles/amphibians from the site, under the supervision of a suitably experienced ecologist. Removal of vegetation and of places of shelter/hibernation features would be undertaken outside the reptile hibernating period (October to February inclusive), during periods of warm, dry weather (with due consideration of the seasonal constraints of clearance works during breeding bird season). If this is not possible, vegetation would be cut to the ground (to remove potential bird nesting habitat), but the roots would remain intact until hibernation is complete. The root system of vegetation would then be removed once the reptile hibernation season is over. Clearing of vegetation would be undertaken under in accordance with a method statement under the supervision of the suitably experienced ECoW	Yes

NOT PROTECTIVELY MARKED

NOT PROTECTIVELY MARKED

Section	Mitigation	Detailed in CoCP?Y/N
	To minimise the risk of incidental mortality to amphibians and reptiles, all vegetation that is to be removed within the site boundary would be maintained in a state unsuitable to support them, i.e. vegetation should be maintained to bare ground. An ECoW would oversee all ground-breaking activities and would inspect all excavations in areas of habitat suitable for amphibians and reptiles on a daily basis.	No. This information would be included in any future licence application (if required) and mitigation strategy. The mitigation strategies would be submitted to the ERG for approval prior to relevant construction works commencing. Where protected species licences are required, SZC Co. will ensure that such licences are sought from Natural England prior to relevant works commencing.
7.5.13	Any excavations made during construction activities would be closed at the end of the day to prevent access by badgers and other terrestrial nocturnal animals. If it is not possible for excavations to be closed at night, a means of egress (i.e. a wooden plank or soil	Yes

NOT PROTECTIVELY MARKED

NOT PROTECTIVELY MARKED

Section	Mitigation	Detailed in CoCP?Y/N
	ramp) would be provided to ensure that any animals that may access these excavations have a means of escape. In addition, prior to construction works commencing, a preconstruction walkover of the site would be conducted in order to identify whether there are any signs of badgers and/or any newly established setts that may be impacted by the works. If any setts are identified that would be disturbed by the construction works, or would require closures, then a licence from Natural England would be obtained. All licensable works would be undertaken between July to November (inclusive).	
7.5.14	During the preliminary works and site preparatory works, the phased approach to site clearance (as described above to safeguard reptiles) would discourage brown hare and hedgehog away from the site of activity and into the surrounding suitable habitat	Yes

NOT PROTECTIVELY MARKED

2.10 Rail

2.10.1 **Table 8** provides a summary of the tertiary mitigation included within **Volume 9, Chapter 7** of the **ES** [APP-555] and confirms whether it was included within **Part C** the **CoCP** [AS-273]. Where the mitigation was not included within the **CoCP** [AS-273] but is now included in the updated **CoCP** submitted at Deadline 2 (Doc Ref. 8.11(B)), justification has been provided.

Table 8: Tertiary mitigation identified within green rail route terrestrial ecology and ornithology assessment [APP-555]

Section	Mitigation	Detailed in CoCP?Y/N
7.5.7	Temporary SuDS would be implemented early in the construction phase. Construction phase water management zones would intercept surface run-off, sediment and contaminants from the construction compound and laydown areas, and incorporate sustainable drainage measures such as swales, filter drains, infiltration basins and soakaways to promote infiltration. Construction drainage would be contained within the site, with drainage to ground. Only if full infiltration is not possible would these systems discharge into the surface drainage network (at greenfield runoff rates) to minimise the potential for impact.	Yes
	Where required, temporary construction lighting would be controlled to minimise light spill on surrounding habitats. The lighting design would use light fittings chosen to limit stray light and minimise impacts on sensitive species. The lighting would	Yes

Section	Mitigation	Detailed in CoCP?Y/N
	also be designed to minimise the visibility from sensitive receptors off-site. This would minimise impacts on nocturnal species such as bats that may use the nearby tree lines or habitats for commuting, roosting or foraging.	
	A Dust Management Plan would be developed and implemented across the site. This would minimise impacts to neighbouring habitats, such as Buckle's Wood CWS.	A Dust Management Plan is mentioned within Part C of the CoCP (Doc Ref. 8.12(B)), but does not specify the impacts it would mitigate.
	Standard pollution prevention control measures would be implemented to avoid any pollution risk to watercourses and sensitive habitats.	Yes.
	There is the potential for non-native species to be introduced during the construction phase. Contractors would be required to undertake a biosecurity risk assessment as part of the planning for the scheme and a management plan put in place to avoid potentially facilitating the spread of non-native species during construction.	Yes
	Works with the potential to affect great crested newts would be carried out either under a reasonable avoidance methods statement or under a licence from Natural England, as required, following agreement with Natural England on an appropriate mitigation strategy.	No. This information would be included in any future licence application (if required) and mitigation strategy. The

