Suffolk County Council



North Falls
Suffolk County Council
Local Impact Report

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1 Glossary of Acronyms

AIL	*Abnormal indivisible load*
AONB	*Area of Outstanding Natural Beauty*
CEA	*Cumulative Effects Assessment*
CROWA	*Countryside and Rights of Way Act*
(O)CTMP	*(Outline) Construction Traffic Management Plan*
(d)DCO	*(draft) Development Consent Order*
DVAONB	*Dedham Vale Area of Outstanding Natural Beauty*
EA1	*East Anglia ONE*
EA1N	*East Anglia ONE North*
EA2	*East Anglia TWO*
EA3	*East Anglia THREE*
EACN	*East Anglia Connection Node*
EIA	*Environmental Impact Assessment*
ES	*Environmental Statement*
ExA	*Examining Authority*
HGV	*Heavy goods vehicle*
LBBG	*Lesser Black-Backed Gull*
LBBG CIMP	*Lesser Black-Backed Gull Compensation, Implementation and Monitoring Plan*
LGV	*Light goods vehicle*
LHA	*Local Highway Authority*
LIR	*Local Impact Report*
LVIA	*Landscape and Visual Impact Assessment*
MRN	*Major Road Network*
NE	*Natural England*
NPPF	*the National Planning Policy Framework*
NPS	*National Policy Statement*
NSIP	*Nationally Significant Infrastructure Project*
OCTMP	*Outline Construction Traffic Management Plan*
OESEA	*UK Government's Offshore Energy Strategic Environmental Assessment*

OOEG	*Offshore Ornithology Engagement Group*
PRoW	*Public rights of way*
RSCF	*Regional Skills Coordination Function*
SCHAONB	*Suffolk Coast & Heaths Area of Outstanding Natural Beauty*
SCLP	*Suffolk Coastal Local Plan*
(O)SEP	*(Outline) Skills and Employment Plan*
SLVIA	*Seascape, landscape and visual impact assessment*
SME	*Small-medium enterprise*
SMO	*Special Movement Order*
SoCG	*Statement of Common Ground*
SoS	*Secretary of State*
SPA	*Special Protection Area*
SPR	*ScottishPower Renewables*
SRN	*Strategic Road Network*
STEM	*Science, Technology, Engineering and Maths*
SuDS	*Sustainable drainage systems*
TTSA	*Traffic and Transport Study Area*
WLP	*Waveney Local Plan*
WTG	*Wind turbine generator*

"The Council" / "SCC" refers to Suffolk County Council

2 Introduction

2.1 Suffolk County Council ("SCC") is a statutory consultee for Nationally Significant Infrastructure Projects ("NSIPs") which incorporate works within or neighbouring its administrative area. Officers have scrutinised the proposals submitted by the Applicant and have spoken with local communities, local Councillors, colleagues from East Suffolk District Council, Essex County Council, and the Suffolk and Essex Coast and Heaths National Landscape partnership.

2.2 This Local Impact Report ("LIR") has been prepared in accordance with s60(3) of the Planning Act 2008 (as amended) and having regard to the guidance in the Planning Inspectorate's guidance Nationally Significant Infrastructure Projects: Advice for Local Authorities and the MHCLG guidance Planning Act 2008: Examination stage for Nationally Significant Infrastructure Projects.

2.3 It is important for SCC to clearly set out its concerns to the Examining Authority ("ExA") at this stage, in order to influence changes and improvements to the proposals before the ExA makes its recommendations to the Secretary of State ("SoS").

2.4 The Applicant has submitted a Development Consent Order ("DCO") application for an offshore generating station with a generating capacity of greater than 100 MW. It is proposed as an extension to the existing Greater Gabbard Offshore Windfarm, located within the southern North Sea, and will be approximately 40 km from the coast of Suffolk at its closest point. This LIR addresses the local impacts of the proposals.

3 Terms of reference

Scope

3.1 The LIR only relates to the impacts of the proposed scheme as it affects the administrative area of SCC, namely the county of Suffolk.

3.2 The report specifically describes the impact of Works (as described in full in the application materials namely: an offshore wind farm, including wind turbine generators ("WTGs") and associated foundations and array cables; transmission infrastructure, including offshore substations and associated foundations, offshore and onshore export cables (underground), including associated transition bays and jointing bays, an onshore substation, and connection infrastructure into the National Grid.

3.3 This LIR does not describe the scheme any further, relying on the Applicant's description as set out in the DCO application documents. SCC notes that the DCO application presents three options with regard to its connection to the National Grid, as set out in section 5.3.1 of the Project Description [APP-019]. SCC is aware that those options may require updating to reflect changes since the submission of the application, and since the limited updating provided in the Co-ordination Report (tracked) [AS-007], and would invite the Applicant to clarify its position on those options.

3.4 SCC has experience of the DCO process and post consent phases of other projects. These include East Anglia ONE ("EA1"), an offshore wind farm that was consented in 2014 and is operational and the East Anglia THREE ("EA3") offshore wind farm that was consented in 2017 and is under construction. Other consented projects in Suffolk include East Anglia ONE North ("EA1N") and East Anglia TWO ("EA2") Offshore Wind Farms, Galloper and Greater Gabbard Offshore Wind Farms, Sunnica Energy Farm, Sizewell C Nuclear Power Station, Bramford to Twinstead Grid Reinforcement, and the now constructed and operational Lake Lothing Third Crossing (now known as the Gull Wing bridge) for which SCC was the promoter.

3.5 SCC will continue to engage with the Applicant through the draft Statement of Common Ground ("SoCG") process, with a view to narrowing the issues in dispute.

Purpose and structure of the LIR

3.6 Section 60 (3) of the 2008 Planning Act defines Local Impact Reports as:

> "a report in writing giving details of the likely impact of the proposed development on the authority's area."

3.7 This LIR provides details of the likely impact of the scheme under topic-based headings reflecting the likely nature of the impacts. The key issues for SCC under each topic are identified, followed by commentary on the extent to which the Applicants address these issues by reference to the application documentation, including the DCO articles, requirements and obligations, as relevant.

4 Description of the area with reference to the proposed development

Natural environment context

4.1 A large area of the Suffolk Coastline running from Kessingland near Lowestoft to the River Stour in the south of the county is covered by the Suffolk Coast and Heaths Area of Outstanding National Beauty ("SCHAONB") and has also been defined as a heritage coast by Natural England ("NE"). Across all stages of the project the array areas will be visible from within the AONB. The SCHAONB is managed by the Suffolk and Essex Coast and Heaths National Landscape partnership, of which SCC is a member[1].

Economic context

East Suffolk

4.2 The East Suffolk District hosts several key economic assets, these include:

i. The Construction of Sizewell C nuclear power station, the operation of Sizewell B nuclear power station, and the ongoing decommissioning of Sizewell A;

ii. The port of Felixstowe – The UK's busiest container port;

iii. Adastral Park at Martlesham – home to BT's Global Research and Development Headquarters and 150 associated firms;

iv. Offshore and renewable energy cluster in and around Lowestoft servicing the southern North Sea gas fields and developing offshore wind sector;

v. Centre for Environment, Fisheries and Aquaculture – a Department for Environment, Food and Rural Affairs agency with substantial expertise in marine sciences and technology that has recently redeveloped its site at Lowestoft.

4.3 The area has a substantial agricultural sector.

4.4 In addition, each year the Latitude Music Festival is hosted at Henham Park in the middle of the district close to the National Landscape and heritage coast. The Aldeburgh Festival is also held each year, which will be close to where the project will be visible from.

Babergh

4.5 Gateway 14 - The largest business, innovation and logistics park in East Anglia. Gateway 14 is part of Freeport East, the new low tax, low regulation zone. The site will also offer the benefit of on site and local amenities, as well as a strong local and regional labour pool.

4.6 Food and Drink sector**-** employs 24.1% of workforce in food supply chain and 12.9% in food production. District is home to Jimmy's Farm and Suffolk Food Hall among others.

4.7 Enterprise Zones at Brantham, Great Blakenham, Eye Airfield etc

4.8 Culture/ visitor economy- Assets such as Gainsborough's House, The Food Museum, The John Peel Centre, Flatford Mill, Constable Country etc

[1] Areas of outstanding natural beauty ("AONBs") are going through a process of being re-named National Landscapes. However, the designated areas are still known as AONBs in legislation and recent policy (including energy-related National Policy Statements). For clarity, this LIR continues to refer to the designated area as AONBs but the partnerships that manage them are referred to by their new name.

Ipswich

4.9 Port- The Port of Ipswich is currently operated and managed by Associated British Ports (ABP)

4.10 Education sector- University of Suffolk/ Suffolk New College/Suffolk One

4.11 Financial Sector - Ipswich has a significant amount of activity in both banking and insurance; Royal Bank of Scotland (RBS), Willis, and AXA are three of the largest single employers in the town. Recently Liverpool Victoria (LV) insurance

4.12 Culture/Heritage- The Hold/Suffolk Archives, Christchurch Mansion, Ipswich Museum, Ipswich Transport Museum, Ipswich Art School, The Regent Theatre, The New Wolsey Theatre, The Corn Exchange, The Jerwood DanceHouse etc

4.13 Ipswich Waterfront Development- As well as UCS main campus building on the waterfronts' eastern edge the waterfront features a highly attractive part-pedestrianised marina, with many cafes and restaurants. Further developments and plans are under discussion.

Demographic context

4.14 The East Suffolk district has an older, aging population which is higher than county, regional and national averages, East Suffolk has 21.3% population aged over 65 in 2021 compared to the national average of 18.6%. The proportion of the population in the district over 65 is forecast to grow in the future (35.7% by 2041) and it is anticipated that the percentage of the population who are working will also decline. This issue will have implications for housing requirements, workforce, service providers and infrastructure provision.

4.15 The Babergh district also has an older, aging population which is higher than county, regional and national averages. Babergh has 27% population aged over 65 in 2021 compared to the national average of 18.6%. The proportion of the population in the district over 65 is forecast to grow in the future (33.8% by 2043) and it is anticipated that the percentage of the population who are working will also decline. This issue will have implications for housing requirements, workforce, service providers and infrastructure provision.

4.16 Ipswich has higher than the national average levels of economic participation at 80.5% in the period October 2023-September 2024. Ipswich's biggest sector is Human Health and Social Work, but other prominent industries include Manufacturing and Construction, making Ipswich a place of opportunity for skills and employment activities in relation to the proposed development. A large proportion of economically inactive people in Ipswich are students who study in institutions such as the University of Suffolk. Ipswich's median age (36.8) is below the national average of 39.3 and further below the median age of Suffolk (42.8).

Transport context

4.17 The A12 north of Ipswich is part of SCC's local highways network which links Lowestoft and Ipswich to Chelmsford, Colchester and London. The A12 also provides an important connection with the A14 for heavy goods vehicle ("HGV") traffic between London and the Port of Felixstowe. The A12 is therefore a key piece of infrastructure which connects the North Falls and Five Estuaries onshore developments with ports on the east coast. The A14 includes the Orwell Bridge crossing and the A12/A14 junction at Seven Hills, to the south of Ipswich. The A14 and the A12 south of Ipswich are part of the Strategic Road Network ("SRN") managed by National Highways.

Infrastructure context

4.18 Along the East Suffolk coastline and within East Suffolk and Babergh there are a number of NSIPs constructed, consented, or proposed. This includes Sizewell C Nuclear power station, four electricity grid upgrades (Bramford to Twinstead, Norwich to Tilbury, Sea Link and LionLink), and four other offshore winds farms (East Anglia THREE, East Anglia ONE North, East Anglia TWO, Five Estuaries). SCC was the promoter of the Gull Wing Bridge in Lowestoft, which opened in August 2024. The Five Estuaries Offshore Wind Farm is currently the subject of a DCO Examination which is due to be completed by 17 March 2025.

5 Policy context

Powering up Britain.

5.1 This document sets out the Government's aims to enhance our country's energy security, seize the economic opportunities of the transition, and deliver on our net zero commitments.[2]

National Policy Statements

5.2 When considering NSIP proposals under the Planning Act 2008 the relevant Secretary of State will refer to National Policy Statements ("NPS").

5.3 NPS (EN-1) is the overarching national policy statement for energy was published in November 2023 and came into force in January 2024. This sets outs the UK Government's commitment to increasing renewable generation capacity and recognises that, in the short to medium term, much of the new capacity is likely to come from onshore and offshore wind.[3]

5.4 NPS (EN-3) is the National Policy Statement for renewable energy infrastructure.[4]

5.5 NPS (EN-5) is the National Policy Statement for electricity network infrastructure. This policy statement applies to not only transmission systems but also associated infrastructure such as substations and converter stations. This policy statement sets out the general principles that should be applied in the assessment of development consent application across the range of energy technologies.[5]

National Planning Policy Framework

5.6 The National Planning Policy Framework ("NPPF") was last updated in December 2024 (with minor corrections in February 2025) and provides national policy in respect of proposals under

[2] See *Powering up Britain*, 2023, available at: https://www.gov.uk/government/publications/powering-up-britain [Accessed 11 October 2024].

[3] See *Overarching National Policy Statement for Energy (EN-1)*, 2023, available at: https://assets.publishing.service.gov.uk/media/65bbfbdc709fe1000f637052/overarching-nps-for-energy-en1.pdf [Accessed 11 October 2024].

[4] See *National Policy Statement for renewable energy infrastructure (EN-3)*, 2023, available at: https://www.gov.uk/government/publications/national-policy-statement-for-renewable-energy-infrastructure-en-3 [Accessed 11 October 2024].

[5] See: *National Policy Statement for electricity networks infrastructure (EN-5)*, 2023, available at: https://www.gov.uk/government/publications/national-policy-statement-for-electricity-networks-infrastructure-en-5 [Accessed 11 October 2024].

the Town & Country Planning Act 1990. It is however also a material consideration when considering NSIP proposals.[6]

Horlock Rules

5.7 National Grid's guidelines for the siting and design of substations.[7]

Community Benefits Consultation

5.8 The Government consulted on a recommended approach to community benefits for electricity transmission network in 2023 and provided the Government's response in November 2023. However, no further guidance has been published by the new Government.[8]

Statutory Development Plan

5.9 The relevant documents that comprise the Development Plan are identified below. Other relevant policy documents are also identified below.

East Suffolk Council Local Plan

5.10 The Suffolk Coastal Local Plan ("SCLP") (covering the former Suffolk Coastal area) was adopted by Full Council on 23 September 2020.

5.11 The Waveney Local Plan ("WLP") was adopted on 20 March 2019 and forms part of the Development Plan relating to the former Waveney local planning authority area.

5.12 The relevant Local Plans for the District therefore consists of:

- East Suffolk Council – Suffolk Coastal Local Plan 2020,
- East Suffolk Council – Waveney Local Plan 2019.

5.13 The relevant policies of the Local Plans will be referred to within this LIR where appropriate, and relevant extracts are included at Appendices B and C.

Babergh & Mid Suffolk Joint Local Plan

~~5.14~~ Part 1 of the Babergh and Mid Suffolk Joint Local Plan was adopted in November 2023 and will guide development in the districts of Babergh and Mid Suffolk until 2037. The relevant policies will be referred to within this LIR where appropriate and relevant extracts are included in Appendix D.

Other relevant local policy

5.15 There are several additional documents produced and endorsed by the relevant authorities which represent local policy on specific topics, which the Council considers of relevance to the proposed developments.

5.16 Suffolk County Council Cabinet agreed the Council's updated Energy and Climate Adaptive Infrastructure Policy at its meeting on 16 May 2023, which indicates the predisposition of the Council to supporting projects that are necessary to deliver Net-Zero Carbon for the UK.

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[6] See *National Planning Policy Framework* December 2023, available at: https://assets.publishing.service.gov.uk/media/65a11af7e8f5ec000f1f8c46/NPPF_December_2023.pdf [Accessed 11 October 2024].

[7] See *NGC substations and the environment: Guidelines on siting and design* (aka The Horlock Rules), appended at Appendix A

[8] See *Community Benefits for Electricity Transmission Network Infrastructure Government Response,* available at: https://assets.publishing.service.gov.uk/media/655cda1dd03a8d000d07fe0b/community-benefits-for-electricity-transmission-network-infrastructure-govt-response.pdf [Accessed 17 February 2025]

However, in order to be able to support a project, the Council expects that any impacts are appropriately dealt with.[9]

5.17 The Dedham Vale Area of Outstanding Natural Beauty and Stour Valley Management Plan 2021-2026 is drawn up by a partnership of organisations that have an interest in the area.[10] These are drawn from the environmental; agricultural; business; community sectors and local authorities.

5.18 The Suffolk and Essex Coast and Heaths Management Plan 2023-2028 has been produced in accordance with the Countryside and Rights of Way Act ("CROWA") 2000 . It seeks to conserve and enhance the special landscape (and seascape) characteristics of the National Landscape and ensure that they are taken into account and enhanced by the planning process, with impacts of major infrastructure development avoided, mitigated or offset. The main landscape character types have been defined as: Sand dunes and shingle ridges, saltmarsh and intertidal flats, coastal levels, open coastal and wooded fens, valley meadowlands, estate sandlands and farmlands. It promotes and recognises the importance of sustainable recreation and tourism within the National Landscape and seeks to enhance the understanding of its historic and cultural assets. The Suffolk heritage coast is largely contained within the National Landscape and there are no specific statutory requirements or powers associated with the heritage coast definition. [11]

5.19 The Suffolk Coasts and Heaths AONB Natural Beauty and Special Qualities Indicators document was published on 20 November 2016[12]. It identifies the features that constitute the natural beauty and special qualities of the whole of the AONB. The document follows a rigorous criteria-based approach for establishing and identifying the special qualities of this nationally important landscape. Several of the Natural Beauty Indicators highlight the importance of the sea and views to it and from it for the special qualities of the AONB (such as landscape quality, scenic quality, relative tranquillity, and cultural heritage).

[9] See *Suffolk County Council Energy and Climate Adaptive Infrastructure Policy*, attached at Appendix E.
[10] See *Dedham Vale Area of Outstanding Natural Beauty and Stour Valley Management Plan 2021-2026*, attached at Appendix F.
[11] See *Suffolk & Essex Coast and Heaths National Landscape Management Plan 2023-28*, attached at Appendix G.
[12] See the *Suffolk Coast and Heaths AONB Natural Beauty and Special Qualities Indicators*, attached at Appendix H.

Impacts by Issue

6 Offshore ecology

Table 1 - Summary of Impacts – Offshore Ecology

SCC impact reference	Description of impact	Construction (C) / Operation (O) / Decommissioning (D)	Negative/ Neutral/ Positive	Required mitigation and how to secure it (change / requirement / obligation)	Policy Context
OE01	Harm to migratory bats, such as Nathusius' pipistrelle, caused by wind turbine rotor blades.	O	Negative	Adjustment to cut-in speeds secured through addition of parameters in the DCO or a suitable control document.	
OE02	In combination impact on Alde-Ore Estuary Special Protection Area ("SPA") population of Lesser Black-Backed Gull ("LBBG")	O	Negative	Ensure production of and implementation of suitable compensation plan to ensure no adverse effects on integrity on LBBG population.	

Negative impacts

Nathusius' pipstrelle (OE01)

6.1 The Council notes that submissions were made to the Five Estuaries examination by other parties (such as the German Federal Maritime and Hydrographic Agency and Natural England) in relation to the potential impacts of offshore wind farms on the migratory bat the Nathusius' pipistrelle (*Pipistrellus nathusii*). It should be noted that national and local survey information indicates that this species is present in Suffolk and Norfolk and Essex[13].

6.2 In addition, it appears that migratory bats and especially juveniles, are vulnerable to death from collision with, or proximity to, moving wind turbine blades. Proximity to wind turbines is known to result in death through barotrauma, which occurs because of exposure to the pressure changes located near the surface of moving wind turbine blades. Fast-moving wind turbine blades create regions of high- and low-pressure variations along the blade surfaces. If bats fly within these regions, the rapid change in pressure may cause internal bleeding, damage to lungs or other organs, and damage to the inner ear.

6.3 As a migratory species, Nathusius' pipistrelle is protected by the Convention on the Conservation of Migratory Species, to which the UK is a signatory state. SCC recommends that advice is sought from NE on the SoS's obligations under these treaties in relation to Nathusius' pipistrelle. This would help the ExA and the SoS to understand the extent to which potential harm to these bats could engage an exception under paragraphs (3) and (4) of section 104 of the Planning Act 2008.

6.4 These issues, impacts, and potential mitigation measures are set out in detail in Appendix 1 of the UK Government's Offshore Energy Strategic Environmental Assessment 4 ("OESEA4")[14].

Lesser black-backed Gull (OE02)

6.5 The Council recognises in Environmental Statement ("ES") Chapter 13, Offshore Ornithology ([APP-027]) that an in combination impact of "moderate adverse" could result on LBBG populations during the operational phase. The ES chapter does not offer any mitigation for this impact within its summary table 13.59.

Required Mitigation or Resolution

Curtailment and monitoring for Nathusius' pipstrelle

6.6 Section A1a.7.3.1 of the OESEA4 appendix highlights a precautionary mitigation measure for the Borssele offshore windfarm of imposing between 25 August and 10 October a turbine cut-in wind speed (i.e. the wind speed at which the turbine starts generating electricity) of 5.5 to 6.0m/s during an easterly wind and 5m/s during low temperatures and westerly winds. Whilst the precise dates chosen are not explained in OESEA4, they would seem to relate to periods of higher autumn migratory activity (see section A1a.7.1.1). This approach is called curtailment.

6.7 SCC consider that this precautionary mitigation measure would be suitable for this project. Offshore wind farms typically have cut-in speeds of between 3.5 and 4.0m/s, so the adjusted cut-in speeds would only reduce generation by a small amount over a specific time frame.

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[13] See extract from *Bats in Suffolk: Distribution Atlas 1983-2016* attached at Appendix I

[14] See UK Offshore Energy Strategic Environmental Assessment 4, Appendix 1 Environmental Baseline, A1a.7 Bats, available at: https://assets.publishing.service.gov.uk/media/62308e42d3bf7f5a8a6955b8/Appendix_1a.7_-_Bats.pdf [Accessed 18/02/2025]

6.8 Any argument that imposition of this measure would be disproportionate should be accompanied by a calculation of the generating losses that it would entail as compared to a more conventional cut-in speed.

6.9 SCC is open-minded as to whether this adjustment to cut-in speeds should be secured as a design parameter in the text of the DCO or by inclusion in a suitable control document. Additionally, SCC understands that Five Estuaries has agreed to provide monitoring to create a potentially useful baseline dataset on migration patterns during the operational period of their project. SCC would encourage North Falls to undertake a similar, or joint, approach.

6.10 The SoS will need to demonstrate that any decision made is compliant with the UK's treaty obligations in regard to both Eurobats and the Aarhus convention on migratory species. This is a matter on which NE will need to advise the ExA and SoS, not a matter for Suffolk County Council.

Lesser black-backed Gull

6.11 Schedule 15 of the Draft Development Consent Order ([AS-022]), requires that an Offshore Ornithology Engagement Group ("OOEG") be formed and an LBBG Compensation, Implementation and Monitoring Plan ("LBBG CIMP") be produced in order to design and confirm suitable compensation for the cumulative impacts outlined in the ES chapter. The Council will require the LBBG CIMP to be entirely satisfactory to the OEEG and approved by Natural England prior to commencement of works.

7 Seascape, landscape and visual amenity

Table 2 - Summary of Impacts – Seascape, landscape and visual amenity

SCC impact reference	Description of impact	Construction (C) / Operation (O) / Decommissioning (D)	Negative/ Neutral/ Positive	Required mitigation and how to secure it (change / requirement / obligation)	Policy Context
SL01	During construction and operation, significant adverse effects on the local seascape character are expected to occur toward the end of completion, in the East Anglia Shipping Waters Marine Character Area (SCA04), Suffolk Coastal Waters (SCA10) arising from partially constructed turbines and platforms. During construction, significant adverse effects on visual receptors along the Suffolk coast (within the SCHAONB) are expected to occur toward the end of completion, for example Viewpoint 9 Shingle Street (Table 29.30) and Viewpoint 11 at Felixstowe (Table 29.32)	C/O/D	Negative	Mitigation/Compensation for the SCHAONB.	new duty in s.85(A1) CROWA 2000
SL02	Potential for long-term reversible adverse effects on perceived seascape character which will be significant for several viewpoints within the SCHAONB [APP-043, Table 29.21]. SCC considers that there is potential for significant adverse effects on the perceptual qualities of the SCHAONB (see paragraphs 7.19 and 7.20 of this document), arising as a result of the operational wind turbine array and maintenance activities which may alter the seascape	O	Negative	Assess the range of configurations of the offshore array and commit to only the least harmful configuration.	NPS EN-1 paragraphs 5.10.7 to 5.10.9 and 5.10.37new duty in s.85(A1) CROWA 2000

Table 2 - Summary of Impacts – Seascape, landscape and visual amenity

SCC impact reference	Description of impact	Construction (C) / Operation (O) / Decommissioning (D)	Negative/ Neutral/ Positive	Required mitigation and how to secure it (change / requirement / obligation)	Policy Context
SL03 SL04	character of the array area itself and the perceived character of the wider seascape. This activity will be visible during good to excellent visibility conditions and may therefore affect the perceived character of the landscape and seascape. Significant long-term reversible adverse effects on a 19km stretch of the Suffolk Coast Path between Aldeburgh and the Butley River have been found in the Applicant's Seascape, Landscape and Visual Impact Assessment ("SLVIA") [APP-043, Table 29.21]. Potential for significant total cumulative effects for the wider seascape, the landscape character of the coastal edge, and for visual receptors between Covehithe (VP1) to Aldeburgh (VP6).				
SL05	The construction/decommission and operation of the *East Anglia Connection Node ("*EACN") On-shore substation, together with the substations of Five Estuaries and North Falls in Essex, may result in some adverse visual	C/O/D	Negative	Potential cumulative effects with other projects should be fully assessed. Most notably, the Applicant should include the Norwich to Tilbury Grid	EN-1 paragraphs 5.10.8 and 5.10.24 new duty in s.85(A1)

Table 2 - Summary of Impacts – Seascape, landscape and visual amenity

SCC impact reference	Description of impact	Construction (C) / Operation (O) / Decommissioning (D)	Negative/ Neutral/ Positive	Required mitigation and how to secure it (change / requirement / obligation)	Policy Context
	effects on visual receptors within the Dedham Vale National Landscape.			Reinforcement project in this assessment, including the impacts of both the pylons and the EACN. This should be done as soon as possible so that any resulting requirements for additional mitigation can be included into the project during the examination process.	CROWA 2000

Policy Context

National Policy Statements

7.1 Good design: Paragraphs 4.7.10 to 4.7.15 of the Overarching National Policy Statement for energy (EN-1) stress the importance of good design to SoS decision making. Energy Infrastructure developments should be sustainable and as attractive, durable and adaptable as they can be. Functionality, aesthetics, amenity benefits and visual impacts should be considered as far as possible by the applicant. Further, paragraph 5.10.37 requires the SoS to consider whether the project has been designed carefully, taking account of environmental effects on the landscape and siting, operational and other relevant constraints, to minimise harm to the landscape, including by appropriate mitigation.

7.2 AONBs: Paragraphs 5.10.7 to 5.10.9 of EN-1 give specific information on treatment of development which may impact on AONBs. These elaborate on the enhanced duty on public bodies, including the SoS, to "seek to further the purpose of conserving and enhancing the natural beauty of the area of outstanding natural beauty", which was introduced by section 245 of the Levelling-up and Regeneration Act 2023. This is a relatively recent change to the statutory framework and so far, the Sheringham and Dudgeon Extension Projects is the only DCO decision for an offshore wind made following the coming into force of this new duty as far as SCC is aware. SCC notes that the Applicant has not addressed this duty in the SLVIA [APP-043], seemingly on the basis that in its assessment the impacts on the SCHAONB would "result in moderate-minor effects on the special qualities of the [SCHAONB] which is not significant in EIA terms" (Table 29.21 of [APP-043]). SCC does not agree that the duty is only engaged where there are "significant" effects in Environmental Impact Assessment ("EIA") terms on a National Landscape. SCC notes that the Examining Authority has asked a question on how the duty applies to the North Falls proposal in its First Written Questions (ExQ1_Q14.1.3) and SCC reserves further comment until it has seen and considered the Applicant's response to this question.

7.3 SCC also notes that the proposal is dependent for its connection to the National Grid on the provision of an as yet unconsented substation forming part of the proposed East Anglia Connection Node at Lawford, provision for which is not made by the Applicant and which is dependent on a separate NSIP project (Norwich to Tilbury) being promoted by National Grid Electricity Transmission securing consent. That project is not yet the subject of a NSIP application and is still at its pre-application stage. SCC considers that, given the uncertainties that attach to that project at the present time, the Applicant's proposal should be phased so that those elements which would have harmful impacts on the SCHAONB are not permitted to take place until it is clear that the required connection to the National Grid will be provided. SCC considers that the securing of such a phasing requirement within any made DCO would be one way in which harm to the SCHAONB could be avoided, unless and until it was shown to be required to deliver the energy benefits of the proposal. SCC notes that this issue did not arise in the case of the Sheringham and Dudgeon Extension Projects, where the Grid connections for those projects (to an existing substation south of Norwich) were not dependent on the unconsented Norwich to Tilbury project

7.4 Paragraph 5.10.8 is particularly relevant to the offshore elements of this project, as a development outside the boundaries of the Suffolk Coast and Heaths AONB which may have impacts within it. The SoS should be satisfied that measures to further the purposes of designation are sufficient, appropriate and proportionate to the type and scale of development. Paragraph 5.10.20 states that for AONBs, assessments should include effects on the natural beauty and special qualities of these areas.

7.5 Landscape management plans: Paragraph 5.10.24 of EN-1 requires applicants to consider how landscapes can be enhanced using landscape management plans, as this will help to enhance environmental assets where they contribute to landscape and townscape quality.

7.6 Seascape: Paragraph 2.8.208 of the National Policy Statement for renewable energy infrastructure (EN-3) requires that a seascape, landscape and visual impact assessment should be undertaken in accordance with the relevant offshore wind farm EIA policy and the latest OESEA, including the White 2020 report.[15,16]

East Suffolk Council Local Plan Policies

7.7 Policy SCLP3.4: Proposals for Major Energy Infrastructure Projects, states that East Suffolk Council will take into consideration the nature, scale, extent and potential impact of proposals for major energy infrastructure projects. The policy states that projects will need to mitigate their landscape and visual impacts.

7.8 Policy SCLP10.4: Landscape Character, requires development to be informed by, and sympathetic to, the special qualities and features described in the Suffolk Coastal Landscape Character Assessment (2018) and Settlement Sensitivity Assessment (2018). The policy sets out an expectation that proposals demonstrate how they will protect and enhance a number of factors including the special qualities and features of an area, the visual relationship and environment around settlements and their landscape setting, distinctive landscape elements, seascapes, river valleys and significant views. Development will not be permitted where it will have a significant adverse impact on sensitive landscapes. Conserving and enhancing the landscape and scenic beauty of the National Landscape is identified as being of particular importance.

7.9 SCLP11.1: Design Quality, this policy makes it clear that good design should consider important landscape or topographic features and retain and/or enhance existing landscaping and natural semi-natural features on site.

Other Relevant Local Policy

7.10 The Suffolk Coast and Heaths National Landscape Management Plan[17] draws attention to the special landscape characteristics of the National Landscape and that they should be protected and enhanced. These are set out in detail in the Character and Special Qualities document which has been attached to this LIR as Appendix H.

Positive or neutral impacts

7.11 SCC does not consider that there would be any neutral or beneficial impacts with regards to landscape and visual matters resulting from the scheme.

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[15] For clarity, the White 2020 report referenced in EN-3 is different from the report commissioned by SCC and the SCHAONB partnership from White consultants in 2020, although it is near-contemporaneous and authored by the same firm. To help differentiate them, in this LIR "the White report 2020" refers to the document which forms part of the OESEA4 evidence base, while "the Suffolk White report 2020" refers to the report titled *Suffolk: Seascape sensitivity to offshore wind farms* which is appended to this LIR at Appendix J.

[16] See *Offshore Energy Strategic Environmental Assessment: Review and update of Seascape and Visual Buffer study for offshore wind farms*, White Consultants 2020, available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/896084/White_Consultants_2020_Seascape_and_visual_buffer_study_for_offshore_wind_farms.pdf [accessed 06February 2025]

[17] See *Suffolk & Essex Coast & Heaths Management Plan 2023-28* at Appendix G.

Negative impacts

North Falls offshore wind turbine arrays – construction phase (SL01)

7.12 The Council considers that (during good to excellent visibility conditions) there would be short-term adverse effects on the perceived seascape and the coastal landscape character areas within the SCHAONB resulting from construction activities within the North Falls array areas.

7.13 The Applicant concludes in Document 3.1.31 Seascape, Landscape and Visual Assessment [APP-043] that effects arising from construction activities in addition to effects experienced during the operational phase would be negligible.

North Falls offshore wind turbine arrays – operational phase (SL02)

7.14 As demonstrated by the Applicant's photomontages ([APP-078], [APP-079], [APP-080], and [APP-081]) there would be theoretical visibility of the wind turbines throughout the year, however in reality weather conditions would limit actual visibility. It is expected that there would be visibility of the turbines for around 20.9% of the time throughout the course of a year under the worst-case scenario. While this may not seem high, this is higher than the 10% national average.

7.15 The periods of the year with the best visibility are also likely to coincide with peak visitor times (summer holidays and especially on summer days when the sun is setting late).

7.16 The Applicant acknowledges that there are likely significant effects ascribed to this project (see [APP-043] table 29.42). The significant effects include receptors for effects on seascape character (represented by East Anglian Shipping Waters SCA04), effects on views (represented by viewpoints 8, 9, 10, 11 and12), and effects on routes (Suffolk Coast Path between the mouth of the Butley River and Landguard Point over a distance of approximately 19km).

7.17 In addition, significant cumulative adverse effects are anticipated between the Naze (Essex) and Orford Ness (Suffolk), and significant total cumulative effects for visual receptors at viewpoints on the Suffolk Coast between Covehithe and Aldeburgh.

7.18 Whilst the Applicant quotes the special qualities and their factors and indicators of the SCHAONB, it does not specify the magnitude of change or the level of significance of effects on each special quality indicator individually. Instead, the Applicant's methodology only states the level of significance of effects on the SCHAONB overall, as opposed to listing effects for each special quality indicator. SCC considers that this methodological approach could serve to conceal the existence of significant adverse effects on certain special quality indicators of the AONB, especially when considering the findings of significant effects on several viewpoints from within the AONB (viewpoints 8, 9, 10, 11 and 12) and the Suffolk Coast Path which lies inside the AONB. SCC's view is that the finding of a significant effect on one special quality indicator of the natural beauty of the AONB is sufficient to conclude that the project will have a significant effect on the natural beauty of the AONB. It cannot be the case that one can in some sense average out the effects on the AONB to reach a conclusion. Each special quality indicator is distinct and findings of impacts and their level of significance on each special quality indicator should be conveyed in the SLVIA.

7.19 One example of the Applicant's SLVIA findings on the SCHAONB which demonstrates this problem is that the Applicant judges the scale of change to perceptual aspects of some of the special qualities of the SCHAONB as medium (this is shown in the 'Magnitude of impact' row of Table 29.21 on page 65 of the SLVIA [APP-043]). A medium magnitude of change should result in significant effects due to the high sensitivity of the AONB. However, this is not carried forward into the conclusion, which judges that there would be no significant effects on the

special qualities overall (see [APP-043] Table 29.21). SCC would welcome, if the Applicant was to clarify why the significance for some of the special qualities was discounted.

7.20 SCC commissioned White Consultants to provide an update addendum to their 2020 report into *Suffolk Seascape Sensitivity Study to Offshore Wind Farms*. White Consultants concluded that turbines over 400m tall should be at least 40km away from the coast and preferably further. If the nearest wind turbine of any given array is around 40km away from the AONB coast, it would be highly desirable for the number around this distance to be minimised in order to avoid significant adverse effects on the National Landscape. However, SCC notes that the study and its addendum provide generalised recommendations based on a high-level assessment of what effects are predicted from different height turbines at different distances from various coastlines. Therefore, the generalised recommendations given by the addendum are not intended to serve as incontrovertible rules which guarantee the avoidance of significant effects; rather, they serve as a general guideline to increase the probability of avoiding such effects. Thus, they do not preclude the possibility that the particular factors involved in a particular project may lead to significant effects despite according with the addendum's conclusions. In the case of the proposed North Falls offshore wind farm, the Applicant has found significant effects in its SLVIA [APP-043] arising from its 377m turbines 40km from the nearest point onshore. SCC concludes that White Consultants' addendum does not contradict the Applicant's findings and concurs that the proposed development will cause significant effects as reported by the Applicant.

7.21 Both in isolation and in accumulation with neighbouring wind energy arrays, the height of the proposed wind turbines (now between 377.4m and 276.4m), will result in both significant and non-significant residual adverse visual effects. SCC considers that the reason for this is that the proposed wind turbines in the Rochdale envelope scenario will be noticeably taller than those of neighbouring arrays and therefore will not only visually stand out more themselves but also potentially draw the attention to the accumulation of arrays along the coast more generally, thereby increasing the perceived adverse visual effects.

7.22 In the Applicant's SLVIA [APP-043], the Applicant concludes in paragraph 144 that no monitoring would be required because there are no proposals for any landscape or visual mitigation which would require monitoring. From the northern-most Suffolk viewpoints, the proposed turbines would be positioned behind the existing Galloper wind farm. However, from VP3 southwards, the proposed scheme visually extends the schemes of Galloper and Greater Gabbard to the south, thereby extending the 'curtaining' effect along the Suffolk coast. This is exacerbated by the greater height of the wind turbine towers proposed for North Falls, which do not visually harmonise with the neighbouring arrays and increase the potential visual presence at the southern end of the group of arrays related to various projects. The Applicant uses a Rochdale envelope approach to allow for flexibility in the number and height of the turbines they will be installing. SCC understands that the Applicant aims to reserve the option to choose any height and number of turbines within this range, so long as it does not exceed the maximum rotor swept area as detailed in the draft Development Consent Order ("dDCO"). In the SLVIA the maximum height scenario of 34 turbines each of 377.39 metres is considered to be the worst-case scenario (see [APP-043] section 29.3.2). The Applicant has provided wirelines for the 57 turbines at 276 meters scenario for comparison purposes in ES Figures 29.3.3 to 29.3.17 [APP-082]. SCC considers that in this scenario the visual effects would be considerably less, because the wind turbines would blend in with neighbouring arrays and visually recede towards the horizon. In contrast, the 34 turbines at 377 metres each represent the worst-case scenario because the 377m turbines will appear noticeably taller than the existing arrays to a greater extent than any other scenario and as a result, draw more attention to neighbouring arrays, increasing perceived negative visual impacts.

7.23 In conclusion, there is potential for long-term adverse visual effects both above and below the significance threshold to affect the perceived character of the wider seascape, the landscape character of Landscape Character Areas and Types within, and the special qualities of, the designated landscape.

On-shore substation – construction, operational and decommissioning phases (SL05)

7.24 Given the existing landform, intervening built structures and intervening vegetation, visibility of the proposed substation, including construction works, is expected to be limited from visual receptors within Suffolk. SCC does, however, consider it important to fully assess potential visual receptor locations within the DVAONB and SCHAONB from areas of higher visibility, and to include cumulative effects with other projects into the assessment.

7.25 SCC agrees with Babergh and Mid Suffolk Councils that the cumulative effects of the onshore substation element of the project on the DVAONB need to be fully assessed. This includes the effects of the pylons which are expected to be built as part of the Norwich to Tilbury Grid Reinforcement.

7.26 SCC appreciates the inclusion of viewpoint 8 in the Applicant's Landscape and Visual Impact Assessment ("LVIA") [APP-044] which is from a part of the Essex Way in the DVAONB. However, as figure 30.2.8 [APP-088] shows, there are zones of theoretical visibility within the DVAONB and along the Essex Way which are not captured by viewpoint 8. SCC considers that the high sensitivity of the Essex Way and the DVAONB warrants the inclusion of further viewpoints in the LVIA to ensure that the visual impact on the designated landscape is thoroughly assessed. The full assessment of these impacts is especially important when considering the increased protections granted to protected landscapes by the update to section 85 of CROWA 2000, which the Applicant must comply with in relation to the DVAONB if the development is found to affect the DVAONB.

7.27 SCC also considers this point pertinent in relation to the visual impacts of the pylons to be built as part of the Norwich to Tilbury Grid Reinforcement project. If it is found that the North Falls substation will be visible from within the DVAONB, then a more thorough cumulative impact assessment of the effects of the pylons and substations on the DVAONB than what is currently present in table 30.32 [APP-044] is warranted.

Required Mitigation or Resolution

Phasing restriction

7.28 To ensure any negative effects on the setting and visual amenity of the SCHAONB are avoided until they are required to deliver the energy benefits of the proposal, consideration should be given to a phasing restriction on undertaking works to construct the offshore WTGs until it is clear that the East Anglia Connection Node, on which the proposal is wholly dependent for its own Grid connection, has been consented and is to be delivered. To secure the correct phasing in a way that places the minimum burden on the eventual undertaker, Suffolk County Council would propose the following wording for a requirement:

> Work No. 1 must not be commenced until notification in writing has been submitted by the undertaker to the relevant planning authority which:
>
> (a) states the date that development consent was granted for the National Grid substation; and
>
> (b) sets out a timetable for the carrying out of all works comprised in Work No. 14, being the works necessary to connect the authorised development to the National Grid substation.

7.29 The term "National Grid substation" is already used in the description of Work No. 14, but SCC considers that the DCO could benefit from a definition for the term.

7.30 SCC considers that the proposed requirement meets the tests required of planning conditions and DCO requirements. It is precise, because it is unambiguous as to what is required and what must not be done until the requirement is satisfied. It is enforceable because it would be clear if a breach were to occur. It is necessary because paragraph 4.11.12 of EN-1 requires that the SoS should be satisfied that appropriate network arrangements are/will be in place for a given project regardless of whether one or multiple (linked) applications are submitted. It is clearly relevant to the North Falls development because it concerns this project's dependence on another project. Controlling the phasing of the project to safeguard against unnecessarily incurred environmental impacts is clearly relevant to planning and not duplicative of any other regulatory regime. It is reasonable in all other respects because it is formulated to trespass lightly on the undertaker's flexibility: it does not cause delay by requiring an approval process, it only limits construction of the part of the project which impacts on the AONB, the turbines are in any case programmed to begin construction as late as year 4[18] and the requirement does not demand rigid adherence to timetabling.

Measures which seek to further the purposes of the AONB

7.31 Because, even with the minimisation of harmful impacts through embedded mitigation, there will still be residual harm to the SCHAONB, the duty at s.85(A1) of the CRoW Act 2000 to seek to conserve and enhance the natural beauty of the SCHAONB requires measures to be put forward, as far as is reasonably practical, to both offset that harm and contribute to the enhancement of the natural beauty of the AONB.

7.32 It is clear that the duty applies to this project despite the fact that the WTG arrays are located offshore and therefore outside the AONB. When considering the advice in para 5.10.7 and in para 5.10.8 of EN-1, it is important to note that no distinction is drawn as regards what the Secretary of State needs to be satisfied about irrespective of whether a development is located within a designated landscape or outside of it. In both cases, the advice is that "*[T]he Secretary of State should be satisfied that measures which seek to further purposes of the designation are sufficient, appropriate and proportionate to the type and scale of the development.*"

7.33 DEFRA has issued guidance[19] which makes it clear that "[t]he duty is an active duty, not passive, which means:

- a relevant authority should take appropriate, reasonable, and proportionate steps to explore measures which further the statutory purposes of Protected Landscapes
- as far as reasonably practicable, relevant authorities should seek to avoid harm and contribute to the conservation and enhancement of the natural beauty, special qualities, and key characteristics of Protected Landscapes

…

- for… development management decisions affecting a Protected Landscape, a relevant authority should seek to further the purposes of the Protected Landscape – in so doing, the

[18] See Table 5.23 Indicative offshore construction programme in *3.1.7 Environmental Statement Chapter 5 Project Description* [APP-019]

[19] See: *Guidance for relevant authorities on seeking to further the purposes of Protected Landscapes*. 16 December 2024. Available at: https://www.gov.uk/government/publications/the-protected-landscapes-duty/guidance-for-relevant-authorities-on-seeking-to-further-the-purposes-of-protected-landscapes [Accessed 07 February 2025].

relevant authority should consider whether such measures can be embedded in the design of plans and proposals where reasonably practical and operationally feasible…"

7.34 The second bullet point of the guidance confirms the position that the discharge of the duty requires more than merely seeking to avoid harm. That is part of what is expected, but the guidance also expects those persons subject to the duty to seek to contribute to the conservation and enhancement of natural beauty and special qualities of the Protected Landscape, "as far as is reasonably practicable". This latter phrase echoes the advice that measures to that end should be "sufficient, appropriate and proportionate" in para 5.10.8 of EN-1.

7.35 SCC would welcome discussions with the Applicant, in conjunction with the Suffolk and Essex Coast & Heaths National Landscape Partnership, on proportionate and deliverable improvement measures that could be undertaken to enhance the natural beauty of the SCHAONB by way of offsetting the residual harm.

7.36 Approaches that would normally be available to deliver such measures include:

- a requirement for the undertaker to directly deliver conservation or enhancement measures within the AONB;
- a planning obligation which secures financial contributions towards conservation or enhancement measures within the AONB; or
- a requirement or obligation for the Applicant to remove existing features which detract from the special qualities of the AONB.

7.37 Notwithstanding its impacts on the AONB, the project has no footprint within the AONB, and therefore the undertaker would have no control over land within the AONB as a result of the grant of development consent. SCC therefore considers it may be most appropriate to secure the delivery of suitable measures by means of a requirement in the draft DCO which would entail the submission of a scheme for the approval of such measures by the relevant planning authority (after consultation with the National Landscape Partnership) and the subsequent implementation of the approved scheme. This would allow the Applicant to discuss and agree such measures with the National Landscape Partnership, which could then take the measures forward for delivery. SCC is aware that a requirement in generally similar terms has been proposed by the Department for Transport in connection with the proposed Lower Thames Crossing DCO, which impacts on the Kent Downs AONB. Measures could be either financial or non-financial for the purpose of enabling works in support of the AONB management plan, and which would therefore enhance the special qualities of the AONB[20].

7.38 SCC would welcome discussions with the Applicant and the Suffolk and Essex Coast and Heaths National Landscape Partnership on a 'without-prejudice' basis to explore options for financial or non-financial measures to seek to further the purpose of the AONB.

[20] https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/TR010032/TR010032-006440-SoS%20Consultation%206%20Letter.pdf

8 Highways

Table 3 - Summary of impacts – Highways					
SCC impact reference	Description of impact	Construction (C) / Operation (O) / Decommissioning (D)	Negative/ Neutral/ Positive	Required mitigation and how to secure it (change / requirement / obligation)	Policy Context
HW01	Potential negative impacts on Suffolk's local transport network and communities due to additional road traffic from construction activity and related abnormal indivisible load ("AIL"), heavy goods vehicle ("HGV"), and light goods vehicle ("LGV") and car movements in terms of severance, pedestrian delay, pedestrian amenity, fear and imitation, driver delay, accidents and safety, noise and air pollution.	C/D	Negative	The Outline Construction Traffic Management Plan ("OCTMP") should more explicitly consider the potential for impacts on Suffolk. It should require the agreement of Suffolk County Council for any management measures which would need to apply in Suffolk. The Traffic and Transport Study Area ("TTSA") has not been finalised in agreement with SCC. As a result, impacts on the A12 have not been assessed, and several NSIPs in Suffolk generating high levels of traffic on the A12 have been either not been considered in the cumulative effects assessment ("CEA") or have been scoped out. Direct and cumulative effects on the A12 should be assessed due to increasing demand on that road and the effects this has on Suffolk businesses and residents.	NPS EN-1, section 5.14
HW02	Potential negative effects of AIL	C/D	Negative	Commit in relevant control documents to early engagement with SCC on route	NPS EN-1, section 5.14, National

Table 3 - Summary of impacts – Highways					
SCC impact reference	Description of impact	Construction (C) / Operation (O) / Decommissioning (D)	Negative/ Neutral/ Positive	Required mitigation and how to secure it (change / requirement / obligation)	Policy Context
	movements. These effects include resourcing and capacity of SCC and the Suffolk Constabulary, suitability of routes both structurally and to minimise impacts on road users and the inadequacy of relying on the ESDAL system and notification timing requirements.			assessment and suitability, preferably allowing at least six months to finalise the route and prepare for the AIL movement, especially in the case of Special Movement Order ("SMO") AILs. The production of an approximate timeline for AIL movements sufficiently in advance of such movements would be preferable. Alternatively, SCC would be satisfied if AIL routes are secured in the OCTMP so that it is clear that SCC's local highway network is unaffected. Special order movements across the A137 Ostrich Creek bridge require a temporary structure the installation and removal of which creates significant disruption to local traffic.	Highways' Water Preferred Policy
HW03	Impact of construction and workforce traffic at ports within or adjacent to Suffolk	C/O/D	Negative	The Applicant should be required, by a requirement of the DCO, to produce port construction traffic management and travel plans for each port, if deemed necessary by the relevant local planning authority,	EN-1, section 2.6, paragraph 5.14.8, Policy SCLP 7.1,

Table 3 - Summary of impacts – Highways					
SCC impact reference	Description of impact	Construction (C) / Operation (O) / Decommissioning (D)	Negative/ Neutral/ Positive	Required mitigation and how to secure it (change / requirement / obligation)	Policy Context
				modelled after those drafted by ScottishPower Renewables (“SPR”) for EA1N & EA2.	Policy SCLP 7.2, Policy LP29

Policy Context

National Policy Statements

8.1 Whilst renewable energy proposals are addressed in overall terms in EN-3, traffic and transport is addressed as a generic impact in section 5.14 of EN-1 (see para 1.3.2 of EN-5). The local policies discussed below are generally consistent with that generic guidance.

Legislation

8.2 Section 39 of The Road Traffic Act 1988 places a duty on Local Highway Authorities (in light of studies into crashes) to take such measures as appear to the authority to be appropriate to prevent such accidents, including the dissemination of information and advice relating to the use of roads, the giving of practical training to road users or any class or description of road users, the construction, improvement, maintenance or repair of roads for the maintenance of which they are responsible and other measures taken in the exercise of their powers for controlling, protecting or assisting the movement of traffic on roads.

East Suffolk Council Local Plan Policies

8.3 Policy SCLP2.2: states that the Council will work with other parties in supporting and enabling delivery of key strategic infrastructure in particular:

- Ipswich Northern Route;
- A12 improvements;
- A14 improvements;
- Sustainable transport measures in Ipswich; and
- Improved walking and cycle routes.

8.4 With regard to Major Energy Infrastructure, table 3.6 lists a number of relevant issues that need to be considered:

- Suitability of local roads to cope with the number and type of vehicle movements necessary for construction;
- The agreement of dedicated routes with local community participation;
- Need for park and ride facilities;
- Inadequate provision of laybys on the Suffolk road network; and
- Cumulative impact of associated growth in and outside Suffolk.

8.5 Policy SCLP3.4 of the East Suffolk Council Suffolk Coastal Local Plan sets out that proposals for major infrastructure projects will be considered against a number of policy requirements, including:

- Appropriate packages of local community benefit to be provided by the developer to offset and compensate the burden and disturbance experienced by the local community for hosting major infrastructure projects;
- Appropriate road and highway measures (including diversion routes) for construction, operational and commercial traffic to reduce the pressure on the local communities;
- The development and associated infrastructure proposals are to deliver positive outcomes for the local community and surrounding environment;
- Cumulative impacts of projects are taken into account and do not cause significant adverse impacts; and

- Appropriate monitoring measures during construction, operating and decommissioning phases to ensure mitigation measures remain relevant and effective.

8.6 Policy SCLP7.1 of the East Suffolk Council Suffolk Coastal Local Plan sets out that development proposals should be designed from the outset to incorporate measures that will encourage using non-car modes. The policy goes on to state that development will be supported where:

- It is proportionate in scale to the existing transport network;
- It is located close to, and provides safe pedestrian and cycle access to services and facilities;
- It is well integrated into and enhances the existing cycle network including the safe design and layout of new cycle routes and provision of covered, secure cycle parking;
- It is well integrated into, protects and enhances the existing pedestrian routes and the public rights of way ("PRoW") network;
- It reduces conflict between users of the transport network including pedestrians, cyclists, users of mobility vehicles and drivers and does not reduce road safety;
- It will improve public transport in the rural areas of the District; and
- The cumulative impact of new development will not create severe impacts on the existing transport network.

8.7 Policy SCLP7.1 also sets out that development that would have significant transport implications should be supported by a Travel Plan and that for non-residential developments the need for a Transport Assessment will be assessed on a case-by-case basis.

8.8 Policy SCLP7.2 states that proposals involving vehicle parking will be supported where they take opportunities to make efficient use of land and they include:

- The provision of safe, secure, and convenient off-street parking of an appropriate size and quantity including addressing the need for parking or secure storage for cars, cycles, and motorcycles, and where relevant, coaches and lorries;
- Opportunities to reduce the recognised problem of anti-social parking or potential problems that may arise which impacts the quality of life or vitality of an area for residents and visitors;
- Appropriate provision for vehicle charging points and ancillary infrastructure associated with the increased use of low emission vehicles; and
- The incorporation of sustainable drainage systems ("SuDS"), permeable surfacing materials and means of protecting water quality in drainage schemes should be ensured.

Babergh and Mid Suffolk Joint Local Plan

8.9 The districts of Babergh and Mid Suffolk are susceptible to transport impacts arising from the proposed development due to their proximity to the project's onshore works and the cumulative impacts of this project together with other nearby NSIPs, including Sizewell C. The Babergh and Mid Suffolk Joint Local Plan includes policy provision in favour of sustainable transport as follows:

8.10 Policy LP29 titled "Safe, Sustainable and Active Transport" expects development to manage transport impacts and promote sustainable transport strategies. The policy includes the following provisions:

- 1) All developments will be required to demonstrate safe and suitable access for all and must prioritise sustainable and active transport and maximise the opportunities to utilise

these modes in accordance with the transport hierarchy. Where possible, active travel is to be tied in with the green infrastructure network to support net environmental gains.

- 2) Development will be expected to contribute to the delivery of sustainable transport strategies for managing the cumulative impacts of growth, whilst protecting and enhancing the Public Rights of Way network.

Positive or neutral impacts

8.11 SCC does not consider that there would be any neutral or beneficial impacts with regards to highways matters resulting from the scheme.

Negative impacts

Construction Traffic (HW01)

8.12 As landfall is in Essex, the impact on Suffolk's highways is expected to be limited, however there are potential impacts from construction and decommissioning traffic, port traffic, and AILs.

8.13 There may be a negative impact on the local transport network and communities due to additional road traffic from construction and decommissioning activity and related AIL, HGV, LGV and car movements in terms of severance, pedestrian delay, pedestrian amenity, fear and intimidation, driver delay, accidents and safety, noise and air pollution.

8.14 An accumulation of NSIPs in the region could exacerbate effects of traffic arising from this project. These include Norwich to Tilbury, which the Applicant has accounted for in its cumulative assessment [APP-041, table 27.28], but also others which the Applicant has not included in its assessment. These include EA1N, EA3, Bramford to Twinstead Grid Reinforcement and Lion Link. These projects are not at all considered for the CEA during the scoping process despite potentially overlapping in their traffic and transport routes. This is especially the case for Bramford to Twinstead which extends into Essex close in proximity to the Applicant's proposed onshore construction works and is projected to significantly overlap temporally with the Applicant's construction timeline. For SCC to be satisfied that there will not be a significant impact on the Suffolk local highways network, the Applicant must expand its study area and consider the cumulative impacts of the other NSIPs listed above. In addition to NSIPs, the A12 Major Road Network ("MRN") scheme, which is a programme of improvement works between the A12/A14 junction at Seven Hills and the A12/A1152 junction at Woods Lane, may overlap temporally with the project. This point covers all types of traffic caused by these projects, including the commute of workers and the movements of HGVs.

8.15 SCC is concerned that the Applicant's Traffic and Transport assessments are insufficient as they relate to Suffolk. First, the Applicant's Traffic and Transport Study Area is noticeably more restricted than that of Five Estuaries despite the two projects having very similar locations in terms of their order limits. The TTSA is shown in [APP-075, figure 27.1]. Specifically, the Applicant does not include the A12 in its assessment, which is the main road connecting Suffolk to Essex, nor does the assessment include any other road connecting Suffolk to Essex. The Applicant justifies the extent of its assessment area by claiming that it has been agreed with the relevant highway authorities [APP-041, section 27.3.1]. However, in the documentation referenced to justify this claim [APP-168, table 1.1], SCC clearly states that it must be satisfied that there will be no adverse impact on the A12 or wider strategic right network which may then have an impact on businesses and residents in Suffolk through proper assessment. Moreover, no other Suffolk Local Authority claims to be satisfied with the TTSA either. In fact, Babergh and Mid Suffolk Councils also state their interest in the impact of this project on highways and traffic flows as they relate to Suffolk in that document [APP-168, table 1.1]. SCC

maintains that it is a relevant highway authority in this context since managing impacts on the Suffolk road network is a direct responsibility of SCC, and it has not been demonstrated that there will be no impacts on the Suffolk road network as a result of this project. Therefore, it is clear that SCC does not agree with the extent of the TTSA, and considers itself a relevant highway authority, so the wording of [APP-041, section 27.8.1] should be rectified accordingly, and the extent of the TTSA should be extended to account for impacts on the A12.

8.16 SCC acknowledges that the A12 south of Ipswich is part of the Strategic Road Network and so the responsibility of National Highways. However, impacts on this part of the A12 affect businesses and residents of Suffolk because the A12 is a vital road connection for many of these people and organisations, hence why SCC is concerned that it has not been included in the Applicant's TTSA.

8.17 The Outline Skills and Employment Plan ("OSEP") [APP-253, section 1.3] states that skills and employment activities will include commitments in Suffolk in the final plan. Despite this commitment, the Applicant has not clarified or assessed the routes of transportation it envisages workers residing in Suffolk to take to the site of the onshore works. This lack of clarity means that SCC neither has a clear idea of the predicted quantity and routes of workforce traffic nor does SCC understand to what extent such traffic will impact Suffolk. The lack of a Workforce Travel Plan also undermines SCC's confidence regarding how the project will meet sustainable travel requirements of both national policy and Suffolk local plan policies (such as paragraphs 5.14.7, 5.14.8, 5.14.9 and 5.14.18 of EN-1, Policy WLP8.21, Policy LP29 and Policy SCLP7.1). SCC recognises that the OCTMP contains a short section on controlling employee trips [APP-251, section 3], but notes that this section lacks reference to Suffolk and how the challenges to meet the target of 1.5 workers per car will be met in relation to those commuting from Suffolk. SCC's experience of similar projects is that thorough plans and strategies on workforce travel are necessary to meet the Applicant's target since such projects typically struggle to meet that target. At present, the limited detail and lack of a dedicated Workforce Travel Plan does not give SCC confidence that the Applicant will be successful in meeting the 1.5 workers per car requirement, especially as it relates to Suffolk.

8.18 Another reason behind SCC's dissatisfaction with the TTSA is the implications the limits of the study area have on the Applicant's cumulative assessment [APP-041, section 27.8]. The Applicant uses the limits of the study area to scope out the majority of NSIPs which impact Suffolk from the cumulative effects assessment, including Sizewell C and EA2, due to "Rationale D" which states that the TTSAs of the projects do not overlap and so do not need to be assessed. SCC argues that this is only the case due to the restrictive limits of the Applicant's TTSA. Moreover, SCC does not believe that this is a sufficient justification for scoping out projects from the cumulative assessment. This is because it does not entail that there will be no cumulative impacts, and it is still possible to undertake such assessments as demonstrated by Five Estuaries, who did so with projects such as Sizewell C, EA1N and EA2. Therefore, SCC is currently unable to accept that traffic and transport impacts have been adequately assessed by the Applicant due to the limits of its study area and the lack of cumulative assessments for the majority of NSIPs being built and operating in Suffolk concurrently with this project.

8.19 SCC also disagrees with the scoping out of projects from the cumulative assessment due to "Rationale A", which states that there is insufficient data from the projects, so there will be no cumulative effects to assess. Whilst this may be the case at present, SCC considers that it is possible that such data may become available in the future as these projects progress, so the Applicant should commit to including them in its assessment if relevant data becomes available. The absence of evidence is not evidence of absence of impacts, so the notion that the lack of data entails the lack of impact is not robust. SCC considers that further engagement

with the promoters of projects that have been notified to the Planning Inspectorate was and is an option open to the Applicant to inform itself of the likely traffic and transport implications of those projects. Projects scoped out due to "Rationale A" includes Sea Link. The Norwich to Tilbury Grid Reinforcement project is in a broadly similar stage to Sea Link, with both projects expecting to submit their applications in 2025, yet it is included in the cumulative impact assessment, but Sea Link is not. Indeed, SCC understands that the Sea Link DCO application is likely to be submitted during the currency of the North Falls DCO Examination. The Applicant should update its CEA and justify the exclusion of any projects that have been notified to the Planning Inspectorate.

AILs (HW02)

8.20 The Applicant has not yet provided substantive details of whether it plans to have AILs travel through Suffolk, including from a port in, or to the north of, Suffolk. Use of such a port would inevitably mean that traffic would make use of SCC's local highways network, which includes the A12 north of Ipswich[21]. Therefore, SCC must ensure that the impacts of AIL movements in Suffolk are minimised to fulfil its duties as the relevant highways authority. SCC acknowledges that within the OCTMP, the Applicant commits to 'agree appropriate timings, routes and asset protection measures' [APP-251, section 2.5.2, paragraph 41] with relevant authorities regarding AIL movements. However, SCC considers that the existing legislative requirements for hauliers regarding routeing, timings and notification timing to be insufficient for minimising impacts. This is because the haulier must give between 2 and 5 days' notice to SCC of any AIL movement. The regulatory regime for the control of AIL movements is complex but it is not the case that movements falling within the Road Vehicles (Authorisation of Special Types) (General) Order 2003 (SI 2003/1998), which are commonly referred to as STGO movements, are subject to consent by SCC. Instead, there is a requirement on a haulier wishing to undertake such a movement to give 2-5 days' prior notice to the highway authority (which would be SCC for non-SRN roads and bridges in Suffolk) and to the police (see Section 17 and Schedule 9) and to provide an indemnity as regards damage.

8.21 Provided that the requisite details for the movement are given in the notice, which has to be in an agreed form, SCC has no power to refuse to allow the movement using that road or bridge to take place or to restrict it to a specified date/time (or dates/times). This inability can cause issues in several ways. For instance, it may be the case that the structures are suitable for the AIL movement, but the route is impractical for other reasons, such as causing disruption by going through a town centre. It is such non-structural aspects, along with the structural suitability itself, of AIL routes which SCC envisaged to be included in its request for the Applicant to assess the 'suitability' of possible AIL routes. Additionally, SCC's ability to coordinate multiple AIL movements in terms of resources and timings is restricted, which can lead to unnecessary disruption for road users and delays for hauliers. SCC would like the wording of the OCTMP updated so that SCC must give its consent for special order AIL movements, since these are the most impactful on the Suffolk road network and on the Suffolk Constabulary.

~~8.22~~ Suffolk is experiencing a significant number of applications for notifications of AIL movements within the county resulting from other NSIPs in the construction phase, placing considerable strain on the police and local highway resources. SCC understands that Suffolk Constabulary are operating at their maximum capacity for escorting loads due to the large numbers of energy infrastructure projects. The quantity of loads moving through Suffolk as a result of energy projects under construction is creating a high degree of disruption, which is

[21] South of Ipswich, the A12 is owned and managed by National Highways.

why Suffolk County Council prefers that the Construction Traffic Management Plan commits to using routes which are known at this point to be feasible (e.g. the route which originates at Harwich).

8.23 The limited capacity in Suffolk of the police to escort loads and the transport network to absorb them is a potential source of risk for project programmes, as multiple projects are competing for police resources and road space.

If the Applicant intends for AILs to travel through Suffolk, then SCC requires assurance that the proposed routes have been adequately assessed and demonstrated to be fit for purpose. This includes proving that highway structures are capable of bearing the anticipated loads. This may require surveys or investigation of structures where such information is dated or not available and, if necessary, repairs or temporary works to these structures. The Applicant is expected to agree the scope of any such investigations or works and cover the SCC's reasonable costs in approving these. It is possible that a resulting impact of this would be negative impacts to the used road surface and structure, along with damage to street furniture.

8.24 SCC appreciates the Applicant's proposal to communicate with Five Estuaries on timings, impacts and routes of AIL deliveries [AS-006, paragraph 8.5.7] and hopes that the two projects will work together to minimise the impacts of these deliveries as they relate to Suffolk. As the referenced document states, SCC expects the Applicant's OCTMP to be updated to include this commitment.

Required Mitigation or Resolution

AIL assessment and management (HW02)

8.25 SCC expects the Applicant to adequately mitigate regarding any movements of AILs in Suffolk, if the Applicant does need to include Suffolk within its AIL routes. This mitigation should include assessment of possible routes in collaboration with SCC to ensure that a route is agreed upon and any damages which occur to the road network are rectified. This may include damages to the road surface, street furniture or any other kind of damage to the road network and immediate surrounding area caused by any activity carried out by the Applicant, as well as rectifying any impact caused by delays which may affect Suffolk businesses. Additionally, if possible, special-order movements across the A137 Ostrich Creek bridge, on the southern outskirts of Ipswich, should be avoided, since this requires a temporary structure, the installation and removal of which creates significant disruption to local traffic.

8.26 During the Five Estuaries examination, SCC appreciated the production of a technical note on AILs for that project, which included estimated numbers of different AILs, their respective regulatory categories and the status of their predicted routes and origins. The production of similar information for the examination of this project would be valuable in SCC's view to better understand the possible impacts of AIL movements in Suffolk given the concerns raised in this document.

8.27 SCC notes that according to National Highways' water-preferred policy, the Applicant should deliver special order AILs from the closest feasible port to the destination. For the Applicant, this port would be the Port of Harwich, so this port should be the Applicant's priority for AIL deliveries and this should be reflected in the relevant documentation.

8.28 Given the concerns raised by SCC on the movements of AILs, SCC strongly encourages the Applicant to take a more holistic and long-term approach. This type of approach would include giving SCC sufficient foresight of the proposed timeline of AIL movements as they relate to Suffolk. This point is particularly pertinent to SMO AILs, regarding which SCC recommends giving at least six months' time for engagement and assessment as best practice. Such

advanced foresight allows SCC to effectively manage the movement and coordinate with National Highways and the Suffolk Constabulary, decreasing the likelihood of the Applicant encountering delays. SCC also recommends giving more notice than that which current legislation requires for STGO AILs, both to SCC and the Suffolk Constabulary, for similar reasons considering the increasingly high volume of notifications SCC receives for such movements. Such an approach would also decrease the likelihood of the Applicant encountering delays for STGO movements. SCC considers that several potential adverse impacts outlined above are not mitigated by current legislation and standard procedures (which were not fashioned around the concurrence of a series of large scale infrastructure projects concentrated in one geographic area with similar or overlapping timelines). Therefore, SCC would like to see, secured within a relevant control document, a commitment from the Applicant to give timelines of its proposed AIL movements, including origins and destinations, sufficiently in advance of the movements themselves.

8.29 Additionally, SCC notes that in the OCTMP [APP-251, section 2.5], the Applicant commits to following standard procedures to manage the impacts of AIL movements. For AIL movements, including SMOs, local authorities must be given at least between 2 and 5 days' notice, with the Suffolk Constabulary only having to be given 2 days' notice. Such legislative requirements are not sufficient to minimise impacts from this project due to the potentially high volume of AIL movements which could occur within Suffolk as a result of this project. So, SCC does not consider that standard procedures are sufficient to adequately minimise impacts.