Section	Mitigation	Detailed in CoCP?Y/N
		mitigation strategies would be submitted to the ERG for approval prior to relevant construction works commencing. Where protected species licences are required, SZC Co. will ensure that such licences are sought from Natural England prior to relevant works commencing.
	The sections of hedgerow to be removed would be cleared outside of the amphibian hibernation period (October to February inclusive). If this is not possible, vegetation would be cut to just above ground level (to remove potential bird nesting habitat), but the roots would remain intact until the newt hibernation season is complete. The root system of vegetation would then be removed once the great crested newt hibernation season is over. This work would be overseen by a suitably experienced Ecological Clerk of Works (ECoW), under licence from Natural England. Any great crested newts encountered would be translocated to an appropriate pond within the ZOI,	No. This information would be included in any future licence application (if required) and mitigation strategy. The mitigation strategies would be submitted to the ERG for approval prior to relevant construction works commencing. Where

NOT PROTECTIVELY MARKED

Section	Mitigation	Detailed in CoCP?Y/N
	known to support them, with suitable adjacent terrestrial habitats.	protected species licences are required, SZC Co. will ensure that such licences are sought from Natural England prior to relevant works commencing. The ECoW role is defined in the CoCP.
	To minimise the risk of incidental mortality, all vegetation within the site boundary would be maintained in a state unsuitable for great crested newts, i.e. vegetation would be maintained to ground level, this would also support mitigation for reptiles. A suitably experienced ECoW would oversee all ground-breaking activities and would inspect all excavations, if uncovered, on a daily basis.	No. This information would be included in any future licence application (if required) and mitigation strategy. The mitigation strategies would be submitted to the ERG for approval prior to relevant construction works commencing. Where protected species licences are required, SZC Co. will ensure that

NOT PROTECTIVELY MARKED

NOT PROTECTIVELY MARKED

Section	Mitigation	Detailed in CoCP?Y/N
		such licences are sought from Natural England prior to relevant works commencing.
	During the removal and reinstatement phase, the removal of the railway ballast and bunds would be conducted outside of amphibian and reptile hibernation period (October to February inclusive) where possible. Otherwise a suitably experienced ECoW would oversee all dismantling and removals.	No. This information would be included in any future licence application (if required) and mitigation strategy. The mitigation strategies would be submitted to the ERG for approval prior to relevant construction works commencing. Where protected species licences are required, SZC Co. will ensure that such licences are sought from Natural England prior to relevant works commencing.
	Should a great crested newt be found during the removal and reinstatement phase, a licence may be required from Natural	No. This information would be included in any

NOT PROTECTIVELY MARKED

Section	Mitigation	Detailed in CoCP?Y/N
	England following agreement with Natural England on an appropriate mitigation strategy.	future licence application (if required) and mitigation strategy. The mitigation strategies would be submitted to the ERG for approval prior to relevant construction works commencing. Where protected species licences are required, SZC Co. will ensure that such licences are sought from Natural England prior to relevant works commencing.
	The proposed vegetation clearance includes the removal of trees with the potential to support roosting bats. Tree inspections to determine evidence of use as roosts would be undertaken sufficiently in advance of tree-felling to enable licence application(s) to be submitted to Natural England, if required. A final inspection of these trees would be undertaken as close to the timing of felling as possible to take into account the regular roost-switching behaviour displaced by tree-roosting bat	No. This information would be included in any future licence application (if required) and mitigation strategy. The mitigation strategies would be submitted to the ERG for approval