8.30 SCC appreciates the Applicant's commitment to agree appropriate timings, routes and asset protection measures with relevant stakeholders and notify them through ESDAL [APP-251, section 2.5.2], though as explained, SCC does not consider these measures sufficient as currently written. ESDAL is not a compulsory process, stating that Applicants / Local Highway Authority ("LHA") *can* use it to manage AIL movements, not *shall*. The process allows hauliers to check the suitability of the route and get advanced notice of any problems. Typically, ESDAL notifications are made shortly before a planned move which has resulted in delays when weak structures are identified on the highway network. In SCC's opinion, the LHA should be engaged well in advance of any AIL movement to review data for structures it maintains, undertake any additional investigations required to provide up-to-date data or fill in gaps prior to an assessment of the structure for the specific load. None of this forms part of the ESDAL process the response being a binary yes/no for suitability of the route. This all takes time particularly with the demands on LHA for numerous NSIPs in the region and other commitments. Typically, SCC, due to its limited resources, has to commission its term maintenance partner to assist with this process. SCC recommends carrying out engagement and route assessments as early as possible to avoid disruption to the project's timeline as much as possible. With the increasing demand on SCC's limited resources for AIL movements, SCC recommends leaving at least six months for engagement and assessment because these activities are planned for post-consent unlike applicants for other energy NSIPs in Suffolk. This recommendation should not be treated as a guarantee as circumstances are liable to change and several factors such as how quickly things progress once the process is started, and results of assessments can delay the process. For instance, Sizewell C has taken a similar approach to the Applicant and is currently facing delays in AIL deliveries due to a new STGO restriction for the Darsham culvert.

8.31 With the increasing influx of major energy projects happening within Suffolk, there are increasing cumulative pressures on these limited resources. Moreover, SCC does not have the capability to suggest alternative routes if the proposed route is structurally adequate, even if it causes unnecessary adverse impacts and is impractical. Therefore, SCC requests for there to be adequate controls put in place to ensure that the impacts of concern are sufficiently minimised.

Port Construction Traffic Management and Travel Plan (HW03)

8.32 If the Applicant plans on utilising any port within Suffolk for the purposes of transferring AILs, or any kind of goods, onshore, then the Applicant should produce a port construction traffic management plan to manage port traffic associated with the construction of the windfarm. It is not necessary for the Applicant to commit to using any particular port at this stage for the Applicant to produce an outline port construction traffic management plan. An outline port construction traffic management plan can be produced at this stage, with a requirement to secure a final port construction management plan when details are known, and the Applicant is in a position to commit to specific measures.

8.33 Unless the Applicant commits that there will be no traffic caused by its offshore construction activities in the relevant control documents, SCC has no clarification of what highways impacts could arise as a result of this project. This is the case because the Applicant's TTSA does not include any ports in or adjacent to Suffolk within its scope and so does not assess or provide information on traffic associated with the offshore construction works. Since SCC's concern relates both to traffic transporting goods and workforce travel, an Outline Port Construction Traffic Management and Travel Plan will ensure that both construction goods and workforce traffic levels are monitored and mitigated where necessary.

8.34 Alternatively, if the Applicant provides information clarifying the expected numbers for goods vehicles travelling through Suffolk for offshore construction and demonstrates that the impacts will not be significant and are within the ports' existing planning permission, then the construction traffic management element of this plan may not be necessary.

8.35 SCC has seen this type of document used effectively in relation to other offshore wind farms in Suffolk. For example, the EA1N DCO[22] contains, at part 3 of schedule 1, requirement 36. Requirement 36 provides that no part of Work No. 1 (which includes the offshore generating station) may commence until a port construction management plan (which accords with the outline port construction management plan) has been submitted to and approved by the relevant highway authority, or confirmation has been given that no port construction traffic management plan is required. This provision is identical to the one secured in the EA2 DCO[23], also at requirement 36 in part 3 of schedule 1.

8.36 EA1N's and EA2's outline port construction traffic management and travel plans (appended to this LIR at Appendices L and M, respectively) illustrate the type of management strategy, measures and monitoring which could be included in a final port construction management plan.

8.37 SCC strongly encourages the Applicant to also develop a Travel Plan for its offshore workforce during the construction and operational phases of the project, as was included in the port management plans for EA1N and EA2. Doing so would give the Applicant the opportunity to explore and promote sustainable transport options, such as rail, bus and bicycle, for its workforce, as required by paragraphs 5.14.7, 5.14.8, 5.14.9 and 5.14.18 of EN-1, Policy WLP8.21 and Policy SCLP7.1. SCC is not aware of any reason, policy or legislative requirement which would exempt the Applicant's workforce for its offshore activities to be exempt from sustainable transport requirements. Most ports in Suffolk are well-connected to public transport networks, meaning that sustainable transport is highly feasible for workers.

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[22] See *The East Anglia ONE North Offshore Wind Farm Order 2022*, available at: https://www.legislation.gov.uk/uksi/2022/432 [Accessed 11 October 2024]
[23] See *The East Anglia TWO Offshore Wind Farm Order 2020, available at: https://www.legislation.gov.uk/uksi/2022/433* [Accessed 21 October 2024]

8.38 SCC appends the following examples of successful Port Travel Plans (as appendices N and O) to this document. These examples are Port Travel Plans produced by EA1 and EA3, which set out detailed strategies for promoting and monitoring sustainable travel for the projects' workforce travelling to ports. SCC considers paragraph 5.14.7 and section 2.6 of EN-1 to show that the rationale for travel plans is not only mitigative but also for the positive environmental effects which can be gained by promoting sustainable transport options.

8.39 SCC extends its point on the production of a Port Travel Plan and the cited policies to support the notion that the Applicant should also produce a dedicated Workforce Travel Plan for onshore works, rather than including workforce travel as a minor part of the OCTMP, to encourage and promote the sustainable travel of its workforce. Such a plan is of interest to Suffolk insofar as it would contribute to Suffolk's net zero and sustainable travel goals, as shown in policies such as Policy WLP8.21, Policy LP29 and Policy SCLP7.1. A workforce travel plan would also demonstrate compliance with sections of EN-1, such as paragraphs 5.14.7, 5.14.8, 5.14.9 and 5.14.18. SCC believes that a thorough, dedicated Workforce Travel Plan is necessary to reach the Applicant's requirement of 1.5 workers per vehicle for its workforce due to the difficulty similar projects have faced in reaching this target. Often, undertakers required well-planned extensive strategic interventions to meet this target. Since the Applicant has assessed the realistic worst-case scenario based on 1.5 workers per vehicle, it should be justifiably certain that this ratio will not be exceeded. At present, the Applicant seems to underestimate the challenge of achieving this. A dedicated Workforce Travel Plan would allow thorough consultation and input from stakeholders to ensure a high likelihood of this target being met. SCC is happy to offer its input and be consulted to aid with the successful drafting and implementation of a Workforce Travel Plan.

8.40 SCC is concerned that it is not considered as a "Highways Stakeholder" in the TMCO Stakeholder Coordination / Collaboration Structure [APP-251, Plate 1.1]. As demonstrated in this Local Impact Report, SCC has several concerns regarding highways impacts of this project as they relate to Suffolk resulting from: workforce movement from Suffolk, offshore construction and operational activities, goods and workforce transportation to ports in Suffolk, impacts on the A12 as they affect Suffolk businesses and residents and AIL movements and escorts. To SCC, it is concerning that it is not considered a relevant highways stakeholder, considering that the Applicant's activities are likely to include the use of Suffolk's local road network and the use of the SRN both within and adjacent to Suffolk upon which many Suffolk businesses and residents rely. The only circumstance in which SCC could consider itself to not be a relevant highways stakeholder, as a local highways authority, would be if the Applicant secured in relevant control documents that it would ensure that no highways impacts, including those from AIL movements, would affect Suffolk. Considering that this is likely to be viewed as an unrealistic and overly restrictive condition, the Applicant should instead consider SCC to be a relevant highways stakeholder so that SCC is properly informed of the Applicant's highways activities as they relate to Suffolk and give its input on how the Applicant can best manage these impacts.

9 Economic development and skills

Table 4 - Summary of impacts – Economic Development and Skills

SCC impact reference	Description of impact	Construction (C) / Operation (O) / Decommissioning (D)	Negative/ Neutral/ Positive	Required mitigation and how to secure it (change / requirement / obligation)	Policy Context
Supply Chain and Economic Development					
ED01	Potential for negligible additional spend from a non-home-based workforce.	C/D	Neutral	None required	
ED02	Opportunities for investments in the local economy as part of the construction programme and associated local/regional supply chain opportunities. This includes but is not limited to; Local Supply Chain Opportunities Inward Investment Opportunities	C/O/D	Neutral	Neutral, however if suitable strategies delivered with local partners engage local small-medium enterprises ("SMEs") within the supply chain, this could be a positive impact. Applicant is expected to engage with existing economic development departments and programmes led by Councils and local organisations to maximise opportunities; Economic Investment – i.e strategic and co-ordinated project planning to inform our economic planning. Skills Development – see below impacts Inward Investment – i.e. Contracted Tier 1 and 2 engagement/introductions	Suffolk County Council's Energy and Climate Adaptive Infrastructure Policy. Policy SCLP3.4 NPS EN-1 section 5.13

				Supply Chain/Business Support – for example Meet the Buyer, Local Procurement Content, Procurement Feedback	
Employment, Skills and Education					
ED03	Local Employment opportunities from the construction; opportunity for local employment creation. Positive impact: Local employment opportunities with progression routes. Well paid, skilled employment opportunities for local people. Negative impact: only low pay, low skills, low progression employment offered locally, or no employment offered locally. Further work by the applicant is required relating the expected number and nature of employment opportunities to the expected availability of labour in the area, given the large number scale of energy projects proposed in the region.	C/O/D	Neutral	With the appropriate agreements, strategies and collaboration with the promoter this could be a positive impact. The applicant is expected to work collaboratively with the Councils to set clear, ambitious and SMART local employment targets that will be monitored and collectively supported to deliver. The applicant is expected to provide more detail in future iterations of the Skills and Employment Plan ("SEP") regarding what specific outcomes and outputs will be monitored to demonstrate social impact. Include details on how the Applicant will adapt its activities in Suffolk to the presence of other, large-scale energy NSIPs, such as Sizewell C, including an absolute commitment to engage and work with the Regional Skills Coordination Function delivered by SCC. For example, Education and	NPS EN-1 paragraphs 5.13.2 to 5.13.5 and paragraphs 5.13.11 and 5.13.12 SCC's Energy and Climate Adaptive Infrastructure Policy: To seek to maximise the benefits of economic growth, skills and STEM (Science, Technology, Engineering and Maths) education inspiration, from energy generation and connection projects, are fully realised for the communities of Suffolk to support the long-term economic growth of the area.

ED04	Opportunities to support and enhance Suffolks Low carbon energy infrastructure skills and training, also leaving a legacy post construction Collaborations with local education and training providers, including further education colleges and training hubs, can enhance vocational training in growing and emerging industries, equipping the local workforce with future-proof skills.	C / O / D	Positive	Skills activity set out in the Skills and Employment Plan can be better integrated and co-ordinated with other NSIP Education and Skills activity. With the correct agreement, strategies and collaboration with the promoter this could be a positive impact. The promoter should, in their Outline Skills and Employment Plan ("OSEP") commit to engagement with SCC's established regional skills coordination function. Develop and deliver a clear plan to maximise apprenticeship opportunities as part of the SEP.	
ED05	Impact on local businesses and on the supply chain of other infrastructure projects in the local area and region due to workforce displacement and churn. Skills Displacement Effect - by attracting labour from existing industries in Suffolk, this can lead to labour shortages and abnormal recruitment requirements/costs in key sectors. This effect is exacerbated when multiple infrastructure projects occur	C/D	Negative	Given that there is a substantial number of nationally significant energy projects in the region that would require a similar skilled worker during the same time period, SCC expect the applicant to quantify and mitigate the negative impact of workforce displacement. The Applicant will need to work with SCC to produce proactive plans and strategies to help control and mitigate the rate of workforce displacement. The developer must actively engage with Suffolk County Council's Regional Skills Coordination Function ("RSCF") to ensure a coordinated	NPS EN-1 paragraph 5.13.6.

	simultaneously, increasing labour market demand			approach to workforce planning and skills development. This includes collaborating on training initiatives, skills and employment planning, and activity to minimise displacement effects from the development and the cumulative impact of multiple NSIPs and Major Projects. Additionally, developers are expected to use and follow the Supplementary Guidance Document: Skills and Workforce as a framework for assessing, mitigating, and maximizing the socio-economic impacts of their project. Compliance with this guidance will ensure alignment with regional workforce strategies, effective skills planning, and the sustainable delivery of local and appropriate employment opportunities	
Tourism					
ED06	Impact on Suffolk as a tourism destination, where wind turbines in the sea scape detract from the environmental quality for recreation activity more broadly and the perception and propensity of people who visit the area.	C/O	Negative	See required mitigation in section 7 *Seascape, landscape and visual amenity* of this LIR.	NPS EN-1 Paragraphs 5.13.4 and 5.13.9. Policy SCLP3.4

The National Policy Statements

9.1 Whilst renewable energy proposals are addressed in overall terms in EN-3, socio-economics is addressed as a generic impact in section 5.13 of EN-1 (see para 1.3.2 of EN-5). The local policies discussed below are generally consistent with that generic guidance.

Overarching Policy Statement for Energy EN-1

9.2 Generic socio-economic impacts of energy NSIPs are covered in Section 5.13 of EN-1.

9.3 EN-1 sets out that the construction, operation and decommissioning of energy infrastructure may have socio-economic impacts at local and regional levels.

9.4 Paragraph 5.13.4 notes socio-economic impacts may include the creation of jobs and training opportunities, the provision of additional local services and improvements to local infrastructure, including the provision of educational and visitor facilities, and effects on tourism. There may be impacts from a changing influx of workers during the different construction, operation and decommissioning phases of the energy infrastructure. This could change the local population dynamics and could alter the demand for services and facilities in the settlements nearest to the construction work (including community facilities and physical infrastructure such as energy, water, transport and waste). There could also be effects on social cohesion depending on how populations and service provision change as a result of the development.

9.5 Paragraph 5.13.4 also covers potential cumulative impacts of development: if development consent were to be granted for a number of projects within a region and these were developed in a similar timeframe, there could be some short-term negative effects, for example a potential shortage of construction workers to meet the needs of other industries and major projects within the region

9.6 Paragraph 5.13.5 states that applicants should "*refer to how the development's socio-economic impacts correlate with local planning policies.*"

9.7 Paragraph 5.13.6 states socio-economic impacts may occur in isolation or be linked to other impacts, for example the visual impact of a development is considered in under landscape and visual impact assessment but may also have an impact on tourism and local businesses.

9.8 Paragraph 5.13.9 notes decision-makers should consider any relevant positive provisions the developer has made or is proposing to make to mitigate impacts (for example through planning obligations) and any legacy benefits that may arise as well as any options for phasing development in relation to the socio-economic impacts.

Local Plan Policy

East Suffolk Council Local Plan Policies

9.9 Policy SCLP6.1: Tourism, recognises that tourism is a substantial and important part of the East Suffolk's overall economy, which brings benefit to quality of life and well-being of communities.

9.10 The supporting text of Policy SCLP6.1 notes that tourism is an important part of the economy of the former Suffolk Coastal area, contributing 12% to total employment across the District in 2017. The Suffolk Coastal Economic Impact of Tourism Report 2017 identifies that over 6.3 million tourist trips were recorded generating a total of £325 million total tourism value across the plan area. The Ipswich Economic Area Sector Needs Assessment (2017) identifies that growth is expected to be seen within the 'Hospitality and Leisure' sector of the

economy. Tourism is an important part of this sector reflecting both the cultural and natural environment across the plan area.

9.11 Policy WLP2.2: Power Park, recognises the huge potential for growth in the former Waveney area associated with the development of offshore wind farms.

9.12 Policy SCLP3.4 provides the following list of potential economic impacts to be considered and assessed for major infrastructure works:

- Economic strategies recognise importance of the Suffolk Energy Coast Need to maximise the economic growth and balance these against economic and social impacts
- Creation of jobs during the construction, operational and decommissioning stages of all projects Realisation of local economic opportunities and benefits
- Associated demands on local supply chain and sectors which support projects
- Minimise adverse impacts and effects on the tourist economy in east Suffolk and maximise benefits where possible

9.13 Policy SCLP3.4: Economic and community benefits where feasible are maximised through agreement of strategies in relation to employment, education and training opportunities for the local community.

Other Relevant Local Policy

Suffolk County Council Energy and Climate Adaptive Infrastructure Policy

9.14 Skills and growth - SCC will continue working actively with the energy and water sectors, (developers, owners or operators and associated supply chains), Government, and regulators, to facilitate the delivery of the policy, that seeks to ensure the use of best available techniques, to maximise the development of skills, employment, and educational inspiration in Suffolk. The objective being to create a relevantly skilled talent pool, that can take advantage of the opportunities presented by a succession of energy generation, connection, and climate adaptive projects.

9.15 SCC expects that individual promoters will contribute to the delivery of these goals in Suffolk, looking to align the achievement of local priorities with their own, going beyond the minimum measures necessary to mitigate the clearly defined impacts of their project. This process should result in measurable outcomes that, for example, deliver social value.

9.16 SCC expects to have comprehensive and effective engagement with developers and their supply chain partners, to maximise the local business opportunity, skills inspiration, and employment benefits. Wherever appropriate, the Council and developers should promote synergies between projects that enhance these benefits, deliver growth, and attract inward investment.

Positive impacts

Additional spend by non-home-based workforce (ED01)

9.17 The project could provide some benefit in terms of additional spend of non-home-based workers. However, without further evaluation this can only be assumed to have negligible impacts in Suffolk.

9.18 The Applicant could work with the Councils on schemes/strategies encouraging non-home-based workers to spend locally. The Applicant could document its intention to assess these numbers as relevant to Suffolk in future iterations of the OSEP.

Neutral impacts

Supply Chain and Economic Development (ED02)

9.19 The Applicant should work with their associated supply chains, contractors and local partners to recruit and train local people ahead of the construction period which will ensure that they develop their skills and are enabled to move between roles and different types of contracts as we see a range of energy infrastructure projects in the region. The project, as part of the wider energy infrastructure construction projects, is an opportunity to generate skills and employment outcomes and subsequently contribute to the achievement of both national and local policy objectives. The applicant must engage with Suffolk County Council's RSCF to ensure a co-ordinated skills development approach.

9.20 The project could have some minor positive impacts on the local supply chain through investment in local businesses to support delivery of the installation of the project. However, given the relatively short construction period of the project, the benefits on the local supply chain is not expected to have a long-term impact unless consideration is given to the wider network projects and how local supply chain can support all of these. There are, in addition to North Falls, further projects requiring similar skillsets in planning that are expected to be constructed. Therefore, a developed, experienced local supply chain can expand to take advantage of these projects and be in a position to export their expertise to similar largescale project opportunities nationally. To maximise these opportunities, the Council expect the Applicant to work with local stakeholders to develop programmes that will support local businesses to grow and offer their services to supply the promoters project and other related projects within and outside the region.

Local employment and skills opportunities (ED03 and ED04)

9.21 SCC welcome the Applicant's production of an outline skills and employment plan. SCC believes that with a few changes to the OSEP, and through a continued collaborative approach, the project will prove socio-economically beneficial to Suffolk. SCC wishes to work with the Applicant to ensure that its activities in this domain are coordinated with others which are happening in Suffolk to maximise the possible benefits for the people of Suffolk.

9.22 To achieve these positive impacts, including for those furthest from the workforce and vulnerable groups, the applicant would need to identify the different phased skills needs across their total workforce, and then the propensity and flexibility of the labour market within the study area to fill these identified roles. SCC would expect a tightening of the labour market due to other major energy projects, including Sizewell C, taking place in relative proximity at a similar time. In parallel, the Applicant would also need to identify local supply chain companies that can become involved in the project.

9.23 The construction period for this project is predicted to occur during the middle of the construction period for Sizewell C Nuclear Power Station. It is anticipated that there would be significant cumulative pressure on the available workforce. This could reduce the opportunities for securing any skills and employment legacy from the construction workforces as the projects would be occurring in parallel.

9.24 SCC expects the promoter to develop a demonstrable understanding of the wider development environment for their project, and to work with SCC and other promoters to manage and mitigate these impacts.

9.25 SCC also disagrees with the scoping out of projects from the cumulative assessment due to insufficient relevant data from the projects which prevents adequate assessment. Whilst this may be the case at present, SCC contends that it is possible that such data may become available in the future as these projects progress, so the Applicant should commit to including

them in its assessment if relevant data becomes available. Due to the timescale of this project, it is highly likely that at least the operational and decommissioning phases will interact with some phase of these other projects, meaning that it cannot be ruled out that there will be no cumulative interaction between them. Additionally, the absence of evidence is not evidence of absence of impacts, so the notion that the lack of data entails the lack of impact is invalid. Projects scoped out due to a lack of available data include Sea Link and Lion Link. The Norwich to Tilbury Grid Reinforcement project is in a similar stage to these other projects yet is included in the cumulative impact assessment. Regarding Norwich to Tilbury, it should be noted that, despite being scoped into the cumulative effect assessment, the data has not yet been included in cumulative effects on employment [AS-010, table 31.53]. It is not clear whether the Applicant intends to update this data as information becomes available, but as things stand, its inclusion in the CEA has been insufficiently implemented.

9.26 The Applicant needs to work collaboratively with the RSCF and local stakeholders, share detailed skills and job information in advance and provide funding for interventions that will ensure a pipeline of local people can be trained and enter the labour market at the right time with the right skills to take up opportunities that the scheme will provide.

Negative impacts

Workforce displacement and churn (ED05)

9.27 SCC considers there is a likely negative impact on workforce availability to regional businesses due to workforce displacement and churn. Within the region, there are numerous energy infrastructure projects planned and expected to be in construction around the same period as the Applicant's development. These projects would likely require some of the skills and workforce needed for the construction of this project. To mitigate this impact, the Applicant should include provision in the OSEP to work collaboratively with SCC and the RSCF to ensure a strategic approach in order to help control the rate of workforce displacement. Labour required should also include members of the local workforce who might not have the necessary skills without some investment in training locally.

9.28 Labour market churn occurs as workers move between jobs. While the Council welcomes, in principle, opportunities for individuals to access jobs with better pay and enhanced career paths, in this case the Council considers that labour market churn will have a damaging negative impact on the local economy. Given the relatively short construction period of this proposal, any employment churn, where skilled labour prematurely leaves their current local employment to work on the project, will have a damaging negative impact on the local economy.

9.29 SCC acknowledges the Applicant's response to its PEIR Consultation Response Letter [AS-010, table 31.1], in which the Applicant states that there is no action required on the issue of labour market churn since the Applicant's assessment has found no likely significant effects for socio-economic issues. However, several issues of concern, such as workforce displacement and labour market churn, have not been assessed, meaning that the Applicant's assessment does not demonstrate that these impacts will be non- significant and negligible.

9.30 SCC is concerned that there is the potential for cumulative pressures on the local labour force, leading to workforce displacement and a distorted labour market that will adversely impact local businesses. Significant displacement caused by the cumulative pressures of many infrastructure projects, in particular EA1N and EA2, Bramford to Twinstead, Norwich to Tilbury, Sea Link, Lion Link, , Five Estuaries and North Falls together with the Sizewell C nuclear power station, building and operating in the same timeframe will likely lead to wage inflation and potentially reduce the availability of local workers, necessitating in the need for non-home-

based workers traveling into the area. SCC is concerned that the Applicant has not included this issue in its assessment of the socio-economic cumulative impacts of this project together with nearby NSIPs [AS-010, table 31.53].

9.31 The Applicant also recognises the possible benefits from the opportunities to co-ordinate with Five Estuaries in the OSEP [APP-253, section 1.2], though SCC believes that there are opportunities for collaboration with other NSIPs in proximity to the proposed development. Whilst SCC appreciates the mention and consideration of effects on the labour market of several NSIPs in Suffolk, it is not clear to what extent the Applicant intends to collaborate and coordinate activities with these projects and update its strategy according to relevant new information. The Applicant should also ensure that the list of relevant major infrastructure projects [APP-253, section 2.4] is exhaustive. Currently, the EA1N and EA2 offshore windfarms and the Lion Link interconnector are excluded despite their proximity both spatially, temporally and in terms of their similarity in worker-demand to the proposed development. The combination of these points mean that SCC is currently unclear on whether the Applicant will adequately maximise benefits, and mitigate negative impacts, when it comes to skills and employment. It is also important to note that projects like Sizewell C will have construction phases which significantly overlap with the North Falls project's operation phase, so inter-phase interaction should be considered in the cumulative assessment.

9.32 SCC expects the negative impacts of labour market churn to be especially pronounced during the transition from the construction to the operational phases of the project due to the significant shift in the number of workers required by the project as it moves into its operational phase. SCC expects the Applicant to mitigate this impact during this transitional phase by facilitating further opportunities for their workforce. This can be achieved in a variety of ways which will be discussed with the Applicant during consultation regarding the drafting of the SEP. Such methods may include assisting workers in gaining employment in other nearby green energy NSIPs which require similar roles/skills, or finding employment in related, non-NSIP roles/industries. SCC also expects the Applicant to remain engaged with and work alongside the RSCF delivered by SCC during all phases of operations.

Tourism (ED06)

9.33 SCC anticipates that the project, given its location close to the Suffolk Coast & Heaths National Landscape and Dedham Vale National Landscape Area and other rural areas of Suffolk of importance to the tourism economy, could have impacts upon visitor perception, and visitor numbers. In combination with other projects happening simultaneously in the area, the impact could be significant. Moreover, negative impacts on tourism and visitor numbers will likely be greater during the operational phase of the project due to the longer timescale.

Required Mitigation or Resolution

OSEP amendments

9.34 SCC recognises that the focus of the activities outlined in the OSEP is in Tendring, but the Applicant is clear that the OSEP includes commitments relevant to Suffolk [APP-253, section 1.3]. SCC wants to see that the economic and skills benefits maximised in a way which doesn't involve duplicate or discordant initiatives coming forward due to a lack of coordination. This point extends to initiatives, activities and effects on Suffolk's workforce resulting from other NSIPs in the region. So, SCC contends that there should be, written into the Requirement, a clear commitment that there is consultation with SCC, which is coordinating those various employment skills matters within Suffolk, to ensure that the maximum benefit is gained from the measures in the strategy. SCC believes that there is nothing problematic with this proposal and that it is a better way of ensuring that the benefits are widespread and are realised.

Specifically, this requested change to Requirement 18 must ensure that SCC be named as a statutory consultee of the discharging authority of the Requirement.

9.35 Although SCC is happy to be consulted by the Applicant during the formation of the Skills and Employment Plan ("SEP"), SCC ought to be a statutory consultee of the discharging authority for this requirement to ensure that SCC's interests are properly considered by the Applicant. This alteration is vital for SCC to ensure that it is satisfied with the details of the final SEP as they relate to Suffolk and to ensure that the public interest is properly safeguarded in relation to the important issue of skills and employment benefits.

9.36 SCC notes that Suffolk is considered to be a region within the scope of activities which will be carried out by the Applicant as detailed in the final SEP, as stated, for instance, in section 1.3 of the OSEP [APP-253]. It should also be noted that there is a high likelihood that the Applicant's offshore activities, both during the construction and operational phases of the project, will be centred around ports in, or adjacent to, Suffolk due to the proximity of the offshore aspects of the project to the region. This means that the Applicant's skills and employment activities which relate to its offshore activities are likely to be relevant to Suffolk. Moreover, whilst the focus of the activities in the SEP relating to the Applicant's onshore works will focus on Tendring, the Applicant agrees that they will be of some relevance to Suffolk. SCC, therefore, considers it good practice and beneficial for it to be a named statutory consultee of Requirement 18 of the dDCO which relates to the SEP. Also, given that many initiatives will affect Essex as well as Suffolk, it would make sense and be consistent for Essex County Council also to be named as a consultee.

9.37 This could be done by adding the words "after consultation with Essex County Council and Suffolk County Council" at the end of paragraph (1) of Requirement 18.

9.38 SCC understands that the successful implementation of skills and employment activities must be done on a consensual and collaborative basis between the Applicant and relevant authorities. SCC considers its request to be a consultee to the discharging authority to support this principle by ensuring that SCC's position is properly informed and fairly considered by the discharging authority. SCC appreciates the potential for economic benefits to result from the delivery of this project and wants to ensure that activities within Suffolk which contribute towards these positive effects are effectively implemented. By being a named consultee of the requirement, SCC will be able to give feedback in a positive way to the discharging authority on the Applicant's approach to activities in Suffolk. SCC would also be able to suggest changes to facilitate a better approach between the Applicant and SCC towards these activities given the complex and dynamic effects of the many NSIPs happening in Suffolk on its labour market. SCC envisages this process to be mutually beneficial in nature due to the effectiveness of such activities affecting the benefits gained by both the Applicant and Suffolk.

9.39 Being named as a consultee in the DCO, as opposed to being an optional consultee, alters the procedures of the consultation which ensures that SCC's comments are properly informed and fairly considered. As detailed in subparagraph (3) of article 32 and subparagraphs (1) and (2) of article 33 of schedule 1 of the dDCO [AS-022], statutory consultees will be able to request more information, and be informed of extra information, and will be bound to timescales to ensure a swift decision is made by the discharging authority. SCC will also have enough time to give an adequate response to the consultation. The discharging authority will have regard to SCC's comments so far as they are relevant to the decision they have to make, and it will be against SCC's interests to undermine the consensual basis of the Applicant's proposed activities relating to Suffolk.

9.40 SCC notes that neither the OSEP [APP-253], nor the Socio-Economics assessment [AS-010] include any statement on the issue of workforce displacement. SCC contends that the SEP should include workforce displacement within its scope of mitigations. Examples of how this could be achieved include the Applicant assisting its workforce with finding employment after their tenure is complete. This could be achieved either by helping them transition into industries related to their previous ones, or by helping them transition into working on other, similar NSIPs, or by some other means created through collaboration between SCC and the Applicant.

9.41 SCC appreciates that the Applicant includes career transitions in table 8.3 of the OSEP [APP-253] as a raised theme which it plans on approaching with various activities. However, the type of transition referred to only covers the transition into employment with the Applicant and not transition once a worker's services are no longer required by the Applicant. In order to secure a lasting skills and employment legacy from this project, the Applicant should include in its approach activities to ensure that workers who will no longer be needed after the construction period can find employment once their tenure with the Applicant is over.

9.42 To mitigate this impact, the Applicant should also include provision in the OSEP to work collaboratively with SCC to ensure a strategic approach in order to help control the rate of workforce displacement. Labour required should also include members of the local workforce who might not have the necessary skills without some investment in training locally.

9.43 SCC is content with the Applicant's intention to develop the SEP in collaboration with supply chain organisations [APP-253, paragraph 86], and believes that this intention should include collaboration with Suffolk's local supply chain. SCC appreciates the Applicant's identification of relevant parts of Suffolk's supply chain and its relative strengths in relation to the Applicant's offshore construction and maintenance activities [APP-253, paragraph 103] SCC believes that the SEP should include activities and strategies to support the development of local supply chains with the scope extending beyond the Applicant's project. To ensure maximal benefits, Suffolk's supply chain ought to be equipped to deal with future NSIPs of a similar nature to that of the Applicant's. SCC is satisfied that the Applicant is committed to coordinating with Five Estuaries on skills and employment strategies [APP-253, section 1.2] and suggests that the Applicant explore collaborative strategies with other energy NSIPs in Suffolk. This point is especially pertinent to Sizewell C as this project will have the biggest impact on Suffolk's workforce and supply chain both in terms of its demand for workers and the skills and employment activities undertaken. Therefore, SCC considers that it would be beneficial, both for Suffolk and the Applicant, for the Applicant to explore collaborative activities with other NSIPs in Suffolk in order to avoid the occurrence of duplicate and discordant activities.

9.44 SCC expects the Applicant to at least demonstrate that it has considered utilising and engaging with Suffolk's local supply chain, as section 5.13.6 of EN-1 requires. SCC's comments on supply chains should be understood to cover all phases of the project, with emphasis on the construction phase, as this is the phase most relevant to Suffolk's supply chains. Where relevant, SCC's comments cover both the operational and decommissioning phases too. It is vital for the Applicant to ensure that it leaves whatever entities it engages with the tools to thrive after their work with the Applicant is completed.

9.45 SCC is pleased that the OSEP mentions that the Applicant will develop monitoring strategies for their activities whilst engaging with stakeholders and will detail them in the SEP. [APP-253, section 10]. SCC welcome the commitment [APP-253, section 10] to evaluate activities and interventions on a periodic basis but expects that further details will be provided in future

iterations of the SEP as to the specific outputs and outcomes to be monitored and reported on to demonstrate social impact.

9.46 SCC notes that the SEP should include detailed, enforceable commitments to ensure that SCC is satisfied that the Applicant's activities will adequately support the size and diversity of Suffolk's labour pool.

9.47 Whilst SCC appreciates the Applicant's assessments of how NSIPs in Suffolk are projected to impact the workforce, and scoping in of several NSIPs in the region in the cumulative effects assessment, in its OSEP, SCC points out that several relevant NSIPs in Suffolk are scoped out of the cumulative effects assessment [AS-010, table 31.50], namely Sea Link and Lion Link. SCC considers that the reasoning given to scope in Sizewell C applies to Sea Link and Lion Link too.

9.48 Moreover, with the exception of Five Estuaries, the Applicant does not state how it intends to adapt its activities to the various other initiatives undertaken by other NSIPs in Suffolk. The Applicant does state in [APP-253, table 8.3] that it intends to collaborate with nearby projects, but SCC believes that this area should be extended to include other large-scale NSIPs within Suffolk in order for the Applicant to adequately fulfil its stated aims [APP-253, section 5]. SCC requests that the Applicant include a detailed strategy on how it will adapt its approach to its various activities and employment strategies in Suffolk based on the presence of other NSIPs which demand high numbers for their own workforce including commitment to engage with and work alongside the RSCF delivered by SCC.

9.49 Although Suffolk's existing skills infrastructure is mentioned in the relevant section [APP-253, section 2.8], the specifics of such infrastructure listed does not include any reference to Suffolk. So, existing skills infrastructure in Suffolk which the Applicant intends to work and collaborate with should be included in this section.

9.50 SCC acknowledges the activities proposed in the OSEP, including estimated numbers of employees during construction and operations, though it notes that the Applicant does not specify what approximate proportion of the workforce will be homebased and non-homebased, and to what extent they will impact Suffolk economically.

9.51 Critical national infrastructure must not only deliver the Government's energy objectives but also deliver sustainable societal and economic impacts in the regions that are hosting them and as set out in Suffolk County Council's Energy and Climate Adaptive Infrastructure Policy. North Falls, as a responsible corporate entity should actively engage with the Council and its partners to identify and deliver inclusive growth, social value and additional wider benefits.

9.52 SCC notes that the sections relevant to skills, employment and economic development from its Energy and Climate Adaptive Infrastructure Policy and Strategic Engagement are omitted from the OSEP. Such references are relevant to section 3.2 of the OSEP and are desirable to be included. The policy states that applicants ought to seek to maximise their economic benefits, such as from economic growth, skills, STEM education for the benefit of the communities of Suffolk to support long-term economic growth. Applicants should also aim to add social value through their projects and should integrate relevant communities into their projects. Another point of note is the requirement for applicants to promote synergies between projects in order to maximise the resulting economic benefits. It would be valuable for the Applicant to signpost how its OSEP fulfils these criteria, along with the criteria from other relevant policy, so that SCC can be satisfied that the project meets Suffolk's policy requirements.

9.53 SCC welcomes the Applicant's mention of apprenticeships as an example of activities it could undertake in the OSEP [APP-253, table 8.3] but notes that the Applicant should ensure that its apprenticeship strategy adequately covers Suffolk in the final SEP. The Applicant should ensure that it develops a clear, detailed plan for an apprenticeship strategy for Suffolk

in collaboration with SCC in order to maximise apprenticeship opportunities in Suffolk. This point also demonstrates why SCC considers it necessary for itself to be consulted by the Applicant during the formation of the SEP, and with the relevant discharging authority for this Requirement. Such consultation is necessary to ensure that the final apprenticeship strategy is as effective as possible and coordinated with other apprenticeship activities happening within a similar timeframe by other NSIPs in Suffolk.

9.54 There are several mentions of the New Anglia Local Enterprise Partnership in the OSEP which has since been dissolved meaning the data and references should be updated.

9.55 Community benefits should be in addition to the required secondary mitigation for the development, including those based on any emerging requirement in the Government's recent consultation on Community Benefits, which the County Council has responded to. SCC encourages the promoter to consider such community benefit options and would be happy to discuss how community benefits suitable for the locality could be incorporated. Given the visual impacts on the Suffolk coast, community benefit must be considered for those affected communities

Suffolk County Council



North Falls

Local Impact Report Appendix A: Horlock Rules

THE NATIONAL GRID COMPANY plc

NGC SUBSTATIONS AND THE ENVIRONMENT: GUIDELINES ON SITING AND DESIGN

Section 1 INTRODUCTION

1 The National Grid Company plc's (NGC's) policy statement on the environment recognises the importance of giving due regard to protecting and enhancing the environment and taking into account the environmental effects of the Company's actions. The Company has statutory duties in relation to preservation of amenity under Schedule 9 of the Electricity Act 1989, and has published a Schedule 9 Statement setting out the manner in which it proposes to meet these duties.

2 NGC has a statutory duty under the Act to develop and maintain an efficient, co-ordinated and economical transmission system of electricity for England and Wales. New transmission lines, new substations, sealing end compounds, line entries, additions and extensions to existing substations may be required to provide new connections for customers or reinforcement of the national grid system arising from changes in the demand for and generation of electricity.

3 This document explains the approach NGC takes towards such developments (Section II) and contains Guidelines (Section III) to assist those responsible for siting and designing substations to mitigate the environmental effects of such developments and so meet the Company's policy. The document complements the Company's Holford Rules guidelines on the routeing of high voltage transmission lines and when appropriate should be used in conjunction with them.

4 The guidelines are to be used by NGC staff, their consultants, and contractors in the siting and design of new substations and extensions to substations. They reflect the criteria the company requires its staff, consultants and contractors to satisfy.

5 As recognised in its Schedule 9 Statement NGC places importance on consultation with statutory planning and amenity bodies over its proposals for new developments. NGC believes that the availability of these guidelines will assist in such discussions by referring to the main considerations relevant to substation siting, and will thereby assist in achieving the most appropriate siting and design solutions.

Section II NGC'S APPROACH TO DESIGN AND SITING OF SUBSTATIONS

Approach to the Environment

6 NGC's environmental policy recognises the importance of giving due regard to protecting and enhancing the environment and taking into account the effect on the environment of all the Company's actions. Following the principle of integrating environmental considerations into all its activities, NGC seeks to keep known adverse effects on the environment to a reasonably practicable minimum and, in accordance with its duties under Schedule 9 of the Electricity Act, the Company gives due regard to the preservation of amenity and takes reasonable steps to mitigate the effects of its relevant proposals. To achieve these aims the Company therefore has to balance technical, economic and environmental considerations to reach reasonably practicable development proposals.

7 The guidelines (Section III) deal with the amenity issues associated with the siting and design of new substations and major extensions or major modifications to existing substations. They cover a range of key issues from the time options are initially considered to final design, including form, silhouette and colour of the entire development in relation to the surrounding area, and also related issues such as overhead line entries, since these are dominant features in any substation.

Environmental Report

8 In order to achieve these objectives, the environmental effects of new substations and extensions or modifications to existing substations will be assessed and where appropriate an environmental report prepared describing the effects and mitigative measures. Items to be considered are summarised in Appendix A.

Integrating Environmental Considerations into Power System Planning

9 The nature of transmission system planning is such that scheme proposals and options may go through various stages before it is finally decided to proceed with construction.

10 The purpose of each proposal for substation, sealing end compound or line entry development should be set out in a brief, and a range of system and siting options should be evaluated and documentated as part of the selection of the preferred solution. In each case the effects of the overall development on the environment should be assessed, prior to a commitment to a particular site or design.

11 When it is clear a project is likely to proceed, an assessment should be made of any additional skills required to deal effectively with the range of environmental, land use, planning and design issues. Consideration should also be given to consultation as soon as reasonably possible with appropriate statutory planning and amenity bodies.

Liaison with other Electricity Companies

12 NGC will encourage and recommend other parties such as power generators or regional electricity companies to adopt these guidelines when

working with NGC on proposals for substations, sealing end compounds or line entries.

Post Construction Review

13 Following completion of the project, a review should be undertaken to check that the necessary measures identified in the environmental report have been implemented.

Section III GUIDELINES

Overall System Options and Site Selection

1 In the development of system options including new substations, consideration must be given to environmental issues from the earliest stage to balance the technical benefits and capital cost requirements for new developments against the consequential environmental effects in order to keep adverse effects to a reasonably practicable minimum.

Amenity, Cultural or Scientific Value of Sites

2 The siting of new NGC substations, sealing end compounds and line entries should as far as reasonably practicable seek to avoid altogether internationally and nationally designated areas of the highest amenity, cultural or scientific value by the overall planning of the system connections.

- ***Notes:***

  1 Internationally and nationally designated areas of highest amenity, cultural or scientific value are:

  National Parks;
  Areas of Outstanding Natural Beauty;
  Heritage Coasts;
  World Heritage Sites;
  Ramsar Sites;
  Sites of Special Scientific Interest;
  National Nature Reserves;
  Special Protection Areas;
  Special Areas of Conservation.

  2 Care should be taken in relation to all historic sites with statutory protection eg Ancient Monuments, Battlefields and Listed Buildings.

  3 Account should be taken of Government Planning Policy Guidance and established codes of practice.

  4 Account should be taken of any development plan policies relevant to the siting or design of substations.

3 Areas of local amenity value, important existing habitats and landscape features including ancient woodland, historic hedgerows, surface and ground water sources and nature conservation areas

should be protected as far as reasonably practicable.

Local Context, Land Use and Site Planning

4 The siting of substations, extensions and associated proposals should take advantage of the screening provided by land form and existing features and the potential use of site layout and levels to keep intrusion into surrounding areas to a reasonably practicable minimum.

- ***Notes:***

  1 *A preliminary study should be undertaken to identify the extent of land required to meet both operational and environmental needs.*
  2 *In some instances it may be possible to site a substation partially or fully enclosed by existing woodlands.*
  3 *Topographical information should be obtained at an early stage. In some cases a geotechnical survey may be required.*

5 The proposals should keep the visual, noise and other environmental effects to a reasonably practicable minimum.

- ***Notes:***

  1 *Allow sufficient space for screening of views by mounding or planting.*
  2 *Consider appropriate noise attenuation measures where necessary.*
  3 *Use security measures which minimise visual intrusion from lighting.*
  4 *Consider appropriate on-site water pollution prevention measures.*
  5 *Consider adjoining uses and the amenity of local inhabitants.*

6 The land use effects of the proposal should be considered when planning the siting of substations or extensions.

- ***Notes:***

  1 *Issues for consideration include potential sterilisation of nationally important land, eg Grade 1 agricultural land and sites of nationally scarce minerals.*
  2 *Effects on land drainage.*

Design

7 In the design of new substations or line entries, early consideration should be given to the options available for terminal towers, equipment, buildings and ancillary development appropriate to individual locations, seeking to keep effects to a reasonably practicable minimum.

- ***Notes:***

  1 *With outdoor equipment, a preference should be given normally to a low profile design with low height structures and silhouettes*

appropriate to the background.

2 *Use lightweight narrow section materials for taller structures especially for gantries over about 6 metres in height.*

3 *Commission exterior design and colours appropriate to the surroundings.*

4 *Materials and colours for buildings, equipment and fencing should be chosen to harmonise with local surroundings.*

5 *Where possible avoid the use of prominent insulators by consideration of available colours appropriate to the background.*

6 *Where possible site buildings to act as visual screens for switchgear.*

7 *Ensure that the design of high voltage and low voltage substations is co-ordinated by early consultation between NGC and its customers.*

8 *Where there are particular technical or environmental constraints, it may be appropriate to consider the use of Gas Insulated Switchgear (GIS) equipment which occupies less space and is usually enclosed within a building.*

9 *Early consideration should be given to the routeing of utility service connections.*

8 Space should be used effectively to limit the area required for development consistent with appropriate mitigation measures and to minimise the adverse effects on existing land use and rights of way, whilst also having regard to future extension of the substation.

- ***Notes:***

1 *Assess the benefit of removing redundant substation equipment from existing sites where this would improve their appearance.*

9 The design of access roads, perimeter fencing, earthshaping, planting and ancillary development should form an integral part of the site layout and design to fit in with the surroundings.

<u>Line Entries</u>

10 In open landscape especially, high voltage line entries should be kept, as far as possible, visually separate from low voltage lines and other overhead lines so as to avoid a confusing appearance.

11 The inter-relationship between towers and substation structures and background and foreground features should be studied to reduce the prominence of structures from main viewpoints. Where practicable the exposure of terminal towers on prominent ridges should be minimised by siting towers against a background of trees rather than open skylines.

END

APPENDIX A

NGC SUBSTATIONS – ENVIRONMENTAL REPORT

Introduction

All proposals for significant extensions of existing substations or for new substations and associated development should be the subject of an environmental appraisal and an environmental report should be produced. The project manager will be responsible for ensuring that an appropriate appraisal is undertaken and report prepared, with due regard to expert advice available to the team.

For a major development a scoping exercise should be undertaken with the contribution of appropriate skills to establish the range and depth of the appraisal. It will generally be appropriate at this stage to consider consultation with the local planning authority.

A clear distinction should be drawn between the preparation of an environmental report which will be undertaken in most cases and a full environmental statement (ES) which may on occasion be required under UK environmental assessment legislation, for example where the substation forms part of a major new power station for which an ES may be needed.

Recommended Content of Environmental Reports for Substations

Section 1

Information describing the project during construction, when operational and on de-commissioning including:-

1.1 Purpose and physical characteristics of the project, including details of access and transport arrangements and employment.

1.2 Land use requirements and other physical features of the project.

1.3 Operational features of the project and relevant measurements of emissions such as noise, vibration, light, heat and electric and magnetic fields.

1.4 Main alternative sites considered and reasons for final choice.

Section 2

Information describing the site and its environment including:-

2.1 Physical features such as

-Flora and fauna
-Soil: agricultural quality, geology
-Water courses including land drainage generally
-Climatic factors

-Historic heritage and archaeological sites
-Landscape and topography
-Local recreational uses
-Proximity of population and any other relevant environmental features.

2.2 The policy framework

The policy framework including all relevant statutory designations such as national nature reserves, sites of special scientific interest, national parks, areas of outstanding natural beauty, heritage coasts, special protection areas, special areas of conservation, regional parks, country parks, national forest parks, local nature reserves, areas affected by tree preservation orders, water protection zones, minerals protection zones, nitrate sensitive areas, conservation areas, listed buildings, scheduled ancient monuments, and designated areas of archaeological importance. It should also include references to Structure, Unitary and Local plan policies applying to the site and the surrounding area which are relevant to the proposed development as well as to any international designations.

Section 3

Assessment of effects on the surrounding area and landscape including:-

3.1 Visual effects, emissions during normal operation, noise, light, impact on local roads and transport.

3.2 Effects of the development on buildings, the architectural and historic heritage and archaeological features.

3.3 Loss of, and damage to flora, fauna and geology.

3.4 Land use/resource effects such as
- quality and quantity of agricultural land to be taken
- sterilisation of mineral resources and alternative uses of the site.

3.5 Changes to hydrographic characteristics.

3.6 Air and Climate

3.7 Indirect matters such as
- traffic (road, rail, air, water) related to the development,
- development associated with the project, eg new roads, sewers, power lines, pipelines, telecommunications etc.

Section 4

Mitigation measures

4.1 Where significant adverse effects are identified, a description of the measures to be taken to avoid, reduce or remedy those effects, eg

a) site planning;

b) technical measures eg equipment selection, recycling of waste or redundant parts, pollution control and treatment, containment (eg shielding of transformers and bunding)

c) aesthetic and ecological measures eg
   - mounding, design, colour, landscaping, tree planting
   - measures to preserve particular habitats or create alternative habitats
   - recording of archaeological sites
   - measures to safeguard historic buildings or sites.

END

Suffolk County Council



North Falls

Local Impact Report Appendix B:

Extracts from East Suffolk Council's Suffolk Coastal Local Plan 2020

Policy SCLP2.2: Strategic Infrastructure Priorities

The Council will work with partners such as the other local planning authorities in the ISPA, Suffolk County Council, Clinical Commissioning Groups, Suffolk Constabulary, utilities companies, Highways England and Network Rail in supporting and enabling the delivery of key strategic infrastructure, and in particular the timely delivery of:

a) A12 improvements;
b) A14 improvements;
c) Sustainable transport measures in Ipswich;
d) Improved walking and cycle routes;
e) Increased capacity on railway lines for freight and passenger traffic;
f) Appropriate education provision to meet needs resulting from growth;
g) Appropriate health and leisure provision to meet needs resulting from growth;
h) Appropriate police, community safety and cohesion provision to meet needs resulting from growth;
i) Provision of green infrastructure and Suitable Alternatives Natural Greenspace;
j) Improvements to water supply, foul sewerage and sewage treatment capacity; and
k) Provision of appropriate digital telecommunications to provide mobile, broadband and radio signal for residents and businesses.

The Council will work with Suffolk County Council and with the other Local Planning Authorities in the Ipswich Strategic Planning Area to support, through a package of funding sources, a range of new and enhanced sustainable transport measures in and around Ipswich.

Supporting text for Policy SCLP2.2: Strategic Infrastructure Priorities

Infrastructure

2.14 Within the Ipswich Strategic Planning Area there are aspirations towards the delivery of a number of key infrastructure projects, and in addition, there will be cross-boundary infrastructure that is required as a result of growth planned within Local Plans.

2.15 The provision of new and improved infrastructure is essential to ensure that the growth planned across the area is sustainable. Planning for infrastructure across the area will include schools, sustainable transport measures, improvements to the A12 and A14, improvements to other parts of the road networks and the railways. In addition to infrastructure requirements directly linked to planned growth, there are other cross-boundary projects that would help to grow and improve the economy and quality of life for the area. Development in the Ipswich Strategic Planning Area is predicted to collectively add to significant strain on the transport network in and around Ipswich. Additional highway capacity will not on its own address these issues and the ISPA authorities agree that robust steps must be taken to prioritise healthy and sustainable travel. A package of transport mitigation measures has been identified to reduce vehicle movements. Suffolk County Council as the Highway Authority has developed a strategy which contains a package of mitigation measures to deliver modal shift and mitigate impacts on the wider Ipswich highways network. These include:

- Transport infrastructure to encourage and support sustainable modes of transport
- A Bus Quality Partnership
- A Smarter Choices programme

- Review of car parking and pricing strategies
- Review of park and ride strategy
- Junction improvements

The strategy which has been developed by Suffolk County Council identifies the costs of delivering these measures and apportionments based on impacts related to planned growth within each local planning authority area. East Suffolk Council is committed to working with the other authorities across the ISPA to ensure that there is a co-ordinated approach to funding the mitigation through the delivery of the Local Plan.

2.16 Over the plan period, the Council will continue to work with neighbouring authorities, service providers and statutory bodies to ensure that strategic infrastructure as detailed in Policy SCLP2.2 is delivered in a timely and effective manner through appropriate funding and delivery mechanisms. Providing a range of infrastructure such as education, health and leisure provision will meet the needs of local communities and businesses and further promote sustainable communities across the plan area. The provision of green infrastructure would also be expected to contribute to the delivery of net gains for biodiversity.



Policy SCLP3.4: Proposals for Major Energy Infrastructure Projects

In its role either as determining authority for development under the Town and Country Planning Act, or as consultee on Nationally Significant Infrastructure Projects, the Council will take into consideration the nature, scale, extent and potential impact of proposals for Major Energy Infrastructure Projects, including cumulative impacts throughout their lifetime, including decommissioning of existing plant and facilities.

The Council will work in partnership with the scheme promoter, local communities, National Grid, Government, New Anglia Local Enterprise Partnership, service providers, public bodies and relevant local authorities to ensure significant local community benefits and an ongoing legacy of the development is achieved as part of any Major Infrastructure Projects as outlined in Table 3.6.

Proposals for Major Energy Infrastructure Projects across the plan area and the need to mitigate the impacts arising from these will have regard to the following policy requirements:

a) Relevant Neighbourhood Plan policies, strategies and visions;
b) Appropriate packages of local community benefit to mitigate the impacts of disturbance experienced by the local community for hosting major infrastructure projects;
c) Community safety and cohesion impacts;
d) Requirement for a robust Environmental Impact Assessment
e) Requirement for a robust Habitats Regulations Assessment;
f) Requirement for a robust Heritage Impact Assessment;
g) Requirement for robust assessment of the potential impacts on the Suffolk Coast and Heaths Area of Outstanding Natural Beauty;
h) Appropriate flood and erosion defences, including the effects of climate change are incorporated into the project to protect the site during the construction, operational and decommissioning stages;
i) Appropriate road and highway measures are introduced (including diversion routes) for construction, operational and commercial traffic to reduce the pressure on the local communities;
j) The development and associated infrastructure proposals will seek to deliver positive outcomes for the local community and surrounding environment;
k) Economic and community benefits where feasible are maximised through agreement of strategies in relation to employment, education and training opportunities for the local community;
l) Measures to ensure the successful decommissioning and restoration of the site through appropriate landscaping is delivered to minimise and mitigate the environmental and social harm caused during operational stages of projects;
m) Cumulative impacts of projects are taken into account and do not cause significant adverse impacts; and
n) Appropriate monitoring measures during construction, operating and decommissioning phases to ensure mitigation measures remain relevant and effective.

Supporting text for Policy SCLP3.4: Proposals for Major Energy Infrastructure Projects

Major Energy Infrastructure

3.52 The Suffolk Coast is at the forefront of electricity energy generation across the country both in respect of onshore and offshore energy. It is essential that major energy infrastructure projects are delivered in a planned way which takes into account the potential impact of constructing, operating and decommissioning large and nationally significant infrastructure in East Suffolk. The Council is committed to working in a collaborative partnership approach with the scheme promoters, local communities, Government, New Anglia Local Enterprise Partnership, service providers and public bodies to ensure the best outcomes of major energy infrastructure projects can be achieved.

3.53 The Government, through the Department for Business, Energy and Industrial Strategy is committed to the increased delivery of Nuclear Energy Provision across the country. A new nuclear power station at Sizewell is a nominated site in the National Policy Statement for Nuclear Power Generation EN6 as part of this national package. Nuclear Energy has been generated at Sizewell since the 1960's and the operation of the site will continue beyond the plan period as a result of the separate operations that take place such as the decommissioning programme at Sizewell A and the continued production at Sizewell B and at a new station.

3.54 The decisions in respect of the new power station will be taken at a national level as a Nationally Significant Infrastructure Project (NSIP) with various regulators assessing safety, security and other issues through the necessary design and construction. Decisions on any other energy related projects identified as NSIPs will also be taken at a national level, taking into consideration relevant National Policy Statements. The Council would be a statutory consultee in this process. However it is considered that one of the biggest development and construction programmes faced by the Council and its communities in generations should be developed alongside the overall policy framework for East Suffolk to enable the impacts and benefits to be managed, including addressing the issues of cumulative impact and outcomes of other large scale projects.

3.55 The role of the Local Plan will be to consider the suitability of any specific proposal and the mitigation of local impacts (both positive and negative) on the communities across the plan area and to realise the economic benefits during the construction, operation and decommissioning stages. The current Sizewell site is a rural location in close proximity to the town of Leiston and other nearby settlements such as Aldringham cum Thorpe and Eastbridge. In addition the wider highway and rail network to this location is challenging. As well as the social impacts affecting the communities nearby, the environmental impacts of a site on the coast, within the Area of Outstanding Natural Beauty and close to protected landscapes such as Sizewell Marshes and Minsmere Nature Reserve, and the impact on the Suffolk Seascape will need to be assessed both during construction and beyond. Impacts on the historic environment should be avoided, and if not possible, minimised. Opportunities to co-locate infrastructure may reduce impacts, and there may be opportunities to enhance the setting of assets through restoration after construction, operation and decommissioning. Focus should be on prevention of impact on the natural and historic environments as opposed to compensation for the effect. Where a project involves multiple consents, developers will be expected to work collaboratively with authorities to prepare a project wide Habitats Regulations Assessment.

3.56 Although the provision of nuclear energy is currently prominent, the Suffolk Coast is increasingly coming under pressure to support developments associated with the off shore energy sector and linking this into the national grid, as well as inter-continental connections to enable the exchange of electricity with other countries. Investment in a variety of major energy infrastructure projects needs to be supported by infrastructure and facilities on shore and these sectors are expected to require land to enable activities over the plan period. Where new major energy projects are proposed, potential alternative sites, located outside of designated areas should be considered at an early stage. Where possible companies and developers will be encouraged to work collaboratively and share infrastructure and facilities that serve other requirements to reduce any potential impacts during the construction, operation and decommissioning stages of projects.

3.57 The cumulative impact of hosting a variety of major energy infrastructure facilities in the area is likely to have an impact on existing and future generations. To balance this impact a variety of local economic, environmental and community mitigation and enhancement measures may be required to ensure proposed Major Energy Infrastructure Projects are acceptable in planning terms. Community mitigation and enhancement could take many different forms over the plan period, but in land use terms these could be in the form of but not limited to examples such as sports facilities, meeting places, woodland planting schemes or habitat creation. Any measures proposed would need to be in accordance with the tests for planning obligations and planning conditions set out in the National Planning Policy Framework.

3.58 The timing of the Major Energy Infrastructure Projects across East Suffolk is not yet confirmed and the planning, construction, operation and decommissioning of existing and future projects are likely to be beyond the Local Plan period but are required to have regard to the policies in the Local Plan. It is not possible to fully identify all the issues that may arise as a result of individual or cumulative projects for local communities and operators. As such, this will need to be kept under consideration alongside future reviews of the Local Plan.

3.59 A variety of local issues have been identified by the Council, as local planning authority, which need to be addressed in relation to Major Energy Infrastructure Projects. The Council will work with the local community, other local authorities, Government agencies, service providers and operators to ensure the most successful outcomes are achieved. Although Table 3.6 identifies a variety of issues that may not be relevant to every Major Energy infrastructure Project, it is intended to inform pre-application and early engagement discussions and provides an early view on potential constraints and opportunities across the plan area.

Table 3.6 – Themes that may be relevant to the consideration of energy infrastructure proposals during the construction, operation and decommissioning stages.

Theme	Issue – what do we need to consider as East Suffolk on these aspects?
Community	▪ Engagement with the local community on the provision of infrastructure ▪ Housing ▪ Community facilities ▪ Health facilities
	▪ Police facilities ▪ Legacy and local community benefits for hosting major significant energy developments
Economic Opportunities	▪ Economic strategies recognise importance of the Suffolk Energy Coast ▪ Need to maximise the economic growth and balance these against economic and social impacts ▪ Creation of jobs during the construction, operational and decommissioning stages of all projects ▪ Realisation of local economic opportunities and benefits ▪ Associated demands on local supply chain and sectors which support projects ▪ Minimise adverse impacts and effects on the tourist economy in east Suffolk and maximise benefits where possible
Emergency Planning	▪ Requirement for a co-ordinated Emergency Plan to be established across all organisations
Environment	▪ Sites located within the Area of Outstanding Natural Beauty and Heritage Coast ▪ Impact on designated and protected landscapes and habitats. Projects to be supported by Habitat Regulations Assessment ▪ Physical form, scale and appearance of buildings within the landscape ▪ Impact on built, historic and natural environment arising from development, operation and decommissioning of projects ▪ Potential impact on designated heritage assets, non-designated heritage assets, archaeological assets, and their settings, in the areas within and surrounding Major Energy Infrastructure Projects ▪ Risk of significant dust deposition and damage to vulnerable landscapes including Minsmere Nature Reserve ▪ Impact on Suffolk Seascape ▪ Impact of light pollution to nocturnal species, on the AONB and the historic environment ▪ Appropriate landscaping of sites after the decommissioning phases ▪ Habitat loss and noise disturbance for species and noise disturbance regarding the historic environment ▪ Effect of light and dust on nature conservation sites and the historic environment ▪ Impact on tranquillity
Flood Risk Management and Coastal Change	▪ Potential sites for Major Energy Infrastructure Projects located on an active coast line ▪ Coastal management, erosion, adaptation ▪ Flood risk related to estuaries ▪ Effect of climate change on the coastline and hydrological processes ▪ Detrimental impact on the sea bed and coastal foreshore environment

Health	▪ Construction and transportation noise impact on local communities ▪ Long term loss of tranquil areas ▪ Loss of large areas of countryside used for leisure and tourism ▪ Negative impact on air quality
Housing and Accommodation	▪ Provision of campus style accommodation for construction workers ▪ Influx of construction workers into the area and overwhelming the accommodation opportunities for local people and people visiting the area
Training and Education Opportunities	▪ Availability of skills in the local area ▪ Upskilling of the local workforce through appropriate training programmes and education ▪ Investment in training opportunities for the local workforce
Transport Network	▪ Local roads are not well suited to carrying the number or type of vehicle movements that will be necessary to enable construction and operation of Major Energy Infrastructure Projects ▪ Agreement of dedicated routes with local community participation ▪ Need for park and ride facilities to be created ▪ Inadequate provision of laybys on the road network across Suffolk ▪ Cumulative impact of other associated growth across and outside of Suffolk ▪ Utilisation of existing rail networks

Policy SCLP6.1: Tourism

The Council will seek to manage tourism across the plan area in a way that protects the features that make the area attractive to visitors, and supports local facilities where the local road network has the capacity to accommodate the traffic generated from proposals.

Proposals which improve the visitor experience and support opportunities for year round tourism will be supported where increased tourism uses can be accommodated.

Proposals for tourist related development will be determined by the area's capacity for further growth in the following locations:

a) The resorts of Felixstowe and Aldeburgh;
b) Market towns of Woodbridge, Framlingham, Saxmundham and Leiston;
c) The Heritage Coast environment which is of national significance;
d) The Suffolk Coast and Heaths Area of Outstanding Natural Beauty; and
e) Rural areas across the rest of the District.

Applicants will be expected to undertake biodiversity and habitat assessments to ensure that any development of tourism related facilities does not conflict with environmental policies. Where appropriate the Council will support the introduction of local management solutions to address any issues caused by tourism.

Supporting text for Policy SCLP6.1: Tourism

6 Tourism

6.1 The tourism sector is a substantial and important part of the area's overall economy, which brings benefit to the quality of life and the wellbeing of communities. The area succeeds in attracting visitors for a variety of reasons, but the character and appeal of its landscapes, villages and market towns is of fundamental importance.

6.2 Tourism supports businesses, facilities, town centres and community life across the plan area. Destinations throughout the plan area are popular for holidays, overnight stays and with residents of the district, nearby areas and further afield. Sustainable growth in tourism can promote a better understanding and appreciation of the natural, built and historic environment, which in turn will help to maintain these finite resources for future generations.

6.3 Visitors to the former Suffolk Coastal area are attracted by the character, culture, history, festivals, music, art, film, food and drink, clean beaches and spectacular coastline, river valleys, and the outstanding countryside and wildlife found across the plan area. Capitalising on these strengths will enable the area to continue to attract year round tourism trade.

6.4 Tourism is an important part of the economy of the former Suffolk Coastal area, contributing 12% to total employment across the District in 2017. The Suffolk Coastal Economic Impact of Tourism Report 2017 identifies that over 6.3 million tourist trips were recorded generating a total of £325 million total tourism value across the plan area. The Ipswich Economic Area Sector Needs Assessment (2017) identifies that growth is expected to be seen within the 'Hospitality and Leisure' sector of the economy. Tourism is an important part of this sector reflecting both the cultural and natural environment across the plan area.

6.5 The former Suffolk Coastal area offers a diverse range of tourism experiences to satisfy all tastes. The strength of the tourism offering in the peak summer months have created a seasonal tourism environment and it is important to exploit opportunities which support the tourism offer all year round. Weaknesses include low pay and productivity in the sector along with gaps and inconsistencies in the overall offer made to visitors alongside strong competition from other local, national and international locations.

6.6 The East Suffolk Business Plan, the East Suffolk Tourism Strategy and the East Suffolk Economic Growth Plan 2018 strive to build on the strength of the tourism economy and set out aims for increasing visitor numbers outside of the main tourist season including delivering and supporting cultural and sporting events. Supporting the industry is of great importance but it must not be at the expense of the sensitive natural and historic assets and attractions that draw people in to the area.

6.7 Popular tourism destinations include locations within the Area of Outstanding Natural Beauty (AONB), Heritage Coast, forests, estuaries, seaside towns and historic villages. This could result in some places and communities experiencing potential significant adverse impacts such as loss of natural habitats or overcrowding. The Local Plan seeks to reduce these impacts whilst increasing the volume and value of tourism trade and extending the tourist season to support compelling destinations and visitor experiences.

6.8 The Local Plan recognises the Suffolk Coast and Heaths AONB as vitally important to the tourism industry . The 2018 AONB Management Plan identifies the natural beauty, tranquillity and historic assets within the AONB as supporting social wellbeing and the local economy.

6.9 The National Planning Policy Framework encourages development of tourism initiatives in urban and rural locations, provided the character of the countryside is respected, and pollution and other adverse effects on the local and natural environments are minimised. The NPPF encourages the retention and development of accessible local services and facilities. In the plan area tourism uses can support local facilities but it is important to maintain a balance between facilities meeting the needs of visitors and communities. Sustainable tourism, as advocated in the AONB Management Plan, is strongly supported in the implementation of tourism development throughout the plan area, but with particular regard to the AONB and Heritage Coast. Along the Heritage Coast it is important that sustainable tourism is integrated with local economic and community benefits, conservation and enhancement of its unique environment and valuable natural resources.

6.10 The Suffolk Coast Tourism Strategy 2013-2023 further advocates support for sustainable tourism, with a strong reputation for its positive environmental values which attract visitors throughout the year, and encourage effective partnership working to balance the environmental, heritage, economic, and community priorities. The Suffolk Coast Destination Management Organisation (DMO) is the organisation established to manage the improved delivery, co-ordination, facilitation, and monitoring of the key elements of the tourism strategy across the Suffolk Coast, through the development and marketing of the Suffolk Coast area as a visitor destination.



Policy SCLP7.1: Sustainable Transport

Development proposals should be designed from the outset to incorporate measures that will encourage people to travel using non-car modes to access home, school, employment, services and facilities.

Development will be supported where:

a) Any significant impacts on the highways network are mitigated;
b) It is proportionate in scale to the existing transport network;
c) All available opportunities to enable and support travel on foot, by cycle or public transport have been considered and taken;
d) It is located close to, and provides safe pedestrian and cycle access to services and facilities;
e) It is well integrated into and enhances the existing cycle network including the safe design and layout of new cycle routes and provision of covered, secure cycle parking;
f) It is well integrated into, protects and enhances the existing pedestrian routes and the public rights of way network;
g) It reduces conflict between users of the transport network including pedestrians, cyclists, users of mobility vehicles and drivers and does not reduce road safety; and
h) The cumulative impact of new development will not create severe impacts on the existing transport network.

Development will be expected to contribute to the delivery of local sustainable transport strategies for managing the cumulative impacts of growth.

Opportunities to improve provision of or access to public transport, in rural and urban areas will be supported.

Proposals for new development that would have significant transport implications should be accompanied by a Travel Plan. A Travel Plan will be required for proposals for:

i) New large scale employment sites;
j) Residential development of 80 or more dwellings; and
k) A development that when considered cumulatively with other developments, is likely to have a severe impact on the local community or road network.

In consultation with the Highway Authority, the scale, location and nature of development will be considered in determining how the transport impacts of development should be assessed. As indicative thresholds a Transport Statement will be required for development of 50 -80 dwellings and a Transport Assessment and Travel Plan will be required for developments of over 80 dwellings. Non residential development will be considered on a case by case basis dependent on the volume of movements anticipated with the use proposed.