Section	Mitigation	Detailed in CoCP?Y/N
	species. Should bats (or evidence of use by bats) be identified, the mitigation strategies laid out in the licence application(s) would be implemented (for example, the fitting of exclusion devices). Should evidence of bat roosting be found, felling would ideally be undertaken under licence in September/October, to avoid the maternity and hibernation periods during which bats are more vulnerable to disturbance (this timing would also avoid the bird-nesting season).	prior to relevant construction works commencing. Where protected species licences are required, SZC Co. will ensure that such licences are sought from Natural England prior to relevant works commencing.
	To mitigate for the loss of the tree and potential roost resources, bat boxes would be installed on retained trees in suitable locations within the site boundary. One bat box would be installed per tree with medium or high bat roost potential that is due to be lost, whether or not a roost has been identified. A variety of bat boxes would be used to support different species.	No. This information would be included in any future licence application (if required) and mitigation strategy. The mitigation strategies would be submitted to the ERG for approval prior to relevant construction works commencing. Where protected species licences are required, SZC Co. will ensure that

Section	Mitigation	Detailed in CoCP?Y/N
		such licences are sought from Natural England prior to relevant works commencing.
	Prior to the commencement of construction, an inspection would be undertaken by a suitably experienced ecologist of any potential reptile refugia, after which they should be removed. In addition, a phased vegetation clearance process would be undertaken to displace any reptiles from the site, under the supervision of a suitably experienced ECoW. Removal of vegetation and of places of shelter/hibernation features would be undertaken outside of the reptile hibernating period (October to February inclusive), during periods of warm, dry weather (with due consideration of the seasonal constraints of clearance works during breeding bird season). If this is not possible, vegetation would be cut to the ground (to remove potential bird nesting habitat), but the roots would remain intact until hibernation is complete. The root system of vegetation would then be removed once the reptile hibernation season is over. Clearing of vegetation would be undertaken under the supervision of the ECoW.	Yes in part. Additional information would be included in any future licence application (if required) and mitigation strategy. The mitigation strategies would be submitted to the ERG for approval prior to relevant construction works commencing. Where protected species licences are required, SZC Co. will ensure that such licences are sought from Natural England prior to relevant works commencing.
	Removal of vegetation, ground clearance and the commencement of construction activities have the potential to	This is included in part within Part C with

Section	Mitigation	Detailed in CoCP?Y/N
	risk killing or injuring nesting birds, and to damage or destroy nests, including those of ground-nesting species, should works be undertaken during the breeding bird season (considered to be late February to August). Birds and their nests are protected under the Wildlife and Countryside Act (Ref. 2) and the removal of scrub and trees and ground clearance works would generally be undertaken outside of the breeding bird season. Measures could also be put in place to deter birds from nesting in any hedgerow to be removed (for example, cutting back vegetation and making the area less suitable); however, if conducted during the reptile hibernation period, the ground would need to remain undisturbed. Where it is not possible to undertake these works outside of the breeding bird season, an inspection for nests would be undertaken by a suitably experienced ECoW prior to the removal of vegetation. If nesting birds are identified during this process, works in the vicinity of the nest (estimated to be a 10m standoff) would cease until the young have fledged.	additional details provided in Part B .
	For trees and hedges to be retained within or immediately adjacent to the site boundary, tree and hedgerow root protection zones would be established. Tree protective fencing as described in section 6.2 of British Standard 5837:2012 (Ref. 3) would be erected, where required, prior to plant and machinery arriving on site and construction works commencing. The	Mitigation for tree protection is included but not hedgerow protection. Hedgerow protection measures

NOT PROTECTIVELY MARKED

Section	Mitigation	Detailed in CoCP?Y/N
	fencing would remain intact throughout the duration of the works and would only be removed upon completion of construction. Weather-proof notices would be attached to any protective fencing located adjacent to retained trees displaying the words 'Construction Exclusion Zone'. If works need to be undertaken within the root protection zones, an arboricultural survey would be undertaken and the recommended measures implemented to secure the long-term survival of the tree/hedgerow.	have now been included in the updated CoCP submitted at Deadline 2 (Doc Ref. 8.11 (B)).
	Prior to construction and again prior to removal and restoration, a walkover of the proposed rail extension route would be conducted by a suitably experienced ecologist to determine the status of previously identified badger setts and to confirm if any new setts have become established within or adjacent to where works would be conducted.	Yes
	The known badger setts would be at risk of damage or destruction due to construction works and would require closure under licence from Natural England. Construction activities that may cause disturbance, damage and/or destruction to any other active badger setts recorded during the pre-construction walkover would also require a licence from Natural England. Any badger setts that require closure would be closed between 1 July and 30 November.	Yes