Supporting text for Policy SCLP7.1: Sustainable Transport

7 Transport

7.1 The Suffolk Coastal Local Plan area has a mixture of urban and rural settlements with limited public transport opportunities in certain parts of the plan area which places a heavy reliance on the private motor car as a form of transport to conduct day-to-day business. Many local roads are single track and unsuitable for conventional public transport and the lack of alternatives increases the use of the private motor car across the plan area. For those residents and visitors close to a range of facilities a bicycle may offer an alternative or additional transport option but this is limited.

7.2 As a result of this, the Local Plan seeks to acknowledge that sustainable transport opportunities are limited and appropriate provision for vehicle parking is required alongside developments and to maintain the viability and vibrancy of the area's town centres, visitor locations and wider communities. The Local Plan outlines strategic ambitions in respect of transport and highways infrastructure in Chapters 2 and 3. Policies in this chapter relate to local and site specific transport issues.

7.3 The Council has prepared a parking strategy and policies as part of Civil Parking Enforcement to be introduced across the District in April 2020. The Parking Plan details the Council's approach to parking management and enforcement, and the Local Plan helps to deliver the objectives through appropriate parking provision and sustainable transport as part of new developments.

Sustainable Transport

7.4 Many areas do not have access to convenient public transport and many local roads are single track and unsuitable for conventional public transport such as buses. This is reflected by the level of household vehicle ownership in the plan area which amounts to 86% compared to a national average of 74% (Census, 2011). Furthermore, approximately 44% of people in the plan area use a car as their primary mode of travel to work compared to a national average of 37% (Census, 2011).

7.5 In order to mitigate the cumulative impacts of growth in the Ipswich Strategic Planning Area on junctions and roads in and around Ipswich, and to promote healthy travel options, a package of transport measures has been identified to reduce vehicle movements. They include:

- Transport infrastructure to encourage and support sustainable modes of transport
- A Bus Quality Partnership
- A Smarter Choices programme
- Review of car parking and pricing strategies
- Review of park and ride strategy
- Junction improvements

Sustainable transport measures will therefore be expected to promote and deliver modal shift in a manner consistent with local strategies.

'.6 The Suffolk Local Transport Plan 2011-2031 sets out priorities to support the growth of businesses, reducing demand for car travel, making efficient use of transport networks and improving infrastructure. The County Council's Rights of Way Improvement Plan complements the Local Transport Plan by identifying changes that will secure an improved network, contributing to its four shared priorities of reducing congestion, accessibility, air quality and safety. In consideration of this, Policy SCLP7.1 encourages and facilitates the use of sustainable transport options where possible, and supports the efficient use of existing transport networks.

'.7 In designing and assessing development proposals, the Public Rights of Way Network should be considered as a means of encouraging physical activity, providing access to the natural environment, supporting tourism, reducing travel by vehicular modes, reducing carbon emissions and (where relevant) aiding recreational avoidance of sensitive sites.

'.8 Travel Plans are required by the National Planning Policy Framework for all new developments that create significant amounts of movement. The purpose of a Travel Plan is to set out measures to facilitate sustainable forms of travel and reduce the use of the private car. This will help to leave a lighter footprint on the environment by enhancing sustainability and will ultimately create better places to live - an action of the Government's 25 year Environment Plan. It is not necessarily the size of the development that triggers the need for such a plan but more the nature of the use.

'.9 The Council will work in partnership with Suffolk County Council as they draft new guidance for Travel Plans. When published the new guidance will be considered by the Council and adopted for use as a material planning consideration if appropriate.

'.10 Travel planning can offer good practice for meeting the requirements set out in this policy for maximising sustainable transport even on sites that do meet the thresholds for a full travel plan.

Policy SCLP7.2: Parking Proposals and Standards

The Council will work with partners to ensure that vehicle parking provision is protected and managed to support the economy and sustainable communities. The level of parking provision required will depend on the location, type and intensity of use. Proposals that minimise congestion, encourage sustainable transport modes and reduce conflict between road users across the plan area will be supported.

Proposals involving vehicle parking will be supported where they take opportunities to make efficient use of land and they include:

a) The provision of safe, secure, and convenient off-street parking of an appropriate size and quantity including addressing the need for parking or secure storage for cars, cycles and motorcycles, and where relevant, coaches and lorries;
b) Opportunities to reduce the recognised problem of anti-social parking or potential problems that may arise which impacts the quality of life or vitality of an area for residents and visitors;
c) Appropriate provision for vehicle charging points and ancillary infrastructure associated with the increased use of low emission vehicles; and
d) The incorporation of sustainable drainage systems (SuDS), permeable surfacing materials and means of protecting water quality in drainage schemes should be ensured.

Where proposals involve public transport improvements or re-developments, the Council will encourage the provision of Park & Ride facilities, if appropriate.

Proposals will be expected to have regard to the parking standards contained in the Suffolk Guidance for Parking (including subsequent revisions), excluding the elements of the Guidance related to 'Residential Parking Design', unless other local planning considerations indicate otherwise. Proposals should also accord with both the East Suffolk Area Parking Plan and the Suffolk Parking Management Strategy, or Neighbourhood Plans for the area where applicable.

Supporting text for Policy SCLP7.2: Parking Proposals and Standards

Vehicle Parking

7.11 The reliance on the car as a primary form of transport in the plan area necessitates the need for provision of adequate, reasonably priced car parking to maintain the viability and vibrancy of town and district centres, as well as resorts and other areas popular with tourists across the plan area.

7.12 Transport and logistics form a very significant part of the local economy. To support the specific needs of this sector, the Council will work with relevant organisations such as Highways England and Suffolk County Council to ensure that needs such as stopping places are provided. Vehicle parking is an important tool for visitor management particularly in relation to tourism across the plan area. The provision of off-street visitor parking, (including multi storey) particularly where it applies to tourism and town centres, will be supported in appropriate locations.



7.13 Some people, either self employed, or as a condition of their employment, are required to take their work vehicle (such as a van or recovery vehicle) home with them. Modern vehicles tend to be bigger than the size of residential garages and parking spaces which means that these are not always suitable or available for parking. Where possible, the Council will encourage larger residential garages and parking spaces in new and renovated residential development to help address this.

7.14 Many modern vehicles are being manufactured with the aim of decreasing carbon emissions. This has led to the increase of low-emission vehicles as a usable and reliable form of transport. Although the concept of low-emission vehicles has been promoted and embraced in urban areas (such as town centre locations, supermarkets or places of work), rural areas have not seen a similar level of uptake. Notwithstanding this, the National Planning Policy Framework promotes the facilitation of low-emission vehicles. Over the plan period, it is anticipated that technological advances could lead to a wider uptake of such vehicles and the Council will support and encourage the facilitation of low-emission vehicles and their ancillary infrastructure needs, such as:

- Passive electric charging (capacity in the connection to the local electricity distribution network and electricity distribution board, as well as cabling to parking spaces).
- Active electric charging (fully installed and ready-to-use charging points):
  - Rapid charging hubs (22-50kw charging power)
  - On-street electric charging (7kw charging power)
  - Off-street electric charging (3kw charging power)

7.15 The level of charging supplied should reflect the standards set out for electric vehicle charging in the 2019 Suffolk Guidance for Parking (or subsequent revisions). However, higher levels of charging power will be supported, if considered appropriate and desirable. Technological advances throughout the lifetime of the

plan may require a flexible approach to be taken when considering low-emission vehicles and charging points in developments.

Parking Proposals and Standards

6 The level of parking provision required can be influenced by the location of new development, accessibility to public transport, provision for cyclists and the availability of public and on-street parking. The Local Plan recognises that improvements to public transport can reduce the requirement for parking provision, and have a beneficial impact on 'anti-social' parking, particularly with respect to commuter vehicles. The Local Plan will therefore support all improvements in public transport and sustainable travel options that have a positive impact on existing problems of parking provision and congestion at key 'pinch points'.

7 When considering proposals for parking, in order to reduce potential for surface water flooding and for the protection of water quality, sustainable drainage systems should be implemented (SuDS) with permeable surface materials[48].

8 As local highways authority, Suffolk County Council published the current 'Suffolk Guidance for Parking' in 2019. The document provides details in respect of vehicle parking standards to be implemented across the county subject to local considerations. Residential standards in the County Council document are presented as minimums and the Local Plan will seek to ensure appropriate parking does not proliferate the parking issues faced by many communities. The visual impact of parking will be considered against relevant policies of this Local Plan including Policies SCLP10.4 and SCLP11.1. The parking standards contained in the Suffolk Guidance for Parking, and any subsequent revisions, should be considered as the principle starting point for development proposals involving parking. Development proposals involving parking that are unable to apply the guidance should provide evidence justifying why the guidance is not applicable to the proposal.



[48] Examples of such can be found in the CIRIA SuDS Manual which details examples of best practice in this regard.

Policy SCLP10.4: Landscape Character

Proposals for development should be informed by, and sympathetic to, the special qualities and features as described in the Suffolk Coastal Landscape Character Assessment (2018), the Settlement Sensitivity Assessment (2018), or successor and updated landscape evidence.

Development proposals will be expected to demonstrate their location, scale, form, design and materials will protect and enhance:

a) The special qualities and features of the area;
b) The visual relationship and environment around settlements and their landscape settings;
c) Distinctive landscape elements including but not limited to watercourses, commons, woodland trees, hedgerows and field boundaries, and their function as ecological corridors;
d) Visually sensitive skylines, seascapes, river valleys and significant views towards key landscapes and cultural features; and
e) The growing network of green infrastructure supporting health, wellbeing and social interaction.

Development will not be permitted where it will have a significant adverse impact on rural river valleys, historic park and gardens, coastal, estuary, heathland and other very sensitive landscapes. Proposals for development will be required to secure the preservation and appropriate restoration or enhancement of natural, historic or man made features across the plan area as identified in the Landscape Character Assessment, Settlement Sensitivity Assessment and successor landscape evidence.

Development will not be permitted where it would have a significant adverse impact on the natural beauty and special qualities of the Suffolk Coast and Heaths Area of Outstanding Natural Beauty, that cannot be adequately mitigated. Development within the Area of Outstanding Natural Beauty, or within its setting, will be informed by landscape and visual impact assessment to assess and identify potential impacts and to identify suitable measures to avoid or mitigate these impacts. Planning permission for major development in the Area of Outstanding Natural Beauty will be refused other than in exceptional circumstances, and where it can be demonstrated that the development is in the public interest, subject to the considerations set out in the National Planning Policy Framework.

Proposals should include measures that enable a scheme to be well integrated into the landscape and enhance connectivity to the surrounding green infrastructure and Public Rights of Way network. Development proposals which have the potential to impact upon the Area of Outstanding Natural Beauty or other sensitive landscapes should be informed by landscape appraisal, landscape and visual impact assessment and landscape mitigation.

Proposals for development should protect and enhance the tranquillity and dark skies across the plan area. Exterior lighting in development should be appropriate and sensitive to protecting the intrinsic darkness of rural and tranquil estuary, heathland and river valley landscape character.

Neighbourhood Plans may include local policies related to protecting and enhancing landscape character and protecting and enhancing tranquillity and dark skies.

Supporting text for Policy SCLP10.4: Landscape Character

Landscape

10.27 The quality of landscapes, visible features of land or scenery is a defining feature of the former Suffolk Coastal District and the identity of local communities. The diverse landscapes of the former Suffolk Coastal District have been influenced and defined by natural and human activity, including a long tradition of farming. The former Suffolk Coastal District area includes large areas of farmland, much of which is the most productive in the country i.e. grades 1, 2, and 3 under the Agricultural Land Classification[57].

[56] https://www.environmental-protection.org.uk/policy-areas/air-quality/air-pollution-and-planning/

[57] Defra - https://magic.defra.gov.uk/StaticMaps/Agricultural%20Land%20Classification%20-%20Provisional%20(England).pdf

10.28 Since human and natural activity evolves over time, landscape character also changes over time. Positive and beneficial management of that change, including restoration and protection where necessary, is essential to maintaining the quality, distinctiveness and vitality of the local environment.

10.29 The landscape of the plan area is varied but characterised by areas which have important landscape designations such as the Suffolk Coast and Heaths Area of Outstanding Natural Beauty, Heritage Coast and Historic Parks and Gardens. Previous Local Plan documents included a county wide approach in the form of Special Landscape Areas (SLA) which originated from the Suffolk Structure Plan. The SLA designations primarily identified the river valleys and tributaries as areas with special landscape attributes that are particularly vulnerable to change.

10.30 Government guidance and best practice advise that a landscape character assessment approach should be taken to inform policy making and planning decisions, rather than locally defined area specific landscape designations. To accord with Government guidance, the Council commissioned a Suffolk Coastal Landscape Character Assessment (2018) and Settlement Sensitivity Assessment (2018) of the former Suffolk Coastal District Council and the fringes of Ipswich[58]. The evidence provides a tool to help understand the character and local distinctiveness of the landscape and identifies the special qualities and features that give it a sense of place, as well as providing guidance on how to manage change. Landscape character is the distinct, recognisable and consistent pattern of elements that make one landscape different from another. The assessment recognises all landscapes, not just those that are designated, and considers sensitivity to change including in relation to recognised features.

10.31 The Suffolk Coastal Landscape Character Assessment (2018) and Settlement Sensitivity Assessment (2018) analyse the sensitivity of settlement fringes, their capacity to accommodate future development and priorities for the enhancement, protection, management and conservation of these landscape areas.

Suffolk Coast & Heaths Area of Outstanding Natural Beauty

10.32 Areas of Outstanding Natural Beauty (AONB) are national landscape designations afforded the highest protection for their landscape and scenic quality. Protection of the Suffolk Coast and Heaths relates not only to the land within this AONB, but also to its setting. In line with national policy great weight is attributed to conserving and enhancing the landscape and scenic beauty in the AONB and the conservation and enhancement of wildlife and cultural heritage are important considerations. A large part of the AONB is also identified as Suffolk Heritage Coast. The AONB Management Plan explains that the Heritage Coast purpose includes objectives for conserving the environmental health and biodiversity of inshore waters and beaches, and to extend opportunities for recreational education, sport and tourist activities that draw on, and are consistent with, the conservation of their heritage features.

10.33 The conservation and enhancement of the Suffolk Coast and Heaths AONB and its setting is also an important influence within the plan area. Incorporating extensive landscapes, from the River Blyth Estuary

[58] The Settlement Sensitivity Assessment (2018) covers the former Suffolk Coastal District and the area around Ipswich within Ipswich Borough and Babergh and Mid Suffolk Districts.

in the north to landscapes around the River Orwell and River Deben Estuaries in the south, the AONB also extends beyond the plan area to the north and south.

10.34 The Suffolk Coast and Heaths Management Plan 2018 is a material consideration and sets out the management objectives for the AONB. The Management Plan has a key role in supporting and co-ordinating the role of management of the AONB as required by the Countryside and Rights of Way Act 2000. A key objective of the Management Plan is to conserve and enhance the AONB's natural beauty and improve its special qualities. Working with local communities, farmers, businesses, non-government organisations, local authorities, statutory agencies and individuals the AONB Management Plan reflects the co-ordinated activity of the partnership.

10.35 The National Planning Policy Framework under paragraph 172 states that planning permission should be refused for major development other than in exceptional circumstances and where it can be demonstrated that the development is in the public interest, and sets out a series of assessment criteria against which applications for major development would be considered. The NPPF explains that whether a proposal is 'major development' is a matter for the decision maker, taking into account its nature, scale and setting, and whether it could have a significant adverse impact on the purposes for which the area has been designated or defined.



Landscape Character and Assessment

10.36 Landscape character is the distinct, recognisable and consistent pattern of elements that makes one landscape different from another. Landscape assessment helps to describe the important features and characteristics of different areas of landscape. This helps to make recommendations for future protection, management and planning. An up to date Suffolk Coastal Landscape Character Assessment (2018) and Settlement Sensitivity Assessment (2018) are important tools in proposing, shaping and determining proposals for new development, analysing and identifying landscape features and characteristics in particular parts of the plan area . This kind of information and guidance is helpful in the conservation of features that give places their unique character, in identifying opportunities for enhancement and positive change, and in providing evidence to support local action. The Landscape Character Area Maps are contained in Appendix H.

10.37 Landscape assessment is not limited to designated landscapes. It recognises particular qualities and features of landscapes to provide an understanding of distinct sense of place and sensitivities to development and change. Types of landscapes with broadly similar combinations of geology, landform,

vegetation, land use, field and settlement patterns repeat across the plan area. Landscapes belonging to a particular type, such as Valley Meadowlands, may be found in different places. Particularly valued landscape types within the former Suffolk Coastal District of the greatest sensitivity to change are rural river valleys, historic park and garden, coastal, estuary and heathland areas.

10.38 The Settlement Sensitivity Assessment (2018) analyses the sensitivity of settlement fringes, their capacity to accommodate future development and priorities for the enhancement, protection, management and conservation of landscape areas.

10.39 Proposals for development should be informed by, and be sympathetic to, the special qualities and features, strategy objectives and considerations identified in the Suffolk Coastal Landscape Character Assessment (2018) and Settlement Sensitivity Assessment (2018). This evidence may be updated during the plan period in which case successor documents will be used in decision making.

10.40 The Council acknowledges that landscape is important to healthy and active communities across the former Suffolk Coastal District. The Public Rights of Way network and areas of green infrastructure associated with developments support social interaction, well being and ease disturbance on protected wildlife sites, for example, by providing alternative outdoor recreation places. Proposed development should take into account Public Rights of Way and provide enhancements to the network where possible. The provision of new footpaths should ensure that these are accessible for all users.



10.41 The Deben Estuary Plan as well as the Suffolk Coast and Heaths AONB Unit both acknowledge the defining feature of tranquillity in parts of the former Suffolk Coastal District. Tranquillity is categorised by areas of semi-natural habitat, a general absence of developments and apparent lack of human activity. Tranquillity is further enhanced by natural sounds and the areas of darkest skies. Evidence indicates that the areas of the former Suffolk Coastal District with greatest tranquillity are the estuaries, river valleys and heaths. Extensive areas of estuary, river valley and heaths are characterised by relatively little artificial light helping to keep the sky dark at night and supporting quality of light and space, wild bird migration and feeding behaviour and sounds like bird calls, the wind through reeds in estuaries and waves on shingle.

10.42 Neighbourhood Plan groups may choose to produce local landscape character assessments to supplement the Local Plan landscape evidence at the Town or Parish level.

Policy SCLP11.1: Design Quality

The Council will support locally distinctive and high quality design that clearly demonstrates an understanding of the key features of local character and seeks to enhance these features through innovative and creative means.

In so doing, permission will be granted where proposals:

a) Support inclusive design environments which are legible, distinctive, accessible, comfortable, and safe, and adopt the principles of dementia friendly design;
b) Demonstrate a clear understanding of the character of the built, historic and natural environment and use this understanding to complement local character and distinctiveness through robust evidence, informed sources and site specific context and analysis;
c) Respond to local context and the form of surrounding buildings in relation to the following criteria:
    i. the overall scale and character should clearly demonstrate consideration of the component parts of the buildings and the development as a whole in relation to its surroundings;
    ii. the layout should fit in well with the existing neighbourhood layout and respond to the ways people and vehicles move around both internal and external to existing and proposed buildings;
    iii. the height and massing of developments should be well related to that of their surroundings;
    iv. there should be a clear relationship between buildings and spaces and the wider street scene or townscape; and
    v. high quality materials appropriate to the local context should be used;
d) Take account of any important landscape or topographical features and retain and/or enhance existing landscaping and natural and semi-natural features on site;
e) Protect the amenity of the wider environment, neighbouring uses and provide a good standard of amenity for future occupiers of the proposed development;
f) Take into account the need to promote public safety and deter crime and disorder through well lit neighbourhoods and development of public spaces that are overlooked;
g) Create permeable and legible developments which are easily accessed, throughout the site and connections outside the site, and used by all, regardless of age, mobility and disability;
h) Provide highway layouts with well integrated car parking and landscaping which create a high quality public realm and avoid the perception of a car dominated environment. In doing so, proposals will be expected to prioritise safe and convenient pedestrian and cycle movement;
i) Include hard and soft landscaping schemes to aid the integration of the development into its surroundings;
j) Ensure that the layout and design incorporates adequate provision for the storage and collection of waste and recycling bins in a way which does not detract from the appearance of the development; and

k) Utilise measures that support resource efficiency.

All major residential development proposals will be expected to perform positively when assessed against Building for Life 12 guidelines. Developments should seek to avoid red outcomes unless there are exceptional circumstances. All Building for Life 12 assessed schemes will be reviewed once built out and compared to initial BfL12 assessments.

Neighbourhood Plans can, and are encouraged to, set out design policies which respond to their own local circumstances.

Supporting text for Policy SCLP11.1: Design Quality

11 Built and Historic Environment

11.1 The Suffolk Coastal Local Plan area is fortunate to have a rich and varied built and historic environment with significant heritage assets alongside contemporary developments which provide a significant boost to the local economy. The Suffolk Coastal Local Plan area contains around 2,400 Listed Buildings and 36 Conservation Areas, as well as numerous archaeological assets and historic parkland.

Design Quality

11.2 Design is a key principle in the creation of sustainable development and should contribute positively to making communities better for everyone. Good design is concerned not only with how development looks but how it feels and functions. Incorporating both the enhancement of local character and distinctiveness that encourages innovative and creative solutions is encouraged. The Local Plan seeks to plan positively for high quality and inclusive design by creating places that function well, and establish a strong sense of place with comfortable places to live, work and visit. As stated in paragraph 124 of the National Planning Policy Framework 'the creation of high quality buildings and places is fundamental to what the planning and development process should achieve'.

11.3 The National Planning Policy Framework also emphasises high quality design and good amenity standards as a core planning principle. It is therefore, of great importance that design principles are understood and appropriately considered by the Local Plan and planning applications. Creating well designed places that incorporate all aspects of design in an inclusive manner can help to deliver a high quality of life. The Council is committed to providing a framework for good design that contributes to improvements in crime prevention, access and inclusion, safe and connected streets, cohesive neighbourhoods, well connected green spaces, and provision of services. The Local Plan seeks to ensure these principles are brought forward over the plan period. The National Planning Policy Framework also promotes the effective use of land and it is important that this is achieved alongside delivering high quality and inclusive design.

11.4 Local distinctiveness plays an important role in enhancing local character and site specific qualities, the importance of which was highlighted through consultation feedback. The Local Plan encourages design that creates a sense of place and acknowledges local form and character. The aim of development should be to create new and exciting places where people want to live, work and visit. In this regard, design should be of its time and site specific. The National Planning Policy Framework establishes the importance of supporting innovative and outstanding design. The Council encourages this across the Suffolk Coastal Local Plan area where it is respectful of its surroundings. In areas of more limited design quality the Council encourages development to significantly enhance design quality through innovative and creative means. Innovative design should be understood to include, but not be limited to, high levels of sustainability and new construction methods and materials.

11.5 The local character and distinctiveness of the Suffolk Coastal Local Plan area are derived from the diversity of architecture, landscape and coastal setting. These have given risen to an architectural typology not just of farmhouses, picturesque cottages and churches but of resort tourism, military research and defence,

agri-industry, park and garden structures, energy and landed estates. Buildings and structures that typify the Suffolk Coastal Local Plan area range from 16th century moot halls, a wide representation of 16th and 17th century farmhouses, the grandest Georgian country house in Suffolk, designed 18th and 19th century landscapes and 19th and 20th century military airfields, towers and pagodas.

11.6 To help facilitate the understanding of local character and to support development that acknowledges and enhances the essence of local character it is important that the most appropriate information sources are referenced in relevant planning applications. Sources which may assist with identifying and assessing local character include Conservation Area Appraisals, Neighbourhood Plans, village / parish plans and the Suffolk Design Guide.

11.7 The introduction of Neighbourhood Plans in the Localism Act 2011 has encouraged local communities to take an active role in the plan-making process and prepare plans and policies that, in gaining statutory weight, have a real impact on the development of localities. In this regard, Neighbourhood Plans can, and are encouraged to, set out design policies which respond to their own local circumstances.

11.8 The Suffolk Design Guide was adopted as Supplementary Planning Guidance by the Council in 1993, and revised in 2000 to acknowledge changes in national planning policy guidance. Although an ageing document, it is comprised of fundamental design principles that will continue to be important considerations. The Suffolk Local Authorities are in the early stages of reviewing the Suffolk Design Guide which will supersede the current guide, and which will be an important reference in relation to design considerations.

11.9 Local Plan consultation representations support the use of Building for Life 12 (BFL 12). Building for Life 12[59] is advocated in paragraph 129 of the National Planning Policy Framework as a tool to deliver well designed development proposals and to assess development proposals. In this regard, the Local Plan encourages all development proposals to use BFL 12 in demonstrating how the scheme meets the criteria for delivering high quality design. BFL 12 will be used as a tool to assist with design discussions during the pre-application and planning application stages, not as a prescriptive set of inflexible rules. BFL 12 (the most recent nationally endorsed version) will be used to inform the decision making process to provide a design quality assessment against all major applications. These assessments should be undertaken at the earliest possible opportunity in the decision making process so that schemes can be amended to deliver high quality design, if necessary. Residential development proposals will be supported where they perform positively when assessed, by planning officers and/or agreed upon through a dialogue between planning officers and applicant, against the Building for Life 12 guidelines. In demonstrating positive performance, applicants should include a design quality assessment of their proposal using all of the BFL 12 Guideline categories within a Design and Access Statement. Such BFL 12 Guideline categories include; integrating the scheme into its surroundings, locally inspired or otherwise distinctive character, and adequate provision of external storage space for bins and recycling. Such assessments should clearly set out how the elements of a proposal contribute to good design and avoid bad design as detailed in the BFL 12 Guidelines. In addition

[59] Building for Life 12 - Third edition | Design Council

to requiring design quality assessments at the decision making stage, the Council will look to review the design quality of completed schemes.



11.10 The Built for Life accreditation reflects high quality design and provides confidence that appropriate consideration has been given to all aspects of design. BFL 12 operates a traffic light scoring system when assessing developments against the 12 criteria. Developments that achieve at least 9 'green' scores are eligible for the Built for Life quality mark, which indicates a high quality of design has been achieved. Developments that achieve a 'green' score for all 12 criteria can be awarded the Built for Life 'Outstanding' accreditation through an independent assessment process, with the best developments recognised at BFL 12 organised events.

11.11 The Suffolk Design Review Panel was established by the Royal Institute of British Architects Suffolk in 2012, to help consider the design quality of planning applications. Comprised of local design experts, the aim of the Panel is to promote and encourage high standards in design of the built environment across Suffolk. In determining planning applications, regard is given to any recommendations detailed in the reports generated by the Design Review Panel.

11.12 The East Suffolk Quality of Place awards, reviewed by judges which are comprised of local design experts and chaired by a District Councillor, are a celebration of the effort being made by people across East Suffolk to add to the quality of the environment, by creating high quality designs in both the built and natural environment and helping to conserve historic buildings. The best designed developments across the District are recorded on the Council's website.

11.13 The Suffolk Coastal Local Plan area has a large proportion of older residents and as such the need for housing to meet the needs of an ageing population is increasing. The Office for National Statistics predicts the population for the over 65 age group is set to increase by 59.7% between 2014 and 2039 across Suffolk. The RTPI's recent Dementia and Town Planning Document[60] and the Alzheimer's Society state that

[60] Dementia and Town Planning 2017 | RTPI

nationally there are currently 850,000 people living with dementia in the UK. This is set to increase to 1 million by 2021 and to 2million by 2051. It is therefore important that the design of the built environment caters for people throughout their lifetime and is suitable and accessible for people regardless of age, mobility or disability. This policy establishes the considerations against which residential developments will be considered, to provide for the needs of the most vulnerable in our society.

11.14 Creating a high quality environment for the elderly and those with disabilities will also result in a high quality environment for young people, for families with young children, and ultimately for everyone. Felixstowe has established a reputation as a Dementia Friendly Town, which can be attributed to Felixstowe Town Council actively engaging with communities as a Dementia Friendly Organisation and a Dementia Action Alliance Member.

Dementia Friendly Design Principles

- Familiar environments – functions of places and buildings are obvious, any changes are small scale and incremental;
- Legible environment – a hierarchy of street types, which are short and fairly narrow. Clear signs at decision points;
- Distinctive environment – A variety of landmarks, with architectural features in a variety of styles and materials. There is a variety of practical features (e.g. trees and street furniture);
- Accessible environment – Land uses are mixed with shops and services within a 5-10 minute walk from housing. Entrances to places are obvious and easy to use and conform to disabled access regulations.

11.15 Inclusive design is concerned with understanding how we use places differently and how this can inform design decisions for the benefit of all users. Inclusive design is defined as the design of mainstream products and/or services that are accessible to and useable by, as many people as reasonably possible without the need for special adaptation or specialised design. However, it is also important that inclusive design recognises the need for specialised adaptation where necessary. The principles of inclusive design detailed in above should be considered as standard practice and at the earliest possible opportunity in the evolution of development proposals with the aim of creating balanced and mixed communities.



11.16 Developers are advised to undertake pre-application consultation with local communities when proposing development. They are encouraged to seek views regarding local community needs and expectations from a broad spectrum of the community, in relation to the design of a proposal. Applicants are encouraged to engage with communities through the use of Building for Life 12.

11.17 Policy SCLP5.8 Housing Mix details the policy requirements in relation to accessible and adaptable dwellings, under Building Regulations standard M4(2). The requirements will be met where a new dwelling makes reasonable provision for most people to access the dwelling and incorporates features that make it potentially suitable for a wide range of occupants, including older people, those with reduced mobility and some wheelchair users. This policy will help to ensure the principles of inclusive design are met.

Suffolk County Council



North Falls

Local Impact Report Appendix C:

Extracts from East Suffolk Council's Waveney Local Plan 2019

Policy WLP2.2 – PowerPark

Land comprising the PowerPark (23.37 hectares) as defined on the Policies Map is allocated for employment development (use classes B1, B2 and B8) and port related development. Associated and ancillary uses necessary to support the offshore energy and engineering sectors will also be permitted.

Proposals involving the redevelopment or change of use of existing premises, to uses not falling within the uses allocated in the paragraph above will not be permitted.

The Council will work with Suffolk County Council, Associated British Ports, the Environment Agency, the Marine Management Organisation and landowners where practicable to:

- Improve the general appearance of the site through improvements to the public realm, landscaping improvements and on-site branding.
- Improve cycle and pedestrian connectivity to and through the site and ensure sufficient car parking is available.
- Provide wayfinding and orientation facilities including signposting to the town centre, the Scores, the historic High Street, the East of England Park and Ness Point.
- Improve the visibility and appearance of the waterfront. This should include improvements to the current fencing treatment and ensure proposed flood walls are attractive and allow for visibility of the waterfront.

New development and redevelopment within the site should be developed in accordance with the following site specific criteria:

- Provision should be made for cyclists including covered secure cycle parking and showering facilities for employees.
- Development should avoid and if necessary mitigate any impact on the Outer Harbour Kittiwake Colony and Ness Point County Wildlife Site. A completed ecological assessment undertaken by a suitably qualified person will be required as part of any planning applications.
- Proposals should respect the cultural heritage of the area and ensure where possible buildings which are non-designated heritage assets are retained as part of any redevelopment.
- All new development will be subject to a site specific flood risk assessment. A flood evacuation plan and details of mitigation measures to the satisfaction of the Council's Emergency Planners must be submitted with any planning applications.

New development next to, opposite, or in close proximity to the PowerPark should ensure potential conflicts are mitigated through the layout, use and environmental credentials of new buildings. Developers should liaise with businesses and port operators to ensure that potential conflicting uses are addressed prior to any application for planning permission. New development should not result in unreasonable restrictions being placed on the operations of the port or existing businesses within the PowerPark.

Supporting text for Policy WLP2.2: PowerPark

PowerPark

Employment development

2.17 There is huge potential for growth in Waveney associated with the development of offshore wind farms as evidenced in the Employment Land Needs Assessment (2016) and the Assessment of Land Requirements to Support Offshore Energy and Engineering in Waveney (2018). The East Anglia Array which is located just off the coast of Lowestoft will be one of the largest wind farms in the world with a capacity of up to 7GW. The first phase of this scheme has consent and the Outer Harbour which forms part of the PowerPark has been chosen as the construction management and operations and maintenance base for the phase. The second phase is now being considered for consent and four further phases are being progressed to planning. In total it is estimated that at least 1,500 new direct and indirect jobs will be created in Waveney as a result of these developments.

2.18 In addition to offshore wind, there are also opportunities for growth from other offshore related sectors, including oil and gas and other offshore renewables. The Outer Harbour is also home to the Lowestoft fishing industry. The fishing industry also has the potential for growth as noted in the Assessment of Land Requirements to Support Offshore Energy and Engineering in Waveney (2018).

2.19 The PowerPark Demand and Need Report (BVG Associates, 2009) identified that the PowerPark is well placed to capitalise on growth in the offshore energy sector. The study advised that a mix of energy sectors including offshore wind, offshore research and development, and marine engineering will deliver the maximum economic and employment benefit from the PowerPark. Responding to this, the Area Action Plan identified the site as the main focus for a cluster of offshore related businesses. This Local Plan continues this approach as the more recent evidence in the Employment Land Needs Assessment (2016) and the Assessment of Land Requirements to Support Offshore Energy and Engineering in Waveney (2018) continue to support this.

2.20 The land allocated as the PowerPark by Policy WLP2.2 includes land both within and outside the statutory Port of Lowestoft as shown on the Policies Map.



2.21 The allocation borders the East Inshore Marine Plan area. The policy helps support the objectives of the East Marine Plan and is consistent with East Marine Plan policies EC3 and WIND1 and WIND2. These policies and the objectives of the East Marine Plan should be considered in developing proposals in this area.

2.22 The PowerPark is already home to a number of offshore related companies including Greater Gabbard Wind Farm, East Anglia Offshore Wind and Sembmarine SLP. The PowerPark is also home to OrbisEnergy which provides office space for businesses focused on the energy sector. The objective for this site is to further enhance this cluster through new development and redevelopment and re-use of existing premises within the site. There is limited vacant land available within the site for new development, so most development will involve the redevelopment or re-use of existing premises. The Council has prepared a relocation strategy and will continue to support and facilitate existing businesses operating in the area that are not in the energy sector to relocate to other areas within the town. Additional employment land has been allocated by Policies WLP2.13 and WLP2.18 in north Lowestoft which could accommodate businesses wishing to relocate.

2.23 The site includes part of both the North Lowestoft and South Lowestoft Conservation Areas. Therefore proposals should have regard to the National Planning Policy Framework with respect to conservation areas and the local provisions set out in Policy WLP8.39 of this Local Plan. The site also contains some non-designated heritage assets. Careful consideration should be given to the significance of these heritage assets and any potential harm from development in line with Policy WLP8.37. Where possible these assets should be retained as part of new development. Proposals should have regard to WLP8.38 Non-Designated Heritage Assets.



Policy WLP8.21 – Sustainable Transport

Development proposals should be designed from the outset to incorporate measures that will encourage people to travel using non-car modes to access home, school, employment, services and facilities.

Development will be supported where:

- It is proportionate in scale to the existing transport network;
- It is located close to, and provides safe pedestrian and cycle access to services, facilities and public transport;
- It is well integrated into and enhances the existing cycle network including the safe design and layout of new routes and provision of covered, secure cycle parking;
- It is well integrated into, protects and enhances the existing pedestrian routes and the public rights of way network;
- It reduces conflict between users of the transport network including pedestrians, cyclists, users of mobility vehicles and drivers and does not reduce road safety;
- It will improve public transport in the rural areas of the District;
- It includes facilities for charging plug-in and other ultra-low emission vehicles; and
- The cumulative impact of new development will not create severe impacts on the transport network.

Developments should connect into the existing pedestrian and cycle network. Where possible, proposals are to include measures set out in the Waveney Cycle Strategy (2016 and subsequent updates) and demonstrate they have considered how the scheme will encourage people to walk and cycle to access services and facilities where practical.

Subject to design considerations under Policies WLP8.29, WLP8.30 and WLP8.31, new developments will be required to provide parking that meets the requirements set out in the Suffolk Guidance for Parking issued by Suffolk County Council (2014 and subsequent updates).

In consultation with the Highway Authority, the scale, location and nature of development will be considered in determining how the transport impacts of development should be assessed. As indicative thresholds, Transport Statements will be required for residential developments between 50-80 dwellings. Transport Assessments and Travel Plans will be required for residential developments larger than 80 dwellings. Non-residential development will be considered on a case by case basis.

Supporting text for Policy WLP8.21: Sustainable Transport

Sustainable Transport

8.110 In Waveney, the car is the most used method to travel to and from work. Cycling levels are above average for the county and walking is also popular. Bus and train use is below county and national averages.

8.111 The Suffolk Local Transport Plan 2011-2031 sets out a priority to support the growth of businesses, reducing the demand for car travel, making efficient use of transport networks and improving infrastructure.

8.112 The Waveney Local Plan: Suffolk County Transport Model (SCTM) - Preferred Option Traffic Forecasting Report (2018) identified that a number of junctions within the District, particularly in south Lowestoft would be close to capacity by 2036 and would therefore increase congestion.

8.113 Active travel such as walking and cycling positively contributes to public health and reduces the reliance on private vehicles. To encourage people to walk and cycle for convenience and enjoyment it is important that routes are delivered so they are direct, well connected to key local destinations and easy to follow. The Suffolk Walking Strategy (2015) and the Waveney Cycle Strategy (2016) set out the value and benefit of these activities, how existing provision can be improved to encourage greater participation and making use of opportunities afforded by a quality public realm and public right of way network. Delivery of these strategies will be critical in mitigating the impacts of congestion.

8.114 The Public Rights of Way Network has an important role in delivering sustainable development. The network provides a means of encouraging physical activity, providing access to the natural environment, supporting tourism, reducing travel by vehicular modes, reducing carbon emissions and (where relevant) aiding recreational avoidance of sensitive sites.

8.115 Policy WLP8.21 sets out requirements which should help improve the use of sustainable transport options and reduce the risk of congestion. The policy sets out basic principles for encouraging sustainable modes of transport. It also requires developers to have regard to the Waveney Cycle Strategy and subsequent updates.

8.116 Parking provision in new developments can have an impact on the use of private cars and also the success of the development. Suffolk County Council has published parking provision guidance and Policy WLP8.21 requires this guidance to be taken into account. To support the use of low emission vehicles, electric vehicle charging points are to be provided in accordance with the standards set out in the Suffolk Guidance for Parking published by Suffolk County Council and subsequent updates. Due to the potential increase in the use of electric vehicles developers are encouraged to provide each house with on plot parking with at least one electrical charging point accessible from either the driveway or garage. For houses with communal parking, flats and other developments, developers are encouraged to provide ducting and electricity supply to each car parking space to enable the installation of a charging point in the future.

8.117 Large scale developments can have significant impacts on local transport networks. The National Planning Policy Framework states that for developments which are likely to generate significant new movements, Transport Assessments and Travel Plans or Transport Statements should be prepared. Transport Assessments and Statements assess the potential transport impacts of developments and identify mitigation measures to promote sustainable development. Transport Assessments are thorough assessments of the transport implications of development, and Transport Statements are a less detailed evaluation to be used where this would be more proportionate to the potential impact of the

development. Travel Plans are long-term management strategies for encouraging sustainable transport and mitigating the traffic impacts of a development. Suffolk County Council as the Highway Authority can provide advice on the scope and content of Transport Statements, Assessments and Travel Plans. Given the potential impacts of traffic on European protected habitats, particularly the Broads Special Area for Conservation, Transport Assessments should evaluate the potential increase in traffic on streets within 400m of protected sites. Where vehicle movements are likely to significantly increase in these locations, further assessment on air quality and impact on habitats will be required to inform project level Habitat Regulations Assessments.

Suffolk County Council



North Falls

Local Impact Report Appendix D:

Extracts from Part 1 of the Babergh and Mid Suffolk Joint Local Plan 2023

Policy LP29 - Safe, Sustainable and Active Transport

1) All developments will be required to demonstrate safe and suitable access for all and must prioritise sustainable and active transport and maximise the opportunities to utilise these modes in accordance with the transport hierarchy. Where possible, active travel is to be tied in with the green infrastructure network to support net environmental gains.

2) Development will be expected to contribute to the delivery of sustainable transport strategies for managing the cumulative impacts of growth, whilst protecting and enhancing the Public Rights of Way network.

3) All development should be informed by the relevant parking guidance[40], with adequate access for servicing and emergency vehicles.

4) Where necessary, development will be expected to provide home to school transport contributions.

5) Development proposals that are expected to, or likely to cause a significant increase in transport movements must:

    a) Be supported by a transport statement and if appropriate a transport assessment[41]; and
    b) Provide a travel plan informed by the relevant County[42] / National Guidance to mitigate the highway impact of development and maximise sustainable transport modes.

6) Significant impacts on highway safety or the function of the highway network must be mitigated. Impact on highway safety must not be unacceptable and the residual cumulative impacts on the road network must not be severe.

Supporting text for Policy LP29: Safe, Sustainable and Active Transport

LP29 - Safe, Sustainable and Active Transport

Policy background and explanation

16.09 This policy has aims to ensure accessibility for all and to deliver sustainable development. It also seeks to provide a suitable policy framework for more detailed considerations of planning around transport and accessibility.

16.10 The National Planning Policy Framework states that developments that will generate significant amounts of traffic should provide a travel plan, to set out measures to facilitate sustainable modes of transport. SCC have produced new guidance for Travel Plans, for use as a material planning consideration. Furthermore, the National Planning Policy Framework, paragraph 34 states that:- 'Plans should set out the contributions expected from development. This should include setting out the levels and types of affordable housing provision required, along with other infrastructure (such as that needed for education, health, transport, flood and water management, green and digital infrastructure).'

16.11 With regards to home to school transport contributions, these are already being secured through the planning process, where relevant to the development. This is done in accordance with the Department for Education (DfE) publication 'Securing developer contributions for education' (April 2019), which should be read in conjunction with the Planning Practice Guidance (PPG) advice on planning obligations (revised March 2019). It is therefore appropriate for the policy to require development contributions to provide for home to school transport where necessary.

16.12 The health benefits of 'Active Transport' are widely understood and supported, as such Sport England have published 'Active Design' which seeks to promote sport and physical activity in new and existing developments, to create an active environment, through designing and adapting where we live to encourage activity in everyday lives. The Councils have also published a Local Cycling and Walking Infrastructure Plan (LCWIP), which identifies opportunities for cycling and walking improvements at a local level.

16.13 Development should have regard to the most recent County Council Rights of Way Improvement Plan.

Suffolk County Council



North Falls

Local Impact Report Appendix E:

Suffolk County Council's Energy and Climate Adaptive Infrastructure Policy

Suffolk County Council's Energy and Climate Adaptive Infrastructure Policy

Scope and purpose of the policy

Suffolk has specific natural and geographic advantages which make it very attractive for locating offshore wind and interconnection projects. Suffolk has established industries, nuclear, offshore gas logistics and agri-tech, as well as climatic conditions, which make it attractive for specific low carbon technologies, especially new nuclear, solar power, hydrogen production and anaerobic digestion.

The delivery of Net Zero[1] in the UK by 2050 is expected to require a pipeline of generation and connection projects in Suffolk. Therefore, significant changes for the economy, environment and communities of Suffolk can be expected as a result.

Suffolk, in common with the other parts of East Anglia, faces specific climate adaptation challenges in relation to both the availability of water, and the impacts of rising sea levels. These issues present significant challenges for the economy, environment, and communities of Suffolk, now, and in the future. Therefore, it is anticipated that a succession of projects, including pipelines, reservoirs, and desalination plants, will be required to mitigate these issues.

The purpose of this policy is to outline how, in principle, the Council will engage and influence other parties to ensure adverse impacts to our communities are understood and addressed by future decisions.

The Role of Suffolk County Council

The County Council tends not to be the decision maker. It is not the decision maker for Nationally Significant Infrastructure Projects (NSIP), energy projects consented under the Electricity Act 1989, or water related projects. Unless they are connected to minerals or waste, including the management and processing of sewage, or reservoirs created through mineral extraction, or the County Council's own development, both water and energy projects would be determined by district or borough councils under the Town and Country Planning Act 1990. The County Council is, however, a key statutory consultee, and its view carries significant weight with the Examining Authority, (ExA) and by extension, the Secretary of State (SoS). Particularly because it has responsibility for a wide range of interlocking issues across the whole county, which affect decision making, having a key role in representing, developing, and supporting, its local communities and protecting their environment.

The County Council is also a significant landowner and is committed to delivering policies, projects and working practices that will contribute to the Council achieving the ambition of net zero emissions for its own operations by 2030.[2]

[1] The Climate Change Act 2008 (2050 Target Amendment) Order 2019 http://www.legislation.gov.uk/uksi/2019/1056/contents/made

[2] https://www.suffolk.gov.uk/planning-waste-and-environment/initiatives/our-climate-emergency-declaration

The need for the Policy

a) To demonstrably recognise that, given Suffolk's locational and other advantages, low carbon, and renewable energy, which has been promoted nationally[3] and internationally as a key strand of economic development, is essential to Suffolk's current and future economic growth.

b) To demonstrably recognise that Suffolk faces specific climate adaptive challenges, which will need to be effectively and robustly addressed to support the economy, whilst protecting and enhancing the communities and environment of Suffolk.

c) To give the Council the best opportunity to influence the provision of new energy and water infrastructure, to ensure that the benefits for Suffolk's communities are maximised, whilst minimising the adverse impacts on them.

d) To seek to maximise the benefits of economic growth, skills, and STEM (Science Technology Engineering and Maths) educational inspiration, from energy generation, transmission, and climate adaptive projects, for the communities of Suffolk, to support the long-term economic growth of the area.

e) To provide other local authorities, energy and water project promoters, Government, and the public, with a clear understanding of the position of the Council in relation to low carbon energy and climate adaptive infrastructure projects, and the policy and process that will guide the Council's response to specific proposals.

f) To ensure that such schemes fully and appropriately consider the character, function and sensitivity of the natural and historic environment and landscape of the county.

g) To manage the impact of low carbon energy projects and water management projects, on the environment and our communities, arising not only from the construction and operation of a project alone, but from the in-combination and cumulative effects of overlapping and consecutive projects.

Relationships to the Council's strategic priorities

The Council is collaborating with partners, including the New Anglia Local Economic Partnership and Public Sector Leaders across Suffolk, to work towards making the County of Suffolk carbon neutral by 2030, as set out in the declared **Climate Emergency[4].**

The expansion of renewable and low carbon energy offers significant opportunities to drive the Council's priority to **Strengthen the Local Economy**, which it recognises as a key priority[5] to unlock potential and improve people's quality of life. The active delivery of net zero by the Council will support opportunities for employment and training, providing more highly skilled jobs with increased wage and productivity levels for our communities, whilst safeguarding Suffolk's natural and historic environment by contributing to **climate change adaptation**. This will help maximise

[3]Policy paper British energy security strategyPhttps://www.gov.uk/government/publications/british-energy-security-strategy/british-energy-security-strategy

[4] Council proposes unprecedented environmental plans in response to climate emergency https://www.suffolk.gov.uk/council-and-democracy/council-news/show/council-proposes-unprecedented-environmental-plans-in-response-to-climate-emergency

[5]Suffolk County Council Corporate Strategy 2022 - 26 https://www.suffolk.gov.uk/asset-library/imported/master-corp-strategy-report-2022-26.pdf

the benefits our environment provides to our economic growth, health, and wellbeing, now and for future generations.

The Council recognises the requirement to develop the **skills needed for future growth** as a signatory to the New Anglia Local Economic Partnership Youth Pledge[6]. We will support employers to train people in the skills their sectors need, continue our ambitious Apprenticeships Suffolk programme, and work with employers to create more start-up businesses.

The Council understands that delivering its policy priorities around the local economy and skills can also directly support another priority in **Protecting and Enhancing Our Environment**. As outlined in the **Corporate Strategy 2022- 26[5]**, the Council recognises that, **"***Suffolk's environment is one of its greatest strengths. It is why so many people enjoy living and working in Suffolk as well as visiting our great county. Suffolk's environment also makes a significant economic contribution as a leader in green growth with its renewables and technology sectors. The county council has declared a climate emergency and recognises both the urgency for action and the scale of the challenge to becoming carbon neutral. We will continue to change our own approaches to progress to net zero, and work to encourage others' behaviour changes. Both are needed to protect and enhance Suffolk's environment and biodiversity."*

The Role of project promoters

The promoters of energy and water management projects should be responsible corporate entities interested in achieving positive outcomes. National Grid for example, has published a Responsible Business Charter[7] that includes designing assets to avoid waste. There is likely to be a high degree of alignment between corporate objectives and the achievement of benefits beyond those that are needed to mitigate the impact of the project. Just as there is an expectation that Suffolk County Council justifies why infrastructure improvements, environmental or other conditions are necessary to mitigate impact, promoters should demonstrate from the outset how they are addressing benefits that align with community needs, as well as their own corporate priorities.

Promoters should be seeking to deliver inclusive growth through working with partners, such as Suffolk County Council[8], to identify and deliver additional social value. National toolkits, frameworks, and individual case studies, such as those available through the Social Value Portal[9], could assist with this process and the measurement of outcomes. A skills programme for example, could be achieving a reduction in long-distance commuting, supporting other businesses, as well as reducing health inequalities.

If a promoter does not have a clear set of corporate responsibilities, then the willingness to deliver social and environmental objectives, including those necessary to mitigate impact, will be a critical matter to resolve. The willingness of the promoter

[6]New Anglia youth pledge https://newanglia.co.uk/youth-pledge/
[7] National Grid Responsible Business Charter 2020 https://www.nationalgrid.com/document/134426/download
[8] https://www.suffolk.gov.uk/business/tenders-and-supplying-us/social-value
[9] Social value Portal https://socialvalueportal.com/

to work with authorities, not just on the mitigation of the direct impacts, but also the integration of their projects into the community, should be an element that promoters look to address during the early stages of consultation.

Promoters should therefore approach communities with a clear rationale of delivering on a range of objectives as part of their project. There might not be perfect alignment between the priorities the promoters outline and those of Suffolk County Council, or even those of the communities. However, by exploring the full extent of potential partnerships at an early stage, promoters will significantly reduce the risks of managing potentially competing demands, and any resultant obligations will be full and active commitments, clearly supported by both the promoter and the other parties.

Energy and Climate Adaptive Infrastructure Policy

Suffolk County Council has declared a Climate Emergency and is therefore predisposed to supporting projects that are necessary to deliver Net-Zero carbon and climate adaptation for the UK. However, projects will not be supported unless the harms of the project alone, as well as cumulatively and in combination with other projects, are adequately recognised, assessed, appropriately mitigated, and, if necessary, compensated for.

Priority setting

The County Council will identify its initial strategic priorities in relation to individual energy and water infrastructure projects coming forward, to help inform the development of those projects, and give clarity to developers, communities, and other parties. Those priorities will be kept under review as proposals are clarified and refined, or new information becomes available.

The County Council will review the effectiveness of its engagement with a project, against these priorities. And it will evaluate the balance of harm and benefit, against these priorities, as the project progresses through the consenting process.

Skills and growth

The Council will continue working actively with the energy and water sectors, (developers, owners or operators and associated supply chains), Government, Local Enterprise Partnerships, and regulators, to facilitate the delivery of the policy, that seeks to ensure the use of best available techniques, to maximise the development of skills, employment, and educational inspiration in Suffolk. The objective being to create a relevantly skilled talent pool, that can take advantage of the opportunities presented by a succession of energy generation, connection, and climate adaptive projects.

The Council expects that individual promoters will contribute to the delivery of these goals in Suffolk, looking to align the achievement of local priorities with their own, going beyond the minimum measures necessary to mitigate the clearly defined impacts of their project. This process should result in measurable outcomes that, for example, deliver social value.

The Council will continue to review and, where necessary, improve local structures and governance to support the development of skills, business growth, employment, and educational inspiration, to ensure that the necessary and appropriate business support, skills, and workforce are available so that employment opportunities provided by projects are secured locally.

The Council expect to have comprehensive and effective engagement with developers and their supply chain partners, to maximise the local business opportunity, skills inspiration, and employment benefits. Wherever appropriate, the Council and developers should promote synergies between projects that enhance these benefits, deliver growth, and attract inward investment.

Local decarbonisation and climate change adaptation

The Council will expect projects to deliver appropriate community benefit schemes in addition to the necessary compensation and mitigation, including schemes that support the decarbonisation of heat and transport, reduce energy poverty, and improve the climate adaptive resilience of both the natural environment and communities.

Relationship with the environment

Project promoters should recognise from the outset, that the large scale of many energy and water proposals means that they will conflict with the character and the sensitivities of Suffolk's natural and historic environment, which underpins key economic sectors in Suffolk, and is central to the sense of place of our communities.

The harm to the environment and communities will arise both from the construction and operation of the promoter's project itself, and from its in combination and cumulative effects with overlapping and consecutive projects. The Council will expect promoters to develop a demonstrable understanding of the wider development environment for their project, and to work with the Council and other promoters to manage and mitigate these impacts.

The Council expects that project promoters will collaborate to minimise the construction impacts of their projects, coordinate development, and share infrastructure, to minimise the adverse cumulative and in combination effects of development on communities and the environment.

The Council will expect project promoters to minimise and mitigate any impacts. Where there is residual harm that cannot be mitigated, this must be appropriately compensated for.

Mitigation proposals should be robust and effective, they should be capable of being adapted, or responding, to the anticipated risks and impacts of the changing climate.

If the harm of a proposal is not properly and robustly addressed, the Council will not support the scheme, notwithstanding its national significance or its contribution to decarbonisation or climate adaptive resilience.

Developers' engagement with communities

The Council will expect developers, and the wider sector, to work with community leaders and partners, to minimise and manage the impacts of both the individual project's construction and operation, and its cumulative and in combination effects

with other concurrent and successive projects. The outcome of this engagement should be to ensure that wider community benefits, as well as the economic and social benefits of energy and water developments, are realised for the people of Suffolk.

Developers' engagement with Suffolk County Council

The Council will expect developers to engage in effective pre-application discussion with the Council. The Council expects that the costs of its engagement throughout the consenting process will be covered under the terms of a Planning Performance Agreement. This will be on a full cost recovery basis, to ensure that local services, and local taxpayers, are not disadvantaged financially by the Council's engagement with project promoters.

Net Zero and climate adaptive infrastructure in Suffolk

The Council recognises that Suffolk will play a very significant role in delivering the UK's Net Zero target, delivering Energy Security, supporting Food Security and adapting to climate change. The Council wishes to ensure that Suffolk can fulfil this role, both to support the national and local response to climate change, and to maximise opportunities for new and existing businesses and technologies in Suffolk. Whilst recognising the importance of projects to deliver Net Zero and adapt to the changing climate, the Council considers it is essential that projects do not lead to avoidable, unmitigated, or uncompensated detriment to the communities and environment of Suffolk, and its existing businesses.

The Council recognises that the infrastructure required to deliver the UK Net Zero target and adapt to climate change, will result in significant change in some locations affected. It will work with developers, partners, and communities, to try to secure proposals that avoid, mitigate and, if necessary, compensate for these changes, for Suffolk's people and environment.

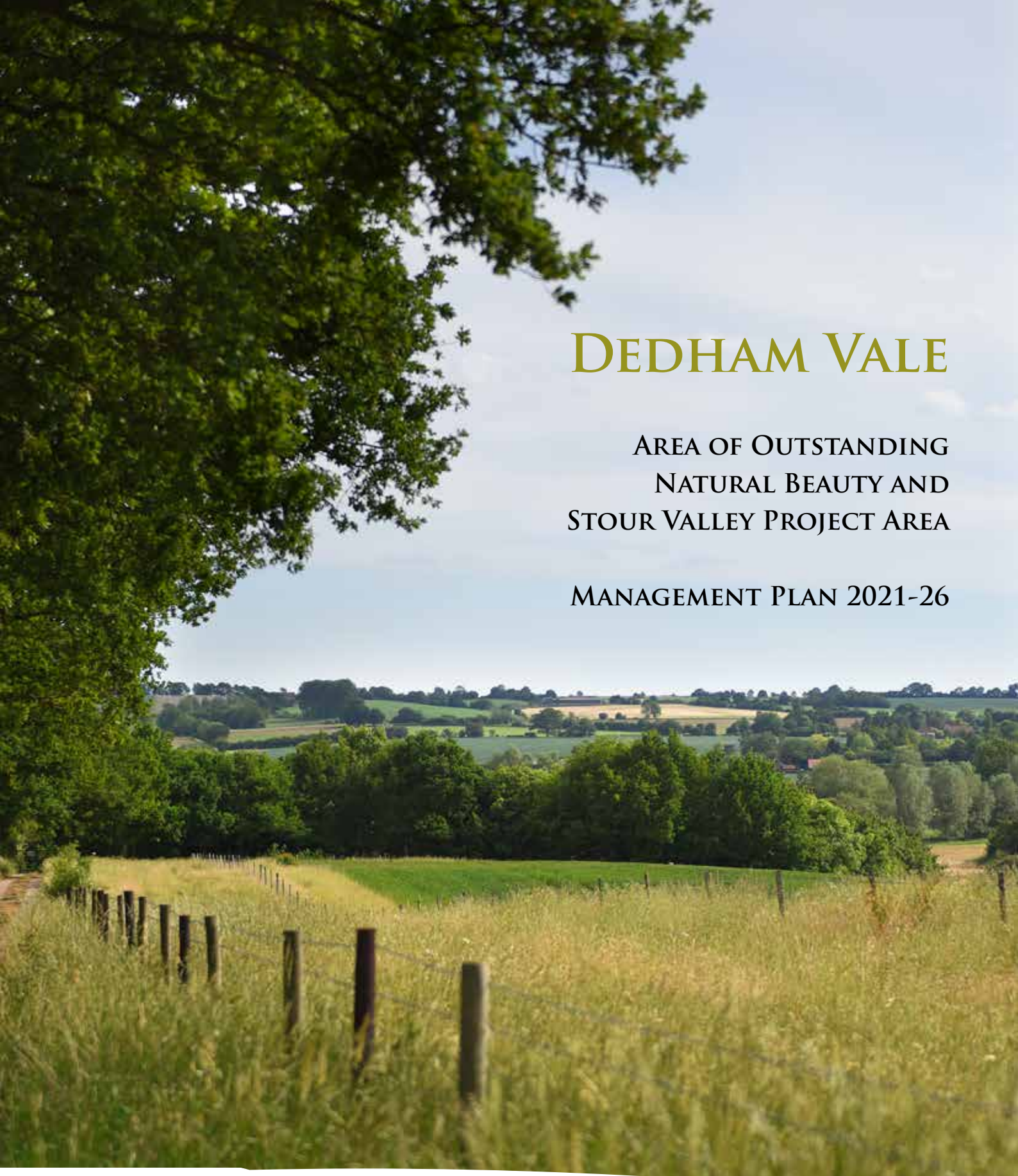
Suffolk County Council



North Falls

Local Impact Report Appendix F:

The Dedham Vale Area of Outstanding Natural Beauty and Stour Valley Management Plan 2021 - 2026



Dedham Vale

Area of Outstanding Natural Beauty and Stour Valley Project Area

Management Plan 2021-26

DEDHAM VALE
AREA OF OUTSTANDING NATURAL BEAUTY
& STOUR VALLEY

Landscapes for life .org.uk

DEDHAM VALE
One of the
AONB Family

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Executive Summary



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AONB and Stour Valley

The Dedham Vale Area of Outstanding Natural Beauty (AONB) and Stour Valley Project area make up around 117 square miles of the Essex/Suffolk border in the East of England. The AONB, that covers 17 square miles, is a nationally designated landscape that of National Parks, to conserve and enhance natural beauty. The Dedham Vale AONB is the fourth smallest AONB of the 38 AONBs in England and Wales. It will form an important part in Government's plans for 30% of land to be protected by 2030 and can have a significant role in addressing climate change and wildlife recovery.

The AONB was designated to ensure the special qualities of the area are conserved and enhanced for future generations. Much of the eastern end of the AONB is associated with the celebrated landscape artist, John Constable, and many of the views he painted remain recognisable today. The wildlife and landscape views of the AONB and Stour Valley ensure that the area remains a nationally important asset. The Stour Valley project area, while not receiving the same level of national protection, has been identified as an important landscape by local residents and statutory and non-statutory organisations for several decades, hence the decision to include the area in the management plan 2021-26.

The AONB and Stour Valley Management Plan

The plan is drawn up by a partnership of organisations that have an interest in the area. These are drawn from the environmental; agricultural; business; community sectors and local authorities. The plan guides the work of these organisations and seeks to balance the need of the different sectors and ensuring that the AONB and Stour Valley remains an example of the finest landscape in the country. It is a statutory duty on local authorities with part of an AONB in their area to produce and review a management plan every five years.

The plan sets out a vision for the area and topic areas offering guidance on how the area should be managed.

A Vision for the Area

The plan outlines a vision for the area as:

> *The Dedham Vale AONB is a distinctive landscape with agriculture and wildlife at its core. Its natural beauty is conserved and enhanced through the efforts of everybody. The AONB is relevant to all members of society who engage in everything it has to offer. It is an area where residents feel a strong sense belonging, visitors are welcomed to enjoy the AONB and respect it as a special place and the heritage is understood and appreciated by all.*

Management Plan Topics

The plan has a series of strategic topics that outline the key issues and offer management objectives and policies to secure the vision for the area:

1. The Countryside

The plan seeks to co-ordinate activity to conserve and enhance the AONB and Stour Valley by setting out a framework for land use decisions and development proposals which reflect the special qualities of the area. The plan explains how work to support the natural beauty of the area can be delivered.

2. Villages Infrastructure and Residents

The plan gives statutory undertakers a framework to deliver appropriate development.

3. Enjoying the Area

The plan seeks to encourage visitors and residents to enjoy the landscapes, natural heritage and historic nature of the area without compromising the natural beauty of the area for future generations.

4. Climate Change and Nature Recovery

The plan seeks to set out options for individuals and decision makers to reduce the impacts of climate change and contribute to nature recovery.

5. The River and Its Tributaries

The plan recognises that the Stour and its tributaries play an important part in the natural beauty of the area, as a habitat for wildlife, flood management and in providing opportunities for quiet informal recreation.

6. Working Together

The plan sets out how different organisations can work together to ensure the best for the AONB and Stour Valley by setting out a vision and management plan policies for the conservation and enhancement of the area. A partnership made up of representatives of the environmental; agricultural; business; community sectors and local authorities provides a forum for discussion on the best way to manage the area for the widest possible positive outcome.



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The Dedham Vale AONB and Stour Valley Partnership

It is an aspiration of the Partnership to work together to secure a high quality landscape in the Dedham Vale underpinned by sustainable economic growth.

The Partnership is made up of around 20 organisations and is the only body responsible for co-ordinating work to conserve and enhance the AONB and Stour Valley. The partnership is co-ordinated by the AONB team, which is hosted and employed by Suffolk County Council and funded by the Department of Environment, Food and Rural Affairs (DEFRA) and 6 other local authorities. Much of the project work undertaken by the AONB team and its volunteers is funded by external grants, sponsorship and work in kind. The partnership meets at least twice a year, to consider important issues related to the conservation and enhancement of natural beauty in the AONB and Stour Valley.

1. FOREWORD



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The Dedham Vale Area of Outstanding Natural Beauty (AONB) and Stour Valley project area is undoubtedly one of England's most important landscapes. Its riverside meadows, picturesque villages and rolling farmland, the wildlife it contains and its associations with some of England's finest artists combine to make this a truly special place. The lower valley is rightly nationally designated as an AONB and many have the aspiration to see more of the Stour Valley, already recognised as a valuable landscape, designated as a national landscape.

The Countryside and Rights of Way Act (2000) places a duty on Local Authorities to prepare a Management Plan for AONBs and to review them every five years. This is our fourth edition since 2000. We are delighted to be able to include much of the upper Stour Valley in this plan, although we recognise that the nationally designated AONB is subject to different local and national policy to conserve and enhance its natural beauty. While this Management Plan covers both parts of the valley, some of its Management Plan policies explicitly relate to the national landscape.

For over 30 years the members of AONB Partnership have worked together to meet the statutory purposes of the AONB, to conserve and enhance natural beauty. This benefits those that live and work in the area and contributes to mitigating the impacts of climate change and wildlife decline. However, natural beauty is increasingly an important factor for supporting local businesses in the area, whether that directly benefits the visitor economy or indirectly offers those businesses the opportunity to attract and retain staff to work in or near this outstanding landscape.

For many of us it feels like times are changing more quickly than ever before. This plan has been developed during the time of a pandemic, the transition of the country leaving the EU and a countrywide focus on national landscapes expressed through the Government's 25 Year Environment Plan, the Landscapes Review of designated landscapes, and an increasing public interest in environmental issues.

The AONB Partnership must work with everyone to ensure the purpose of conserving and enhancing natural beauty is met. It must work harder to reach out to all sections of society, to ensure that all national and local policies recognise the statutory purposes of AONBs and to work with others in the wider community to ensure that the best decisions are made to meet the statutory purposes of the AONB.

We live in a time of unprecedented change. AONBs have an important part to play in society's ability to deal with the challenges that we all face; environmental, economic and wellbeing. The Management Plan policies contained here will contribute to addressing those challenges.

Cllr Nigel Chapman, Chairman of the AONB Partnership.



© Cathy Shelbourne Wormingford Dragon

2. Introduction



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2.1 Purpose of the Document

For the nationally designated AONB, section 85 of the Countryside and Rights of Way Act 2000 places a duty on all relevant authorities to:

> *have regard to the purpose of conserving and enhancing the natural beauty of an AONB when exercising or performing any function in relation to or so as to affect an AONB.*
>
> *The section 85 Duty of Regard applies to all functions, not just those relating to planning and is applicable whether a function is statutory or permissive.*
>
> *It is applicable to land outside as well as within an AONB, where an activity may have an impact on an AONB. The requirement is to 'conserve and enhance' and both aspects are required to be addressed.*
>
> *In relation to planning, the Duty of Regard applies in respect of both plan making and decision making, including deciding what weight to apply to different planning matters, considering whether planning conditions are necessary and also when considering planning enforcement action. It is good practice for a local planning authority to consider the Duty of Regard at several points [For example a reference of how AONB purposes have been considered in a planning officers report] in the decision-making process and to provide written evidence that regard has been had.*

This Management Plan provides a framework for statutory bodies to meet that duty.

For the Stour Valley project area this document, and the Management Plan policies it contains, provides a framework for meeting the aspiration to conserve and enhance its natural beauty and special qualities.

Section 89 of the Countryside and Rights of Way Act (2000) requires Local Authorities to formulate policy for the management of AONBs and review it every five years. This Management Plan meets that requirement.

This Management Plan is set in the context of national and local policy and strategy. The primary purpose of the AONB designation is to conserve and enhance natural beauty with secondary purposes to meet the needs of recreation, safeguarding agriculture, forestry, other rural industries, and of the economic and social needs of local communities.



© Environment Agency James Fletcher Flatford Bridge and River Stour



2.2 Statement of Commitment

Dedham Vale AONB and Stour Valley Partnership members endorse this plan by agreeing the following statement:

We endorse the Dedham Vale AONB and Stour Valley Management Plan 2021-26 and will use it as a guiding framework for maintaining and enhancing the natural beauty of the AONB. We will work in partnership with other organisations to deliver the vision for the area.

In addition, Local Authority partners agree the following statement:

As required by Section 85 of the Countryside and Rights of Way Act 2000 this plan formulates policy for AONB local authorities relating to the management of the Dedham Vale AONB.

For the Stour Valley project area, Dedham Vale AONB and Stour Valley Partnership members endorse this plan by agreeing the following statement:

We endorse the Dedham Vale AONB and Stour Valley Management Plan 2021-26 and will use it as a guiding framework for maintaining and enhancing the natural beauty of the Stour Valley. We will work in partnership with other organisations to deliver the vision for the area.

2.3 What is an Area of Outstanding Natural Beauty?

An AONB is an area that has been identified by Government to have high scenic quality so has been given statutory protection to conserve and enhance its natural beauty. The natural beauty features that define AONBs, including the Dedham Vale AONB, relate to landscape quality, scenic quality, relative wildness, relative tranquillity, natural heritage and cultural heritage.