NOT PROTECTIVELY MARKED

Section	Mitigation	Detailed in CoCP?Y/N
	There is potential for badgers to enter the site during construction, or for new setts to be excavated within the bunds (prior to the installation of the security fence). During construction and operation, an ecological watching brief would be conducted of the earthworks bund to monitor for any signs of badger activity. Any excavations made during the course of construction activities would be closed at the end of the day to prevent access by badgers. Should it not be possible for excavations to be closed at night, a means of egress (i.e. a wooden plank) would be provided to ensure that any badgers that may access these excavations have a means of escape.	Yes
	During the preliminary works and site preparatory works, a phased approach to site clearance and topsoil stripping would discourage brown hares and hedgehogs away from the site of activity and into the surrounding suitable habitat.	Yes

REFERENCES

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2. Wildlife and Countryside Act, as amended. 1981. (Online) Available from <http://www.legislation.gov.uk/ukpga/1981/69>
3. British Standards Institute. 2012. British Standard for Trees in relation to design, demolition and construction (BS 5837:2012). British Standards Institute. 2012.

APPENDIX 7D SUMMARY OF REQUIREMENTS OF NPS-EN1 RELEVANT TO THE TERRESTRIAL ECOLOGY AND ORNITHOLOGY ASSESSMENTS

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1 INTRODUCTION

1.1 EXA Question BIO. 1.41

1.1.1 *"[APP-171] (Vol 1 App 6J) is a helpful document assisting the ExA to check what law and policy has been addressed.*

1.1.2 *[APP-224]Vol 2 Ch 14. Please will the Applicant explain why Table 14.1, which lists the requirements of NPS EN-1 specific to the Main Site omits policies 4.2.1; 4.3; 4.10.2; 5.3.3; 5.3.4 despite their being listed in Table 1.1 of [APP-171] as having been addressed in Ch 14. The ExA wishes to understand the Applicant's approach.*

1.1.3 *[APP-224] Please will the Applicant explain why Table 14.2, which lists the requirements of NPS EN-6 specific to the Main Site, includes policy 3.9.3 but that was omitted from Table 1.2 of [APP-171]; omits 3.9.4 and 3.9.6 which were listed in Table 1.2 of [APP-171] as having been addressed in Ch 14; includes C.8.52 which was not in [APP-171], omits C.8.53 which was in [APP-171] and includes C.8.63 which was not in [APP-171].*

1.1.4 *Please, for the policies which are not in Tables 14.1 and 14.2, will the Applicant submit equivalent statements to those which are addressed in those tables. Replacement tables may be a convenient way to do this. The Applicant will appreciate that differences between [APP-171] and the actual assessment chapters such as [APP-224] Vol 2 Ch 14 make the consideration of what law and policy has actually been addressed difficult.*

1.1.5 *Please will the Applicant check whether there are differences between Tables 1.1 and 1.2 of [APP-171] and the relevant tables in the chapters for terrestrial ecology on the Associated Sites and submit equivalent statements for any missing policies, as in (c) above."*

1.2 Applicant's Response

1.2.1 To support the response to ExQ1 question ref Bio1.41 provided in **Chapter 7, Table 1** provides commentary against international legislation, and national policy and legislation relevant to the terrestrial ecology and ornithology assessment. It summaries where it has been considered within **Volume 1, Appendix 6J [APP-171]**, **Volume 2, Chapter 14 [AS-033]** and **Volumes 3 to 9, Chapter 7 of the Environmental Statement (ES) [APP-**

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[363](#), [APP-394](#), [APP-425](#), [APP-461](#), [APP-494](#), [APP-523](#) and [APP-555](#)] or where it has been omitted and provides justification if there was an error. The aim of **Table 1** is to confirm which legislation and policies are relevant to the main development site and each of the associated development sites.