In addition to the Management Plan policies contained within this plan, AONBs are subject to national and local policy to deliver its statutory purpose.

As well as high scenic quality AONBs often have strong associations with artists, heritage features or wildlife habitat. AONBs cover around 15% of the land area of England.

There are currently 33 AONBs wholly in England with a further one spanning the English/Welsh border. Information on AONBs can be found on the National Association for AONBs website[1].



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2.4 What is the Stour Valley Project Area?

The Stour Valley project area lies upstream of the nationally designated AONB and runs across the Essex/ Suffolk border from the western boundary of the AONB, to the east of Bures and to near the Cambridgeshire border following the Stour River.

The origins of the Stour Valley project area date to the 1970s and are based in the constituent local authorities desire to 'protect' the area from inappropriate development and for it to be considered for AONB status.

The Stour Valley project area does not benefit from the same level of protection afforded by the policies relating to the AONB. However, significant parts of the Stour Valley project area are deemed to be 'valued landscapes' as defined by the National Planning Policy Framework (revised Feb 2019). The area has been subject to a Management Plan since 2000 that has been recognised by the constituent local authorities in their local plans and/or historically been subject to a Special Landscape Area status and subsequent Landscape Character Assessments.

[1] https://landscapesforlife.org.uk/

2.5 The Dedham Vale AONB and Stour Valley Project Area

The Dedham Vale AONB

The Dedham AONB is situated on the Essex/Suffolk border in the East of England. It was designated as an AONB in 1970. The AONB covers the lower reaches of the River Stour and is bounded to the east by the Cattawade Marshes where the river becomes tidal. The western boundary runs between Bures and Wormingford. The northern and southern boundaries are situated a few kilometres either side of the river, at times following the rivers Box and Brett that are tributaries of the Stour.

The Dedham Vale AONB is the fourth smallest AONB in England at 90 square kilometres (around 35 square miles). It is essentially a farmed landscape, with a population of around 10,000. The area is characterised by its picturesque villages, rolling farmland, rivers, meadows, ancient woodlands, and a wide variety of local wildlife that combine to create what many describe as the traditional English lowland landscape.

The Dedham Vale AONB has extraordinary cultural significance. The associations with artists, including the internationally significant landscape artist and painter John Constable; the quantity and quality of historic buildings; and hidden archaeology all contribute to the area's international importance.

A Landscape Character Assessment of the area recognises six distinct types of landscape: Valley Floor; Rolling Valley Farmlands; Rolling Estate Farmlands; Plateau Farmlands; Undulating Ancient Farmlands; and Undulating Estate Farmlands, details of which can be seen on the Suffolk Landscape website[2] , which includes the Essex elements of the AONB.

The Landscape of the area is described in Natural England's National Character Assessment 86, the summary of which states:

> *It is an ancient landscape of wooded arable countryside with a distinct sense of enclosure. The overall character is of a gently undulating, chalky boulder clay plateau, the undulations being caused by the numerous small-scale river valleys that dissect the plateau. There is a complex network of old species-rich hedgerows, ancient woods and parklands, meadows with streams and rivers that flow eastwards.*
>
> *Traditional irregular field patterns are still discernible over much of the area, despite field enlargements in the second half of the 20th century. The widespread moderately fertile, chalky clay soils give the vegetation a more or less calcareous character. Gravel and sand deposits under the clay are important geological features, often exposed during mineral extraction, which contribute to our understanding of ice-age environmental change*

The Stour Valley Project Area

The Stour Valley project area, upstream of the AONB, follows the River Stour that predominately forms the boundary between Essex and Suffolk. The project area is 302 square kilometres (around 181 square miles) running from the Western AONB boundary past Sudbury and Haverhill to near the Cambridgeshire border at Great Bradley. It extends three to four kilometres either side of the River Stour with extensions along the Bumpstead Brook, Belchamp Brook and River Glem.

The project area is predominately rural and often demonstrates medieval settlement patterns. In places the growth of villages and changes to agricultural practices have altered the landscape but not fundamentally changed it. Many of the villages retain their historic centres and have timber framed buildings, imposing churches and village greens. Historic hamlets and isolated farm buildings are scattered throughout the landscape.

The area has many woodlands situated within the tributary valleys but much of the valley floor is given over to arable crops with the notable exception of Sudbury Common Lands where large tracts of water meadows remain as an important feature of the landscape.

[2] https://suffolklandscape.org.uk/



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2.6 Natural Beauty and Special Qualities

The Dedham Vale AONB

The Natural Beauty characteristics of the AONB relate to the reasons for designation, to conserve and enhance that natural beauty.

Public bodies and statutory undertakers have a duty to have regard to the purpose of AONB designation, when carrying out their day to day functions.

The section 85 Duty of Regard, from the Countryside and Rights of Way Act 2000, applies to all functions, not just those relating to planning and is applicable whether a function is statutory or permissive.

It is applicable to land outside as well as within an AONB, where an activity may have an impact on an AONB. The requirement is to 'conserve and enhance' and both aspects are required to be addressed.

For Local Authorities, in relation to planning, the Duty of Regard applies in respect of both plan making and decision making, including deciding what weight to apply to different planning matters. It is good practice for a local planning authority to consider this Duty of Regard. This could be undertaken, for example, in the planning officers' report during determinations or reference to AONB purpose in plan making.

For statutory undertakers, such as utility providers, this requires them to pay regard to the purposes of designation when developing projects that impact on the AONB.

The Natural Beauty and Special Qualities of the Dedham Vale AONB are neatly summarised in the former Countryside Commission's publication 'The Dedham Vale Landscape' This document comments that the AONB landscape is:

> *...important because of its unspoilt rural character. It has remained remarkably free from the intrusion of modern development...*

It goes on to comment:

> *Rich agricultural landscapes and woods are complemented by the consistent use of local building materials and colours in the villages and isolated cottages.*
> *The visual harmony gives the AONB its strong sense of unity, which is vital to its aesthetic appeal and sense of place. Within this overall character, the landscape is greatly enhanced by rich contrasts in scenery and characteristic details.*

In 2016 the AONB Partnership commissioned Alison Farmer Associates to:

> *...review, gather and present evidence on the natural beauty and special qualities of the existing AONB in order to clearly articulate why it is one of England's nationally valued landscapes.*

This piece of work includes a detailed assessment of the factors which contribute to the natural beauty and special qualities of the Dedham Vale AONB and the relationship between them. It comments on the natural beauty indicators used as considerations as part of the Dedham Vale's AONB designation process, such as:

- Landscape quality:
  Intactness of landscape and generally free of incongruous features
- Scenic quality:
  Iconic lowland river valley with assemblage of features
- Relative wildness
  Sense of remoteness, historic human and agricultural activity
- Relative tranquillity
  Limited, but significant, incursions from human activity
- Natural heritage features
  Functioning river, with associated habitats and species
- Cultural heritage
  Historic villages, visible archaeology and artistic associations

The work provides supporting evidence on how the Dedham Vale meets these indicators and discusses current, perceived and anticipated risks to these areas Natural Beauty and special qualities.
In summary the document clearly demonstrates that the AONB exhibits a range of natural beauty features/ characteristics which sets it above 'normal countryside' and which deservedly places it within the family of nationally designated landscapes.

The special qualities of the AONB extend to the importance of the above and below ground heritage assets.



© **Gregg Brown** River Stour



The Stour Valley Project Area

In addition to the work described above, in 2016 Alison Farmer Associates were commissioned to undertake a study of an area of the Stour Valley project area to review, update and gather evidence on the special qualities of an evaluation area to determine its suitability for designation as AONB. As part of this work evidence was gathered on the characteristics of the area using the natural beauty indicators listed above.

In 2019, the AONB Partnership commissioned Alison Farmer Associates to undertake an assessment of the Stour Valley project area. This work was commissioned to develop a better understanding about why the project area is special and what makes it a Valued Landscape. This work included an assessment of the natural beauty, special qualities, landscape, and cultural features at the valley scale. It also included an assessment of individual key settlements within the project area to understand how they had evolved historically but also to understand their relationship and importance within the wider valley landscape. The summary of findings from this study identifies several themes for the area, namely:

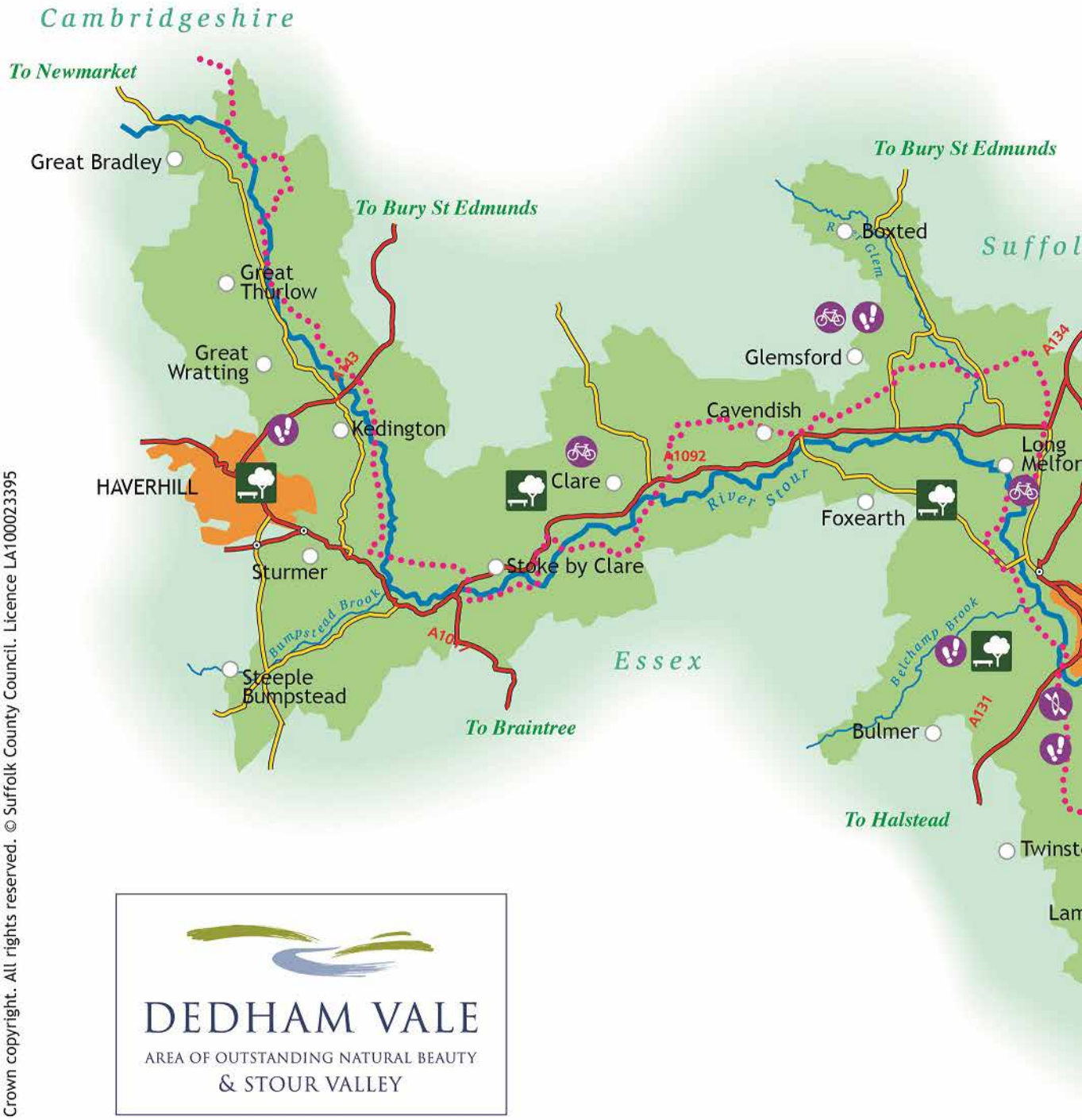
- Outstanding collection of historic buildings and small scale villages that exhibit qualities that should be valued individually and as groups.
- Significant collection of churches whose towers create key landmarks and are often inter-visible across the Stour Valley and contribute to a quintessential English lowland scene.
- Extensive areas of valley floor pasture grazed by livestock and associated with pollarded willows high value ecosystem services and settings for historic settlements.
- Perception of a rural backwater.
- The coincidence of historic features and patterns, small church/hall complex hamlets/villages, remnant parkland, pre 18th century enclosures and small copses on the valley sides, gives rise to a tangible time.
- Notable areas of valley and valley floor with are relatively inaccessible except by foot increasing perceptions of tranquillity.
- Wooded skylines that define valleys and reduce intrusion from modern development.

As well as identifying what is special (valued) about the project area, the assessment also identified enhancement opportunities for those parts of the project area where the landscape had been altered through changes to agricultural practices or by inappropriate development.

2.7 Responsibility for Dedham Vale AONB and Stour Valley Project Area

The Dedham Vale AONB and Stour Valley Project Area

The nationally designated AONB and Stour Valley project area is shown in the map below.



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Area of Outstanding Natural Beauty (AONB)
Stour Valley Project Area
Stour Valley Path
Country Parks and Picnic sites
Local circular walks - free AONB leaflets
Local cycle routes - free AONB leaflets
Public canoe launching locations. Craft must have an appropriate licence www.riverstourtrust.org
SUDBURY
To Hadleigh & Ipswich
A1071
A134
Great Cornard
River Box
River Brett
Polstead
Raydon
To Ipswich
Stoke-by-Nayland
Higham
Leavenheath
Stratford St Mary
East Bergholt
Cattawade
Nayland
Bures
Boxted
Flatford
Stour Estuary
Dedham
MANNINGTREE
Langham
Wormingford
Great Horkesley
A12
A137
To Colchester
To Colchester

The Dedham Vale AONB

All statutory bodies and statutory undertakers have a responsibility to pay regard to the purpose of the AONB when decision making. This is not limited to environmental issues but across all their areas of responsibility.

Natural England is responsible for offering advice to Government and others on how AONBs should be managed and protected. Furthermore, Natural England is responsible for recommending to Government on whether to designate land as AONB and are the responsible organisation for undertaking any future boundary variations.

The Stour Valley Project Area

Local Authorities have a statutory function to undertake spatial planning across the area in which they have jurisdiction. Local Authorities have supported an AONB type management in in the Stour Valley project area via financial support to the AONB team.

The Dedham Vale AONB and Stour Valley Advisory Committee and Partnership

To ensure the efficient and co-ordinated management of the AONB and Stour Valley project area, a Joint Advisory Committee and Partnership were formed in 1993.

The Joint Advisory Committee deals with the governance of the AONB staff team and provides strategic direction and a scrutiny function. The Partnership is made up of a diverse range of organisations with an interest in the AONB and Stour Valley project area. It works together to support the conservation and enhancement of the environmental, economic, and social wellbeing of the area by delivering Management Plan policies and objectives.



© Gregg Brown

2.8 Planning in the Dedham Vale AONB and Stour Valley Project Area

Local Plans and Neighbourhood Plans

Local Planning Authorities are responsible for preparing Local Plans for their administrative areas. Where these fall within the AONB or Stour Valley project area, Local Planning Authorities should ensure the purpose of designation is recognised within them and help deliver the objectives and policies in this Management Plan.

Where Parish or Town Councils are preparing Neighbourhood Plans within the AONB they should support the purposes of the national designation. For those in the project area it would be appropriate if they met Management Plan objectives contained within this document.

Determining Planning Applications In the Dedham Vale AONB

Planning decisions relating to development applications in AONBs remain with Local Planning Authorities. The National Planning Policy Framework states that:

Great weight should be given to conserving and enhancing landscape and scenic beauty in National Parks, the Broads and Areas of Outstanding Natural Beauty, which have the highest status of protection in relation to these issues. The conservation and enhancement of wildlife and cultural heritage are also important considerations in these areas...

It goes on to say:

Planning permission should be refused for major development other than in exceptional circumstances, and where it can be demonstrated that the development is in the public interest. Consideration of such applications should include an assessment of:

a) the need for the development, including in terms of any national considerations, and the impact of permitting it, or refusing it, upon the local economy;

b) the cost of, and scope for, developing outside the designated area, or meeting the need for it in some other way; and



© **Gregg Brown** Nayland architecture

c) any detrimental effect on the environment, the landscape and recreational opportunities, and the extent to which that could be moderated.

It is worth noting that development is acceptable in the AONB where it contributes to the statutory purposes of the AONB. Development proposals are expected to meet a higher standard of planning and design to ensure that the statutory purposes of the AONB are met.

In the Stour Valley Project Area

Local Planning Authorities operating across the Stour Valley project area are responsible for determining planning applications within this area. As these authorities have endorsed this plan and contributed to the development of the Valued Landscape work (see section 2.6 above) it is anticipated that the Management Plan policies and recommendations in the Valued Landscape Assessment for the Stour Valley project area are given appropriate weight in determining applications.

It is anticipated that where planning permission is awarded in the Stour Valley project area it will not significantly impact those defined qualities of the area that make it important to residents and visitors.

2.9 International, National and Local Context

International

Designated areas such as the Dedham Vale AONB remain the fundamental concept of international conservation strategies supported by Governments. AONBs are recognised as Category V Protected Landscapes under the International Union for Conservation of Nature (ICUN) global framework.

AONBs are designated under national legislation and at the time of writing it remains to be seen what impacts the decision for the United Kingdom to leave the European Union will have. The most obvious impacts relate to changes to agri-environment schemes and how much weight will be given to designated landscapes in the proposed Environmental Land Management Scheme (ELMS). AONBs, and the land within them, are well placed to deliver on the Government mantra of public money for public goods.

Government has indicated that European laws and regulations that offered environmental protections when the United Kingdom was in the European Union will be carried over into UK domestic legislation.

National

There is a wide range of national legislation that influence the delivery of AONB purposes. From the original National Parks and Access to the Countryside Act 1949, that provided the legislation to designate AONBs, to a plethora of acts relating to wildlife, planning and the natural environment.

During the period of the previous Management Plan the Government published its 25 Year Environment Plan. It also published the Landscapes Review in 2019, an independent review led by Julian Glover to consider the next steps for National Parks and Areas of Outstanding Natural Beauty in England.

The national AONB network has responded to what it sees as the key issues of wildlife decline and the climate crisis with its offer to Government, known as the Colchester Declaration, named after the town it was developed in during a national conference at the University of Essex in 2019.



© **Gregg Brown** Power Cables in the AONB

The 25 Year Environment Plan reflects that:

> *...AONBs has been among the outstanding environmental achievements of the past 100 years.*

And goes on to say:

> *We will make sure they [AONBs] continue to be conserved and enhanced, while recognising that they are living landscapes that support rural communities.*

Before it goes on to recommend a review of designated landscapes, which we now know as the Landscapes Review.

At the time of writing the Government has not responded to the Landscapes Review which was published in September 2019 and included 27 proposals. Many of those proposals reflect the aspirations that AONBs have had for many years and are reproduced below.

The proposals in the Landscapes Review of resonance and/or significance for the Dedham Vale AONB are highlighted in bold:

- **Proposal 1: National landscapes should have a renewed mission to recover and enhance nature and be supported and held to account for delivery by a new National Landscapes Service.**
- Proposal 2: The state of nature and natural capital in our national landscapes should be regularly and robustly assessed, informing the priorities for action.
- **Proposal 3: Strengthened Management Plans should set clear priorities and actions for nature recovery including, but not limited to, wilder areas and the response to climate change (notably tree planting and peatland restoration). Their implementation must be backed up by stronger status in law.**
- Proposal 4: National landscapes should form the backbone of Nature Recovery Networks – joining things up within and beyond their boundaries.
- **Proposal 5: A central place for national landscapes in new Environmental Land Management Schemes.**
- **Proposal 6: A strengthened place for national landscapes in the planning system with AONBs given statutory consultee status, encouragement to develop local plans and changes to the National Planning Policy Framework.**
- **Proposal 7: A stronger mission to connect all people with our national landscapes, supported and held to account by the new National Landscapes Service.**
- Proposal 8: A night under the stars in a national landscape for every child.
- **Proposal 9: New long-term programmes to increase the ethnic diversity of visitors.**
- **Proposal 10: Landscapes that cater for and improve the nation's health and wellbeing.**
- **Proposal 11: Expanding volunteering in our national landscapes.**
- **Proposal 12: Better information and signs to guide visitors.**
- Proposal 13: A ranger service in all our national landscapes, part of a national family.
- Proposal 14: National landscapes supported to become leaders in sustainable tourism.
- Proposal 15: Joining up with others to make the most of what we have and bringing National Trails into the national landscape family.
- Proposal 16: Consider expanding open access rights in national landscapes.
- Proposal 17: National landscapes working for vibrant communities.
- Proposal 18: A new National Landscapes Housing Association to build affordable homes.
- Proposal 19: A new approach to coordinating public transport piloted in the Lake District, and new, more sustainable ways of accessing national landscapes.
- Proposal 20: New designated landscapes and a new National Forest.
- Proposal 21: Welcoming new landscape approaches in cities and the coast, and a city park competition.
- **Proposal 22: A better designations process.**
- **Proposal 23: Stronger purposes in law for our national landscapes.**
- **Proposal 24: AONBs strengthened with new purposes, powers, and resources, renamed as National Landscapes.**
- Proposal 25: A new National Landscapes Service bringing our 44 national landscapes together to achieve more than the sum of their parts.
- Proposal 26: Reformed governance to inspire and secure ambition in our national landscapes and better reflect society.
- **Proposal 27: A new financial model – more money, more secure, more enterprising.**

In summary, the AONB Partnership welcomes the report, it awaits Government response and is particularly interested in proposals relating to the status of AONBs, increasing AONB audiences, and more projects to address wildlife decline.

The national AONB network's **Colchester Declaration** outlines the AONB offer to Government, which pledges to:

- Creating an approach for people to make an emotional connection with nature.
- To prepare a Nature Recovery Plan for each AONB.
- To contribute to work to mitigate and adapt to climate change.
- To contribute to work to enhance wildlife habitat.

Subject to being given appropriate resources.

Local

As required by the Countryside and Rights of Way Act 2000, Local Authorities will:

- *In exercising or performing any functions in relation to, or so as to affect, land in an area of outstanding natural beauty, a relevant authority shall have regard to the purpose of conserving and enhancing the natural beauty of the area of outstanding natural beauty.*

This will include relevant policies in their Local Plans and other strategies and plans.



© **Gregg Brown** Dedham



© Ben Heather Bures

2.10 Statement of Significance

For the Dedham Vale AONB

The Statement of Significance defines the natural beauty, character and special qualities of the Dedham Vale AONB. It provides the criteria against which potential impacts on the nationally designated landscape can be judged.

The Dedham Vale AONB is a predominately agricultural landscape that exhibits a subtle lowland river valley with an assemblage of features associated with this landscape still in place and intact. These features include a gently winding river and tributaries; gentle valley sides with scattered woodlands; sunken rural lanes; picturesque villages with imposing churches and historic timber framed buildings; scattered farmsteads and agricultural buildings; small fields enclosed by ancient hedgerows; riverside grazing meadows with associated drainage ditches and visible and hidden archaeology providing evidence of human habitation over previous millennia.

The area remains mostly free of incongruous development and large scale industrial developments. Despite some intrusions of human activity in the twentieth and twenty first centuries, the area retains a rural charm and tranquillity and is largely free of infrastructure associated with modern life.

The essential character of the Dedham Vale AONB was established in the middle of the previous millennium and has remained intact despite social, technological events. The fundamental beauty of the area and the scenes of a working landscape were captured by England's finest landscape artist, John Constable. The sites of his paintings are still recognisable in the heart of what is now the AONB.



© Ben Heather River Stour

Statement of Significance for the Stour Valley Area

The Stour Valley project area is predominately an agricultural area that is a sparsely populated with most people living in village settlements that can trace their history back to the Saxon period and are listed in the Domesday Book of 1086.

The valley slopes are gentle, forming shallow valleys which sit within wider
undulating farmland. The junction between valley and wider farmland is transitional and subtle, the presence of a water courses, associated wetland vegetation, and small nucleated villages/hamlets, generally distinguishing the valleys from other landscape undulations.

On the more elevated farmland above the valleys there is a high incidence of medieval moated farmhouses and small copses/blocks of ancient woodland. These features reflect the underlying clay soils found on the higher land. Despite woodland blocks, elevated farmland has a predominantly open character, affording long distance views over the shallow valleys.

The expansive views and openness perceived from higher land contrasts with that of the more intimate valleys and small settlements. The lack of major transport infrastructure gives this landscape a relative tranquillity reinforcing perceptions of a rural backwater.

The majority of the settlements have a distinctive settlement pattern with dwellings clustered around small angular greens or tyes. Medieval churches have often been built in prominent positions and knapped in flint reflecting the areas prosperity and the importance of religion during the time of construction.

Villages show a rich heritage of building styles, reflecting changing building techniques, fashions and relative wealth over the centuries of development but many retain a core of medieval timber framed buildings. Beyond the villages there are a series of isolated farmsteads and manorial halls (often moated) reflecting the areas agricultural heritage and accumulated wealth.

2.11 Vision Statement

For the Dedham Vale AONB

It is the aim of this plan that:

The Dedham Vale AONB is a distinctive landscape with agriculture and wildlife at its core. Its natural beauty is conserved and enhanced through the efforts of everybody. The AONB is relevant to all members of society who engage in everything it has to offer. It is an area where residents feel a strong sense belonging, visitors are welcomed to enjoy the AONB and respect it as a special place and the heritage is understood and appreciated by all.

For the Stour Valley Project Area

The Stour Valley project area is a cherished landscape by both residents and visitors. It has agriculture and wildlife are at its core and everyone appreciates its scenic quality and beauty. The area is treasured and decisions impacting its landscape quality recognise its status as a valued landscape.



2.12 Review of 2016-21 Plan

The 2016-21 Dedham Vale AONB and Stour Valley project area Management Plan was endorsed by the AONB partnership members in 2016. Reports of progress undertaken to deliver the Management Plan were made to the Dedham Vale AONB and Stour Valley Partnership. An evaluation of the previous plan has drawn the following conclusions:

- The AONB vision statement and statement of significance are largely valid and have required minor modifications for the 2021-26 plan to reflect contemporary thinking and the priorities of the Partnership.

- The period covered by the 2016-21 plan has seen unprecedented national influences on the AONB expressed through the Government's 25 Year Environment Plan and the Landscapes Review of National Parks and AONBs, as well as reviews of the planning system including the publication of a revised National Planning Policy Framework and changes to the permitted development rules.

- There were unanticipated societal changes during the time of the 2016-21 plan including the UK's decision to leave the European Union, wider recognition of the climate crisis and wildlife decline, and the coronavirus pandemic.

- It has been widely recognised that AONBs do not serve all sections of society equally. There are audiences missing the benefits AONBs can bring, and more work is needed to engage with them, remove barriers, and generate a genuine welcome.

- The Management Plan has been used by many organisations to support their work to meet the purposes of the AONB and the aspirations of the Stour Valley project area, although more needs to be done.

Notable successes during the period of the 2016-21 plan include:

- Multiple externally funded projects to deliver the purposes of the AONB and to deliver environmental gains in the Stour Valley project area. These include:
  - The River Stour Enhancement Project
  - A LEADER funded project to enhance the Stour Valley for visitors
  - A European funded project to engage businesses in the benefits of the AONB
  - A National Lottery Heritage Funded project to celebrate 50 years of designation
  - Ofgem funding to underground low voltage power cables

- The development of the Stour Valley Farmers Cluster Group which shares the aim of many AONB Partnership organisations to address wildlife decline.

- The development of volunteer activity by the AONB team and several of its partners to deliver the aspirations of the 2016-21 plan. This includes volunteer activity across a wide range of activity including:
  - Conservation
  - Access
  - Events
  - Work placements
  - Project development
  - Community archaeological projects

- The distribution of funds to communities, organisations and businesses through the AONB sustainable development fund and the Stour Valley Environment Fund for projects that meet the environmental, economic and social aspirations of the 2016-21 plan.

- A broader recognition of the importance of the statutory purposes of the AONB and value of the Stour Valley project area through the planning system and public engagement events.

2.13 The 2021-26 Plan

This 2021-26 plan has two main areas. The introduction section outlines the area of geographical interest and background of the plan. The context and issues section explores the key issues by theme, the current pressures on those themes and sets out objectives and Management Plan policies for each theme.

3. Context and Management Plan Policies



© Ben Heather Sudbury

3. Context and Management Plan Policies

This section of the Management Plan explores the influences on the AONB and Stour Valley project area through a series of themes. The theme areas are:

- The Countryside
- Villages, Infrastructure, and Residents
- Enjoying the Area
- Climate Change and Nature Recovery
- The River and its Tributaries
- Working Together

Each theme is the given a series of objectives and subsequent Management Plan objectives.

3.1 The Countryside

The Dedham Vale AONB and Stour Valley project area is a place that provokes feelings of pride. This sense of place and belonging was brought into sharp focus in 1938 when proposals to demolish a coaching arch at the Sun Inn in Dedham acted as a catalyst to raise awareness of the importance of the natural and historic features in the area. These were the first steps in the Dedham Vale securing AONB status in 1970.

Much of the land in the AONB and Stour Valley project area is in private ownership, although there are notable exceptions of areas being owned by charitable organisations with objectives sympathetic to the purposes of the AONB designation.

Most of the land in private ownership is used for agriculture. Agriculture is the primary driver for landscape management in the area. Many of the key landscape features, that contribute to the natural beauty of the area, such as hedgerows, grasslands and woodlands are dependent on farming practices that do not have a significant detrimental impact on the purposes of the AONB designation.

The AONB and Stour Valley project area has an extensive network of public rights of way and promoted routes (for walking and cycling) of various lengths. This includes walking routes of a few miles, to the 60-mile Stour Valley Path regional route, and promoted cycle routes such as locally developed routes and the national cycle route promoted by Sustrans. Although much of the land is in private ownership, there are huge public benefits from the land in terms of access to the countryside, through the public rights of way network, that bring health and wellbeing benefits as well as economic benefits to local businesses offering visitor services. In 2019 the Dedham Vale AONB visitor economy was calculated to be worth £68M and supported 1,490 jobs. In the Stour Valley project area, the figures are £49M and 1,283 jobs.



© Michael Pinckard St Mary's Church, East Bergholt

The nationally designated AONB and valued Stour Valley project area sit within a wider countryside setting that enhances the value of these landscapes. The experience of being in the AONB is enhanced by its setting, and benefits for wildlife and access also accrue from the wider countryside setting.

Agriculture is supported to conserve and enhance these features through agri-environment schemes. Such schemes are funded through the public purse to secure food supplies and environmental gain. The lifespan of this plan will see support for farming move to an agriculture transition plan before the implementation of the Environmental Land Management Scheme. AONBs will have an important role in delivering the new Farming in Protected Landscapes programme.

The character of the area is further influenced by national and local policy. The AONB is subject to policy to meet the reasons for designation, to conserve and enhance natural beauty. While development is not stopped in an AONB, there is a presumption against major development within these designated landscapes. Local Planning Authorities offer further protection to the purposes of the AONB through development control policies contained within Local Plans.

Natural England has produced guidance for the management of landscapes through a series of National Character Areas (NCA). NCA 86 covers much of the AONB and Stour Valley and provides a broad range of information that can be used by individuals and communities to help achieve greater enhancement of the distinctive features of the landscape. The profiles include a description of how the natural environment can contribute to the welfare of people and protect resources provided in each character area and how these benefit people, wildlife and the economy.

The Dedham Vale AONB and Stour Valley Partnership resolved in 2009 that their long term ambition is for a review of the boundary of the AONB with a desire to see the current boundary extended westwards towards Sudbury. In 2016 the Partnership commissioned Alison Farmer Associates to undertake a study to identify an area in the Stour Valley project area that met the AONB designation criteria. An area to the west of the existing boundary towards Sudbury was identified.

The AONB and Stour Valley project area is home to some excellent wildlife habitat that support important wildlife species. The area has seven of the nation's best wildlife and or geological sites, known as Sites of Special Scientific Interest. Around 2% of the land area of the AONB is designated as a Site of Special Scientific Interest. There is a clear link between landscape and wildlife.

It is widely reported that recorded wildlife has declined by 60% since 1970. To address this catastrophic wildlife decline, different sectors need to work to a common aim to reverse those declines. Space needs to be made for nature both physically and in policy and strategy.

Tranquillity is a key component of the natural beauty. Significant detrimental impacts to tranquillity and the defined characteristics of the AONB can arise from overflying aircraft, road noise, and inappropriate use of lighting. NATS, the National Air Traffic Service recognises AONBs, but commercial traffic continues to impact the AONB. Other detractors of tranquillity should be avoided or if that is not possible, minimised.

Light aircraft can further impact the sense of tranquillity in the AONB and Stour Valley project area.

Tranquillity can further be compromised by the inappropriate use of lighting. Light is essential to many aspects of modern life, but inappropriate design can have negative impacts on the purposes of the AONB and the character of the Stour Valley project area.

The Dedham Vale AONB and Stour Valley has a rich historic landscape, including a prehistoric element and a possible Neolithic Longbarrow and Cursus monument. Records for the known historic environment can be obtained from The Suffolk Heritage Explorer[3] and the Essex Heritage Gateway[4].

The Historic Environment Records on both sides of the county boundary are constantly being updated as new information is being discovered and the importance of the historic and prehistoric nature of the AONB and Stour Valley project area is known.

Full records can be obtained from the Suffolk County Historic Environment Record (HER) via a data request[5] or the Historic Environment Records in Essex[6]. The area of the Dedham Vale AONB and Stour Valley form part of a prehistoric landscape, with a possible Neolithic Longbarrow, and ring ditch cropmarks, which likely represent Bronze Age funerary monuments. Additionally, there is a Neolithic Cursus monument at Stratford St Mary which overlooks the Stour River Valley.