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Table 1: Policy Summary

Policy	Policy type	Volume 1, Appendix 6J [APP-171]	Main Development Site [AS-033]	Sizewell Link Road [APP-461]	Two Village Bypass [APP-425]	Northern Park and Ride [APP-363]	Southern Park and Ride [APP-394]	Freight Management Facility [APP-523]	Yoxford Roundabout and Other Highways Improvements [APP-494]	Green Rail Route [APP-555]
Convention on Biological Diversity	International	Yes	These policies are applicable to the main development site and associated development sites and is referenced within each of the terrestrial ecology and ornithology assessments.							
Convention on Wetlands of International Importance especially as Waterfowl Habitat 1971										
Directive 2009/147/EC of the European Parliament and of the Council on the conservation of wild birds (Birds Directive)										
Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora (Habitats Directive)										
Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention)										
Convention on the Conservation of Migratory Species of Wild Animals (Bonn Convention)										
Wildlife and Countryside Act	National	Yes	These policies are applicable to the main development site and associated development sites and is referenced within each of the terrestrial ecology and ornithology assessments.							
Conservation of Habitats and Species Regulations (Habitat Regulations)										
Conservation of Offshore Marine Habitats and Species Regulations 2017		Yes, this was including as it is relevant to the Sizewell C Project, but is addressed elsewhere in the ES.	No this policy is not considered to be relevant to the Volume 2, Chapter 14 [AS-033] as the impacts of the proposed development are assessed in Volume 2 Chapter 22 of the ES , Marine Ecology [AS-035]. On this basis this policy was omitted.	No this policy is not considered to be relevant to the assessment of the associated development sites as marine habitats and species are not present. On this basis this policy was omitted for each of the assessments.						
Countryside and Rights of Way Act		Yes	These policies are applicable to the main development site and associated development sites and is referenced within each of the terrestrial ecology and ornithology assessments.							
Natural Environment and Rural Communities (NERC) Act										
Hedgerows Regulation										
Protection of Badgers Act										
UK Biodiversity Action Plan (BAP) (now superseded by the 'UK Post-2010 Biodiversity Framework')										
Planning Practice Guidance										
Government's 25 Year Environment Plan		Yes	These policies are applicable to the main development site and associated development sites and is referenced within each of the terrestrial ecology and ornithology assessments.							
National Planning Policy Framework										
National Policy Statements (NPS) for Energy Infrastructure and Nuclear Power Generation EN-1 4.2.1:	Yes	This policy was not included within any of the terrestrial ecology and ornithology assessments as it is generic across them all.								

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Policy	Policy type	Volume 1, Appendix 6J [APP-171]	Main Development Site [AS-033]	Sizewell Link Road [APP-461]	Two Village Bypass [APP-425]	Northern Park and Ride [APP-363]	Southern Park and Ride [APP-394]	Freight Management Facility [APP-523]	Yoxford Roundabout and Other Highways Improvements [APP-494]	Green Rail Route [APP-555]	
<i>“All proposals for projects that are subject to the European Environmental Impact Assessment Directive must be accompanied by an Environmental Statement (ES) describing the aspects of the environment likely to be significantly affected by the project. The Directive specifically refers to effects on human beings, fauna and flora, soil, water, air, climate, the landscape, material assets and cultural heritage, and the interaction between them. The Directive requires an assessment of the likely significant effects of the proposed project on the environment, covering the direct effects and any indirect, secondary, cumulative, short, medium and long-term, permanent and temporary, positive and negative effects at all stages of the project, and also of the measures envisaged for avoiding or mitigating significant adverse effects.”</i>											
<i>EN-1 4.3; “Under the Habitats and Species Regulations consideration must be given to whether the project may have a significant effect on a European site, or on any site to which the same protection is applied as a matter of policy, either alone or in combination with other plans or projects. In the event that an Appropriate Assessment is required, the applicant must provide information as may reasonably be required to enable the Appropriate Assessment to be conducted. This should include information on any mitigation measures that are proposed to minimise or avoid likely effects”</i>		Yes	Whilst this policy is relevant to this site, as it is generic across all assessments it is referenced in Volume 1, Appendix 6J [APP-171] .	These chapters did identify this policy in error. This policy should have only been referenced in Volume 1, Appendix 6J [APP-171] as it is generic across all assessments.							
<i>EN-1 4.10.2; “It [planning and pollution control systems] plays a key role in protecting and improving the natural environment, public health and safety, and amenity, for example by attaching conditions to allow developments which would otherwise not be environmentally acceptable to proceed, and preventing harmful development which cannot be made acceptable even through conditions. Pollution control is concerned with preventing pollution through the use of measures to prohibit or limit the releases of substances to the environment from different sources to the lowest practicable level. It also ensures that ambient air and water quality meet standards that guard against impacts to the environment or human health.”</i>		Yes	As this policy has been considered within all assessments it is only identified within Volume 1, Appendix 6J [APP-171] and not within any site chapters.								
<i>EN-1 5.2.3; “A particular effect of air emissions from some energy infrastructure may be eutrophication, which is the</i>		Yes	This policy was included with each terrestrial ecology and ornithology assessment, however as this policy has been considered within all assessments it should have only identified within Volume 1, Appendix 6J [APP-171] and not within any of the site specific chapters.								

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excessive enrichment of nutrients in the environment. Eutrophication from air pollution results mainly from emissions of NOx and ammonia. The main emissions from energy infrastructure are from generating stations. Eutrophication can affect plant growth and functioning, altering the competitive balance of species and thereby damaging biodiversity. In aquatic ecosystems it can cause changes to algal composition and lead to algal blooms, which remove oxygen from the water, adversely affecting plants and fish. The effects on ecosystems can be short term or irreversible, and can have a large impact on ecosystem services such as pollination, aesthetic services and water supply.”											
EN-1 5.2.7; “The ES should describe... any potential eutrophication impacts.”		Yes	This policy was included with each terrestrial ecology and ornithology assessment, however as this policy has been considered within all assessments it should have only identified within Volume 1, Appendix 6J [APP-171] and not within any of the site specific chapters.								
EN-1 5.3.3; “Where the development is subject to EIA the applicant should ensure that the ES clearly sets out any effects on internationally, nationally and locally designated sites of ecological or geological conservation importance, on protected species and on habitats and other species identified as being of principal importance for the conservation of biodiversity.”		Yes	Whilst this policy is relevant to this site, as it is generic across all assessments it is referenced in Volume 1, Appendix 6J [APP-171] .	This policy was included with each of the terrestrial ecology and ornithology assessment for the associated development sites, however as this policy has been considered within all assessments it should have only identified within Volume 1, Appendix 6J [APP-171] and not within any site chapters.							
EN-1 5.3.4; “The applicant should show how the project has taken advantage of opportunities to conserve and enhance biodiversity and geological conservation interests.”		Yes	As this policy has been considered within all assessments it is only identified within Volume 1, Appendix 6J [APP-171] and not within any site specific chapters.								
EN-1 5.3.18; “The applicant should include appropriate mitigation measures as an integral part of the proposed development. In particular, the applicant should demonstrate that: during construction, they will seek to ensure that activities will be confined to the minimum areas required for the works; during construction and operation best practice will be followed to ensure that risk of disturbance or damage to species or habitats is minimised, including as a consequence of transport access arrangements; habitats will, where practicable, be restored after construction works have finished: and		Yes	This policy was included with each terrestrial ecology and ornithology assessment, however as this policy has been considered within all assessments it should have only identified within Volume 1, Appendix 6J [APP-171] and not within any of the site specific chapters.								

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opportunities will be taken to enhance existing habitats and, where practicable, to create new habitats of value within the site landscaping proposals.”											
EN-6 1.7.4; “Possible adverse effects on nature conservation sites of European importance were identified by the Nuclear Habitats Regulations Assessment (HRA). Further studies will need to be carried out, as part of the project HRA and environmental impact assessment (EIA) processes for individual development consent applications, to determine the significance of the effects and the effectiveness of any mitigation measures.” “Possible significant adverse effects on nationally important nature conservation sites and designated landscapes were identified by the Nuclear AoS. Further studies will need to be carried out, as part of the project EIA process for individual development consent applications, to determine the significance of the effects and the effectiveness of any mitigation measures.”		Yes	Whilst this policy is relevant to this site, as it is generic across all assessments it is referenced in Volume 1, Appendix 6J [APP-171] .	This policy was included with each of the terrestrial ecology and ornithology assessment for the associated development sites, however as this policy has been considered within all assessments it should have only identified within Volume 1, Appendix 6J [APP-171] and not within any of the site specific chapters.							
EN-6.3.9.3; “In carrying out an assessment in accordance with Section 5.3 of EN-1, applicants should also consider the effects of the construction of a new nuclear power station on the groundwater regime and its effects on terrestrial/coastal habitats.”		No	Yes, this policy is only applicable to the main development site and is therefore not referenced in Volume 1, Appendix 6J [APP-171] .	This policy is not relevant to the associated development sites as these sites are not considered to have any impacts on coastal habitats. The potential effects on water quality are assessed in Volumes 3 to 9 Chapter 12, Groundwater and Surface Water.							
EN-6 3.9.4; “At the project level, baseline studies on nationally and internationally important habitats and species that may be affected as a result of the development should be undertaken by the applicant to inform the assessment of the cumulative ecological effects”		Yes	As this policy has been considered within all assessments it is only identified within Volume 1, Appendix 6J [APP-171] and not within any site chapters.								
EN-6 3.9.6; “As well as the options for mitigation set out in EN-1, the Nuclear AoS and HRA have identified possible mitigation options. These include variations to building layout to avoid ecologically sensitive areas and on-site measures to protect habitats and species and to avoid or minimise pollution and the disturbance of wildlife.”		Yes	As this policy has been considered within all assessments it is only identified within Volume 1, Appendix 6J [APP-171] and not within any site chapters.								
EN-6 Annex A A.7.4; “All project level Habitats Regulations Assessments must take account of the potential adverse effects and the proposed avoidance and mitigation measures identified through the strategic level assessment(s).”		Yes	Whilst this policy is relevant to this site, as it is generic across all assessments it is referenced in Volume	This policy was included with each of the terrestrial ecology and ornithology assessment for the associated development sites, however as this policy has been considered within all assessments it should have only identified within Volume 1, Appendix 6J [APP-171] and not within any site chapters.							

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			1, Appendix 6J [APP-171].							
EN-6 Annex C C.8.52; “A number of responses expressed concern over the impacts that a new nuclear power station may have on European protected sites which are situated near the site. These concerns include impacts on protected bird populations (including nightjar, woodlark and little tern), water quality, fish and shellfish populations and the effects of cooling water abstraction and discharge. There was a particular concern that the recently designated Outer Thames Estuary Special Protection Area (SPA) should be considered as part of the assessment.”		No. As this policy is generic across all assessments it should be referenced in Volume 1, Appendix 6J [APP-171] .	Yes	This policy is considered to be of relevance to each of the terrestrial ecology and ornithology assessment for the associated development sites as the desk study to identify important ecological features of relevance to the assessments considers SPAs.						
EN-6 Annex C C.8.53; “A precautionary approach suggests that the assessment at this strategic level cannot rule out the potential for adverse effects on the integrity of nine European Sites (Alde-Ore and Butley Estuaries Special Area of Conservation (SAC), Alde-Ore Estuary SPA / Ramsar, Minsmere to Walberswick Heaths and Marshes SAC, Minsmere to Walberswick SPA/ Ramsar, Orfordness-Shingle Street SAC, Sandlings SPA, Outer Thames Estuary SPA) through potential impacts on water resources and quality, habitat and species loss and fragmentation, and disturbance (noise, light and visual).”		Yes	Whilst this policy is relevant to these sites, as it is generic across all assessments it is referenced in Volume 1, Appendix 6J [APP-171] .			This policy was included with each of the terrestrial ecology and ornithology assessment for the associated development sites, however as this policy has been considered within all assessments it should have only identified within Volume 1, Appendix 6J [APP-171] and not within any site chapters.				
EN-6 Annex C C8.54; “The Habitats Regulations Assessment on sites of international importance has proposed a suite of avoidance and mitigation measures to be considered as part of the project level Habitats Regulations Assessment. At this stage, it is assessed that the effective implementation of the proposed suite of avoidance and mitigation measures may help to address adverse effects on European Site integrity, but that more detailed project level Habitats Regulations Assessment is required to reach conclusions that are in accordance with the requirements of the Habitats Directive.”		Yes	Whilst this policy is relevant to this site, as it is generic across all assessments it is referenced in Volume 1, Appendix 6J [APP-171] .	This policy was included with each of the terrestrial ecology and ornithology assessment for the associated development sites, however as this policy has been considered within all assessments it should have only identified within Volume 1, Appendix 6J [APP-171] and not within any site chapters.						
EN-6 Annex C C8.60; “Some responses focused on designated sites including Sizewell Marshes Site of Special Scientific Interest (SSSI) and Leiston-Aldeburgh SSSI, and potential effects on		Yes, this is in error as it is only applicable to the main	This policy is only relevant to the terrestrial ecology assessment for the main development site	This policy is not relevant to this site as there would be no land	This policy was included with these chapters. This was an error as this policy is not relevant to these sites as		This policy is not relevant to this site as there would be no land	This policy was included with these chapters. This was an error as this policy is not relevant to these sites as there would be no land tale from any SSSIs.		

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Minsmere-Walberswick Heaths and Marshes SSSI, from which the site boundary includes some land-take. Some responses questioned how direct land take could be mitigated"		development site.	and should not have been referenced within Volume 1, Appendix 6J [APP-171].	tale from any SSSIs.	there would be no land tale from any SSSIs.		tale from any SSSIs.			
EN-6 Annex C C8.61; "The Appraisal of Sustainability identified the potential for adverse effects on sites and species considered to be of national nature conservation importance means that significant strategic effects on biodiversity cannot be ruled out at this stage of the appraisal. The Appraisal of Sustainability identifies that there could be potential significant effects at the following SSSIs which are within 5km of the site: Sizewell Marshes SSSI; Minsmere-Walberswick Heaths and Marshes SSSI; Leiston-Aldeburgh SSSI; Alde-Ore Estuary SSSI."		Yes	Whilst this policy is relevant to these site, as it is generic across all assessments it is referenced in Volume 1, Appendix 6J [APP-171].		This policy was included with these chapter however as this policy has been considered within all assessments it should have only identified within Volume 1, Appendix 6J [APP-171].		Whilst this policy was not referenced as there are no SSSIs with 5km of the site it is still considered to be relevant to the assessment.		This policy was included with these chapter however as this policy has been considered within all assessments it should have only identified within Volume 1, Appendix 6J [APP-171].	
EN-6 C.8.62; "As the site boundary also indicates land-take from Sizewell Marshes SSSI, the Appraisal of Sustainability finds that construction and the presence of development are likely to lead to direct loss and fragmentation of habitats within the Sizewell Marshes SSSI. Sizewell Marshes SSSI is an area of grazing marsh with important assemblages of invertebrates and breeding and winter bird populations."		No	Yes, this policy is only applicable to the main development site and is therefore not referenced in Volume 1, Appendix 6J [APP-171].	This policy is not relevant to the associated development sites as these sites are not considered to have any land take from Sizewell Marshes SSSI.						
EN-6 C.8.63; "The Appraisal of Sustainability identified the potential for the mitigation of biodiversity effects on sites of UK wide conservation importance (Sizewell Marshes SSSI), including the creation of replacement habitat. The Appraisal of Sustainability notes that developers could avoid or minimise losses and disturbance to protected species through careful site layout, design, routing, location of the development, associated infrastructure, and construction management and timings. The Appraisal of Sustainability finds that there is potential for habitat creation within the wider area in order to replace lost "wet meadows" habitats of the Sizewell Marshes SSSI, but also finds that it may not be possible to fully compensate for losses of this habitat. The applicant will need to develop an ecological mitigation and management plan to minimise the impacts."		No	Yes, this policy is only applicable to the main development site and is therefore not referenced in Volume 1, Appendix 6J [APP-171].	This policy is not relevant to the associated development sites as these sites are not considered to have any land take from Sizewell Marshes SSSI.						

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EN-6 Annex C C8.65; <i>“The Government has noted that there will be further assessment of any proposal for [Sizewell C] at the project level and that EN-1 sets out detailed consideration that must be given to issues related to nationally designated sites, should an application for development consent come forward”</i>		Yes	Whilst this policy is relevant to these site, as it is generic across all assessments it is referenced in Volume 1, Appendix 6J [APP-171].		This policy was included with this chapter however as this policy has been considered within all assessments it should have only identified within Volume 1, Appendix 6J [APP-171].	Whilst this policy is relevant to these sites, as it is generic across all assessments it is referenced in Volume 1, Appendix 6J [APP-171].				
Suffolk Nature Strategy	Regional	Yes	These policies are applicable to the main development site and associated development sites and is referenced within each of the terrestrial ecology and ornithology assessments.							
Suffolk Local BAP										
Suffolk’s Priority Species and Habitats list										
Suffolk Coastal District Council Local Plan Core Strategy and Development Management Policies	Local	Yes	This policy should have been referenced. Details of CWSs within 2km of the site are detailed in section 14.6 of Volume 2, Chapter 14 . of the ES .							
Suffolk Coastal District Council Final Draft Local Plan										
County wildlife site (CWS).										
		Yes	Yes	Yes	This policy should have been referenced. Details of CWSs within 2km of the site are detailed in section 7.4 of Chapter 7 of Volumes 3, 4, 7 and 8 of the ES .					Yes

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