[3] www.heritage.suffolk.gov.uk
[4] www.heritagegateway.org.uk
[5] www.suffolk.gov.uk/culture-heritage-and-leisure/suffolk-archaeological-service/what-is-the-historic-environment-record/
[6] https://www.placeservices.co.uk/what-we-do/historic-environment/historic-environment-records/



The key influences on the AONB and Stour Valley Project Area are:

- The Government's 25 Year Environment Plan that sets out sets out how it will improve the environment over a generation by creating richer habitats for wildlife and improving air and water quality.
- The Landscapes Review. Considers the next steps for National Parks and AONBs in England, with 27 recommendations including those addressing wildlife decline, rural communities, and wider understanding of AONBs.
- The Colchester Declaration, adopted in 2019, is the AONB network's offer to Government to address the twin issues of wildlife decline and climate change.
- The role of the new Environmental Land Management Scheme in providing public good. This new agri-environment scheme replaces support given to farmers following the United Kingdom's departure from the European Union.
- The Farming in Protected Landscapes programme will enable farmers and landowners to deliver projects that facilitate the purposes of the AONB.
- The Stour Valley Farmer Cluster, covering over 80% of the AONB with a priority to combine and integrate productive agriculture with landscape scale enhancement of wildlife and resource protection.
- Planning policy, including the National Planning Policy Framework and Local Planning Authority policies in Local Plans.
- Development pressures, including those for infrastructure and urbanisation of the countryside.
- Increasing traffic.
- Impacts of Nationally Significant Infrastructure Projects on the AONB and Stour Valley project area.
- Potential delivery of a Dedham Vale AONB boundary review.
- Climate change.
- Negative impacts on tranquillity such as noise and light pollution and increasing visitor and recreational demand.
- The value of the historic environment.

Aim:

- To conserve and enhance the natural beauty of the AONB and Stour Valley project area.

Objectives:

- Land use management decisions pay regard to the purpose of the AONB, to conserve and enhance its natural beauty.
- Decision makers consider the purposes of the AONB when working on development proposals.
- The natural features, of the AONB and Stour Valley project area, including its wildlife, are conserved and enhanced.
- The AONB and Stour Valley project area's heritage, landscape and wildlife are appreciated by all sections of society.
- Secure Dark Sky status for the AONB.

Management Plan Policies:

CS1	Support work that contributes to and protects the statutory purposes of the AONB, including impacts on its defined characteristics of landscape and scenic quality, relative wildness, and tranquillity.
CS2	Resist proposals that significantly negatively impact the AONB's natural beauty and special qualities, including those in its setting.
CS3	Support work that contributes to local distinctiveness, appropriate climate change mitigation and wildlife recovery in the AONB and Stour Valley project area.
CS4	Support work to broaden the audiences to the AONB and Stour Valley project area and improve understanding of its natural and built features.
CS5	Work with the Dedham Vale Society and others to secure Dark Sky status for the AONB.
CS6	Support the aspiration to extend the AONB boundary.



© **Gregg Brown** Families exploring the countryside

3.2 Villages, Infrastructure, and Residents

The Dedham Vale AONB and Stour Valley is a relatively sparsely populated area with most people living in village settlements that can trace their history back to the Saxon period and are listed in the Domesday Book of 1086.

These villages contribute significantly to the reasons for designation for the AONB and the value many place on the Stour Valley project area.

Most of the settlements have a distinctive settlement pattern with dwellings clustered around small angular greens or tyes. Medieval churches have often been built in prominent positions and knapped in flint reflecting the areas prosperity and the importance of religion during the time of construction.

Villages show a rich heritage of building styles, reflecting changing building techniques, fashions and relative wealth over the centuries of development but many retain a core of medieval timber framed buildings. Beyond the villages there are a series of isolated farmsteads and manorial halls (often moated) reflecting the areas agricultural heritage and accumulated wealth.

Roads, electricity distribution networks, and telecommunications structures are examples of infrastructure that is vital to everyday life. These can impact on the purposes of the AONB and the valued landscape of the Stour Valley project area in a negative way.

The local road network often reflects historical transport routes and forms part of the character of the area. Sunken lanes are often designated as protected lanes in district and borough council Local Plans. These heritage assets can be at risk from inappropriate use, such as use as 'rat runs', by oversized vehicles and sometimes on drivers relying on inappropriate satellite navigation system routes.

Local electricity distribution networks can have a detrimental impact on the natural beauty of the area and new connections should consider the potential impact on the AONB and Stour Valley project area landscape. An Ofgem scheme to underground low voltage overhead power cables in designated protected landscapes, such as AONBs, should be used where possible to offset the negative impacts of this type of infrastructure.

Communications infrastructure including masts, poles (with associated cables), and communication 'boxes' have the potential to conflict with the purposes of the AONB and the natural beauty of the Stour Valley project area. It is recognised that this form of technology is vital to residents' and visitors and is a fast-developing technology with the likely roll out of 5G technology during the lifetime of this plan.



© Outdoor Learning at Daws Hall Trust Lamarsh



Stour Valley Path near Bures

National infrastructure in the AONB and Stour Valley project area such as trunk roads; national rail routes; national grid energy transmission equipment; and water transfer structures can negatively impact upon the purposes of the AONB. It is recognised that national infrastructure is vital to society and has benefits for local residents.

Renewable energy will need to play an important part in reducing the negative environmental impact of society's demand for electricity. There is a presumption, in the National Planning Policy Framework, against major development in the AONB. This type of development can also have significant negative impacts to the character of the Stour Valley project area. There is an increasing interest in domestic or local energy renewable energy schemes, and where these do not have a significant impact on the purposes of the AONB, due to their scale or location, they are considered a benefit to society.

The population profile of the East of England, that includes the AONB and Stour Valley, shows that the population has a slightly older demographic and a higher growth rate than the national average.

The key influences on the AONB and Stour Valley Project Area are:

- National and Local Plan policy relating to development in the AONB and Stour Valley project area.
- The potential for visitor pressures negatively impacting on resident's quality of life.
- Residents transport options to access services, work and recreational opportunities.
- Inappropriate deployment of infrastructure and upgrades to existing structures.
- Many visitors to the AONB and Stour Valley project area come from just outside its boundaries and have an emotional attachment to the area.
- The value of the historic environment and the need to ensure it is considered in decision making.

Aim:

To conserve and enhance the characteristics of the built environment.

Objectives:

- Residents live in and contribute to a high-quality environment.
- Development within villages contributes to the purposes of the AONB designation and the characteristics of the Stour Valley project area.
- Infrastructure does not significantly negatively impact the AONB or Stour Valley project area.

Management Plan Policies:	
VIR1	Develop understanding of the purposes of the AONB designation to residents and infrastructure owners to inform any development proposals.
VIR2	Champion the purposes of the AONB and characteristics of the Stour Valley project area to Local Planning Authorities and other decision makers.
VIR3	Conserve and enhance the AONB by supporting work to reduce the negative impacts of proposed and existing infrastructure.
VIR4	Work with the visitor and tourism industry to maximise the economic, social and wellbeing benefits and minimise any negative impacts of the visitor activity.



© Coes Meadow - Meadow management

3.3 Enjoying the Area

The Dedham Vale AONB and Stour Valley project area is a place to enjoy. The area offers a wide variety of opportunities for walking; riding; boating; discovering history and heritage; wildlife watching; fine or rustic dining; environmental education; countryside sports; geocaching; environmental volunteering and visiting historical sites and buildings.

The tourism business is an important element of the local economy. In 2019 the Dedham Vale AONB visitor economy was calculated to be worth £68M and supported 1,490 jobs. In the Stour Valley project area, the figures are £49M and 1,283 jobs.

Much of this tourism business is built on the back of the natural beauty of the area, its historic and cultural associations, and its natural and built heritage. Access to these qualities is often through charities such as the National Trust, RSPB, and the Wildlife Trusts, but commercial interests play an important part, particularly in the hospitality sector. It is a primary long term interest for this sector of the economy that the AONB and Stour Valley project area retains and enhances its landscape quality.

There are opportunities to enjoy the area by volunteering to help the areas wildlife and undertake landscape improvements. Groups from the Dedham Vale AONB and Stour Valley Project, the National Trust, RSPB, Sudbury Common Lands Charity, Wildlife Trusts, Parish Councils and Community groups offer regular opportunities.

Much of the attraction to residents and visitors alike is the relative tranquillity and unspoilt nature of the AONB and Stour Valley project area. Although visitors are always encouraged and welcome to enjoy the area, they are encouraged to respect both the natural environment and residents.

There is a recognition that there are benefits to developing the visitor offer in the shoulder seasons (Spring and Autumn) as well as winter months and this can improve business viability. Visitors coming during these times can benefit from less bustle and congestion. Visits during these times help with the viability for commercial operations of both the private sector and the commercial operations of charities. Visitors during these times can often benefit from a sense of remoteness and peacefulness.

In addition to its natural beauty the area is known for its association with artists such as Constable, Gainsborough and Munnings. There is also a wealth of historical features that draw visitors, including the Stour navigation, a wealth of archaeology (including below ground heritage assets). Furthermore, the historic and picturesque villages, often with outstanding churches are a key feature and characteristic of the AONB and Stour Valley project area.

Most visitors arrive to the area by car. There are some options for travelling to the AONB by train, as it is served by a mainline railway station. The Stour Valley project area is served by a branch line. There are options for more sustainable transport methods once they have arrived in the area, such as bike hire and a limited bus service. The boundary to the AONB and Stour Valley is not obvious on the ground and many visitors and residents will not be aware of the boundary.

The growth in the popularity of cycling, canoeing, paddle boarding, walking and running due to the desire for improving health and the positive experiences gained has been witnessed in the area. This activity is an excellent way to experience the natural beauty of the AONB, although some visitor behaviours have been detrimental to the purposes of the AONB and lead to tensions with the resident population.

Those that come to the area enjoy the relative tranquillity and unspoilt nature of the area. Large scale recreational facilities and noisy or intrusive pastimes are likely to have a negative impact on the defined natural beauty qualities of the area, particularly its relative tranquillity.

The intimate nature of the AONB means that visitor infrastructure, from signage to built structures, require careful consideration to avoid negative impacts on the qualities of the nationally designated landscape. Development and promoted activities need to consider the primary purpose of the AONB, to conserve and enhance the natural beauty.

Activities such as country sports and learning about rural crafts are well catered for in the area and can fit well with the purposes of the AONB and contribute to the wellbeing of the area. There are also a number of golf courses in the area. These golf courses have the potential to contribute to the purposes of the AONB if managed in a sympathetic way.

The Government's review into National Parks and AONBs, the Landscapes Review, identified the lack of diversity in visitors to AONBs. This is something that needs to be addressed, AONBs are national assets and visitors to them should reflect society.

Co-ordination and Developing the Area for Tourism

The AONB and Stour Valley project area runs across many administrative boundaries but there has never been one organisation directly co-ordinating either tourism activity or promotion across the whole area. A LEADER funded project during the time of the previous Management Plan worked to address this void. Groups such as the River Stour Festival work hard to deliver a coordinated approach to the visitor offer, as does the Wool Towns Association. Individual businesses continue to market and promote themselves and often refer to the natural beauty of the area.

As the area straddles two counties both Visit Essex and Visit Suffolk undertake campaigns to promote the areas, although both organisations are mindful of the fragility of the area.

A Visitor Management Group, operating in the Flatford area, has for many years bought representatives, drawn from the charitable, commercial, and public sectors together in an attempt to undertake work to influence visitor behaviours once they have arrived.

The development of a group to promote the area for tourism that does not have a significant negative impact on the purposes of the AONB designation is likely to be welcomed by those in the private, public and third sectors.

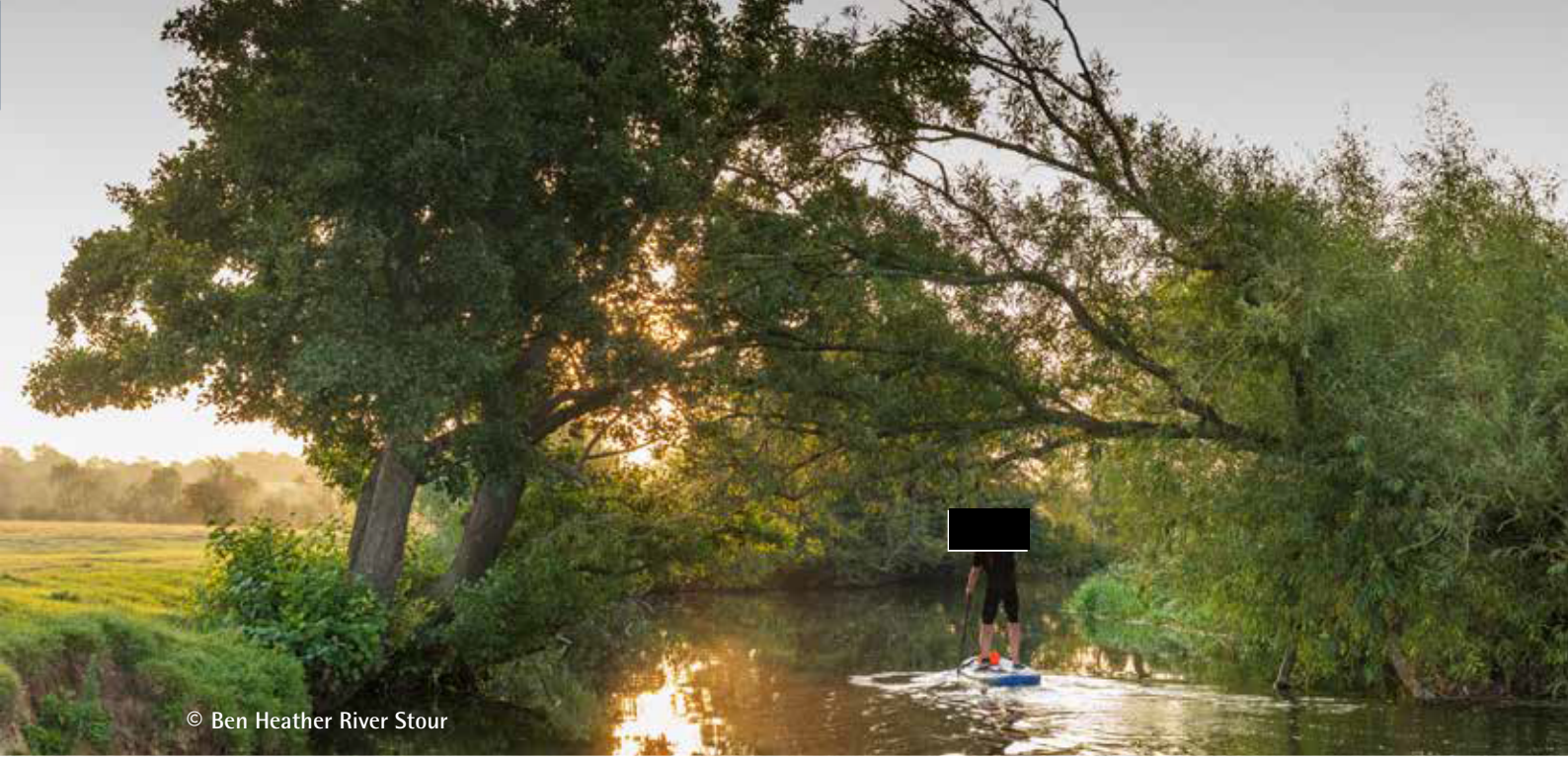
Information provided for visitors is key to increasing enjoyment, understanding and encouraging appropriate behaviours. Information is currently available from a wide range of sources and in different formats. However, information highways are constantly evolving and appropriate mechanisms to engage the different audiences are required. Consideration needs to be made for the currently missing audiences, to ensure all members of society are made aware of the benefits of the AONB.

Information should reflect the different interests in the area, and it is appropriate that information is available in a wide variety of formats including books and pamphlets; leaflets; web based; via social media; static displays; staff and press articles.

It is appropriate that information is disseminated by a variety of methods providing it is fit for purpose and meets the needs of visitors. There is some benefit in having cross promotion between organisations and sectors, and shared messages relating to the area's natural beauty would contribute to the primary purposes of the AONB and supporting the conservation of the Stour Valley.



© **Field Studies Council** Flatford Mill with artists



© Ben Heather River Stour

The key issues that impact the AONB and Stour Valley Project Area are:

- Visitor activity and behaviours impacting the primary purpose of the AONB, agricultural operations, and resident's quality of life at hotspots and at particular times of the year.
- A locally important visitor economy.
- The lack of a co-ordinating body to promote sustainable tourism.
- The lack of more sustainable transport options.

Aim:

The AONB and Stour Valley project area are enjoyed by all sections of society

Objectives:

- The AONB and Stour Valley is an area that appeals to all sections of society
- The AONB and Stour Valley project area is enjoyed by visitors from all sections of society without compromising its natural beauty.
- The AONB and Stour Valley project area has a sustainable visitor economy.
- The understanding of the AONB and its features, to encourage further efforts to conserve and enhance its defined natural beauty

Management Plan Policies:	
ETA1	Support projects to broaden the appeal, understanding and engagement with the area to groups that are currently underrepresented in the current visitor profile.
ETA2	Support new visitor facilities that reflect the scale and qualities of the AONB and Stour Valley project area and do not significantly detract from its natural beauty.
ETA3	Support initiatives to encourage more sustainable transport to and from the area and for travel within the area.
ETA4	Support coordination of promoting tourism to the AONB and Stour Valley project area and minimise any negative impacts of the visitor activity on Habitats sites.
ETA5	Raise awareness of the AONB designation to visitor service providers and visitors.
ETA6	Promote behaviours that do not adversely impact the residents or the natural beauty of the AONB and Stour Valley.



Flooding at Nayland in 2020

3.4 Climate Change and Nature Recovery

Climate change is one the causes already starting to shape the AONB landscape and its constituent wildlife. Its future impacts are likely to be significant and profound. Land use change is the most significant cause of wildlife decline. Development that delivers on biodiversity net gain and agricultural practices, supported by the agricultural transition plan and the Environmental Land Management Scheme have the potential to address the causes of wildlife decline.

The national AONB network committed to an approach to address the twin concerns of climate change and wildlife decline at its national conference in 2019. This became known as the Colchester Declaration, named after the town it was developed in during the Landscapes for Life conference at the University of Essex. The declaration is reproduced below:

The Colchester Declaration 2019

Set against a backdrop of unprecedented concern for the future of the natural world, and intergovernmental reports that the current global response to the effects of human impact on nature is insufficient – the National Association for Areas of Outstanding Natural Beauty believes that now is the time to significantly increase the scale and pace of nature conservation activity in AONBs. Using our unique network and partnership model, we are making a collective Declaration on Nature in AONBs, setting out our strategy for change.

With many AONB host authorities having taken the step of declaring a Climate Emergency we are demonstrating our readiness to act to redress declines in species and habitats within the context of a wider response to climate change.

We believe:

1. *Natural Beauty has intrinsic value and means so much to people.*
2. *AONBs should be places of rich, diverse, and abundant wildlife.*
3. *Nature recovery is central to the conservation and enhancement of natural beauty.*
4. *Climate change is the biggest threat to humanity and one of the greatest threats to biodiversity. Designated landscapes offer some of the most powerful solutions to the challenges of climate change.*
5. *The network of AONBs and National Parks, their teams, partnerships, authorities and stakeholders offer a unique solution to tackling environmental challenges.*

We pledge:

1. *To enable an approach that creates opportunities within AONBs for people to make an emotional connection with nature.*
2. *To prepare a Nature Recovery Plan for each AONB.*

By 2024

1. *To embed an ecosystems services approach into all AONB Management Plans.*
2. *To ensure all AONB Management Plans include meaningful measures around climate change mitigation and adaptation, including clear, measurable targets to support Net Zero.*

By 2030

1. *That at least 200,000 ha of SSSIs in AONBs will be in favourable condition.*
2. *That at least 100,000 ha of wildlife-rich habitat outside of protected sites will have been created or restored in AONBs to further support the natural movement of plants and animals.*
3. *That at least 36,000 ha of new woodland will have been planted or allowed to regenerate in AONBs following the principle of the right tree in the right place.*
4. *That, by each AONB immediately adopting a species on the threatened list and by preparing and delivering a Species Action Plan, at least thirty species relevant to AONBs will be taken off the list by 2030.*

We call on Westminster and Welsh Governments to provide the power and resources to make these targets achievable



© Ben Heather Dedham

Nationally, wildlife records indicate a 60%[7] decrease since 1970, there is no reason to expect this is significantly different to what has been experienced in the AONB and Stour Valley project area. Records for species and habitats are contained in the State of AONB report, 2018[8] and will need to be repeated at suitable intervals. Other available data from the AONB Nature Recovery Plan being developed in 2021 will need to be monitored to understand changes to landscape and wildlife populations.

The AONB is working in partnership with the Stour Valley Farmer Cluster to address wildlife decline and has developed a Nature Recovery Plan for the AONB.

The key issues that impact the AONB and Stour Valley Project Area are:

- Increase in the intensity of rain and storms.
- Winters are expected to be warmer and wetter with greater rainfall intensity.
- Intensification of agricultural practices that have contributed to the decline in wildlife.
- Feeling of helplessness in ability to combat impacts of climate change and wildlife decline at an individual level.
- The Dedham Vale AONB has selected the Hazel Dormouse as its flagship species for nature recovery following a consultation process with the AONB and Stour Valley Partnership and other stakeholders in 2020.

Aim:

The AONB and Stour Valley contributes to mitigating climate change and wildlife recovery.

Objectives:

- To reduce, minimise and mitigate the impacts of climate change.
- To deliver wildlife recovery.
- Maintain and enhance soil health.
- Work to mitigate climate change and support wildlife recovery do not adversely impact the areas special qualities and historic environment.

[7] www.jncc.gov.uk/ukbi-C4a
[8] https://arcg.is/0LP4DC



Dykes in Bures during restoration works



Reinstated dykes at Bures following project work

Management Plan Policies:	
CCNR1	Implement the Colchester Declaration.
CCNR2	Increase tree cover, where appropriate to the AONB and Stour Valley project area landscape (based on the principles of the Wildlife and Countryside Link[9] paper).
CCNR3	Support nature-based solutions to combat the impacts of climate change that improve landscape and wildlife habitat where this does not compromise the statutory purposes of the AONB.
CCNR4	Use AONB Sustainable Development Fund to support projects that address climate change, soil health and wildlife decline.
CCNR5	Promote understanding of all causes of climate change and wildlife decline, how people can make a difference and the need for adaptation.
CCNR6	Provide nature-based solutions to help tackle climate change and increase ecosystem resilience.

[9] www.wcl.org.uk/docs/Link_woodland_expansion_principles_Feb2020.pdf

3.5 The River and its Tributaries

The River Stour is a defining feature of the area. Much of the areas appeal to people, the value to wildlife and local economy is based on the river. Once it was a vitally important trade link boosting commerce between London and Europe to the Stour Valley and Sudbury. Goods such as bricks and wool travelling downstream and 'night soil' (fertiliser in the form of droppings of horses drawing carriages in London) coming upstream.

The river has always been an important wildlife corridor and a place for people to enjoy getting out on and near the water. The river and its tributaries are home to species such as otter, water vole, kingfisher, and a diverse range of fish. The quiet or lucky visitor will sometimes be fortunate to catch a glimpse of these charismatic river residents.

River Navigation

The river is navigable by unpowered craft such as canoes and kayaks from Brundon Mill to Cattawade. The River Stour Trust runs electrically powered passenger boat trips from Sudbury and between Flatford and Dedham in the summer months. Many people enjoy getting out on the water and this is a wonderful way of taking in the landscapes of the Stour Valley that so inspired artists such as John Constable, John Nash and Thomas Gainsborough.

Ely Ouse to Essex Water Transfer System

The river plays a vital role in the Ely Ouse to Essex Transfer Scheme transporting water from Denver in Norfolk, to Abberton and Hanningfield reservoirs, to provide a public water supply in Essex. In the early part of this century, Essex & Suffolk Water has increased the capacity of the relatively close Abberton Reservoir by 60% and increased its daily pumping capacity at its river intakes. When natural (unsupported) river flows are high, a greater volume of water can be abstracted and used to fill the enlarged Abberton Reservoir. This means that the likelihood of the Ely Ouse to Essex Transfer Scheme being needed in the medium term is reduced.

The combined effects of abstractions for agricultural use and that for public water supply means for prolonged periods very little water flows into the estuary. During periods of very low flow the water company is required to operate their intakes to ensure that water flowing into the reach downstream of Stratford St Mary is allowed to continue downstream and discharge to the estuary. These low flows are monitored for ecological purposes by the Environment Agency.



 Creating new backwater habitat



The backwater habitat thriving following completion

Riverside Trees

Much of the main river and some tributaries are defined in the landscape by plantations of cricket bat willows along the banks. These willows grow to maturity in around 20 years and can provide an important source of income to riparian landowners. These trees can offer some benefit in cooling river waters in the summer months supporting wildlife. However, they are not as effective at shading or providing wildlife habitat as native trees that would historically have been found along the Stour Valley such as native willows, alder and black poplar, which are being planted by initiatives such as the River Stour Enhancement Project.

Demand for Potable Water

The UK Groundwater Forum estimates that there has been a 70% increase in the demand for water over the last 30 years. The AONB and Stour Valley project area is one of the driest in England with around 110 days where rain is recorded and an annual rainfall measurement of 568mm compared with a national average of 133 days and 855mm. This increasing demand in a dry area of the country means greater pressure on the water supply network including the River Stour that forms part of this network.

An abstraction licensing strategy has been produced by the Environment Agency setting out how water resources are managed in the Essex Catchment Abstraction Management Strategy (CAMS) [10] area. It provides information about where water is available for further abstraction and an indication of how reliable a new abstraction license may be.

Water Quality

Water quality in the River Stour and its tributaries is subject to national and European legislation including the Water Framework Directive. It has been stated by the United Kingdom Government that legislation will be brought over from European Law or equivalent laws will be made as the United Kingdom leave the European Union. The directive seeks to improve the ecological and chemical status of the surface water in terms of its:

- Biological quality (fish, benthic invertebrates, aquatic flora).
- Hydro morphological quality such as riverbank structure, river continuity or substrate of the riverbed.
- Physical-chemical quality such as temperature, oxygenation, and nutrient conditions.
- Chemical quality that refers to environmental quality standards for river basin specific pollutants.

[10] www.gov.uk/government/publications/cams-essex-abstraction-licensing-strategy



© River Stour Trust, Trusty II electric boat

There are a variety of initiatives to improve water quality aimed at improving the ecological state of the river including River Basin Management Plans, Catchment Sensitive Farming, Nitrate Vulnerable Zones and Catchment Abstraction Management Strategy.

Water quality can be adversely impacted by invasive plant species. Exposed bare riverbanks under species such as Himalayan Balsam over winter are at greater risk of erosion increasing the sediment load of the river. Other problems associated with non-native species are de-oxygenation and the shading of native in channel submerged water plants.

The Environment Agency has supported a River Stour Enhancement Project to support work to maintain the environmental quality of the River Stour and its tributaries.

Recreational Use

The river provides many opportunities for fishing. Fishing remains the highest participation sport in England. Many of the fishing rights are owned by clubs such as the London Anglers Club and Colchester Angling Preservation Society.

The river is enjoyed by many. In addition to many private craft that use the river there are boats to hire at Dedham and Flatford. This includes river trips on electric craft from Sudbury, such as the Stour Lighter, restored through the Managing a Masterpiece Landscape Partnership Scheme. There are companies that hire craft, and some provide guided canoe trips along the length of the navigable channel. Vessels using the river are required to be licenced.

The River Stour Trust is a registered charity dedicated to the conservation and restoration of the Stour Navigation. The Environment Agency is the navigation authority and as such manages the navigation that is limited to self-propelled vessels for the length of the Navigation, Sudbury to Cattawade and specific rights for certain powered crafts along defined stretches.

Wild swimming is increasing in popularity with individuals and organised groups taking advantage of the river and its outstanding landscape, some use the municipal outdoor swimming facility on the Stour at Sudbury. Many people enjoy spending time next to the river. Access is limited to where Public Rights of Way run adjacent to the river, public open spaces such as the Sudbury Common Lands and some land owned by businesses that use the attraction of the river to attract custom, such as the Henny Swan public house and Milsom's Hotel and Restaurant.

Flooding

Climate change means that the UK is experiencing increasing numbers and magnitude of storm events. Stewardship of the countryside, through natural flood management, has and can continue to reduce this flood risk with increasing land in permanent pasture and agricultural practices to reduce the speed of run off from farmed land.

The operation of the sluice gates associated with the many mills plays a part in managing water levels on the river, but they are not flood control structures. Soft engineering projects, such as those facilitated by the River Stour Enhancement Project, that direct excessive flows away from sensitive areas can be of benefit to reduce the impacts of flooding.

Routine maintenance of the river and its control structures, ensuring development considers flood risk areas and the use of the Environment Agency's flood alert systems, can help reduce the impacts and risk of floods.

River Morphology

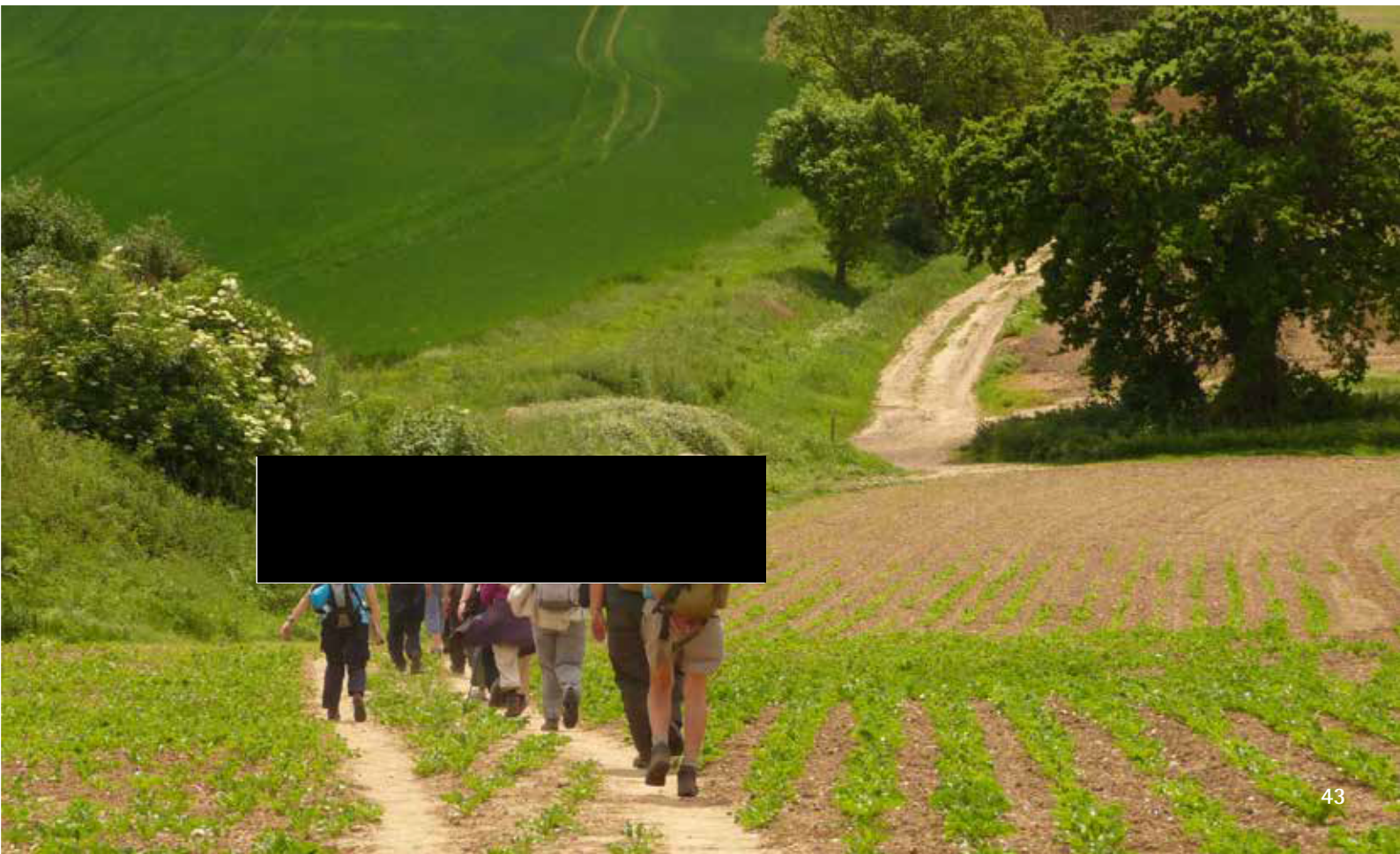
The River Stour has been subject to many alterations by humans over many centuries. Evidence of these alterations can be seen throughout the AONB and Stour Valley project area including its most iconic location at Flatford, the site of the artist John Constable's 'The Haywain'. Here the river has been diverted to provide water for the local mill.

Many of these alterations have allowed water to flow away quickly. This can reduce the value to wildlife, although increase agricultural productivity. The value of wetter areas to ecosystem services and the natural capital they provide to society, is recognised by agri-environment schemes that in some cases support projects to improve the wildlife and landscape function of the river.

The Water Framework Directive is a mechanism to measure the environmental quality of rivers. Measures can be put in place for water bodies with a modified function (such as flood defence and navigation) for them to achieve good ecological potential. These include increasing in channel morphological diversity, retaining marginal aquatic and riparian habitats, and improving floodplain connectivity.

In recent years the River Stour Enhancement Project, a partnership between the Environment Agency and the Dedham Vale AONB and Stour Valley, has worked with landowners to deliver significant environmental gains. These include the creation of backwaters, naturalising, reconnecting the floodplain with the river, restoring the morphology of the river, providing tree cover, and the removal on non-native invasive plant species.

There have been historical improvements to the navigation including new cuts, most noticeably at Wormingford where a new channel was cut and at Nayland, where a flood relief channel was introduced. Navigation improvements have included dredging of the channel to ensure that there is sufficient water depth for the river craft.





Stour Valley Volunteers clearing Himalayan Balsam near Bures

The river has been manipulated many times by the needs of agriculture. The protection of agricultural land by the creation of riverbanks, or levees, to protect agricultural land from flooding, can be observed through the majority of the river.

The cumulative impact of the changes in the river's morphology for the purposes of industrial navigation and flood defence have had a negative impact on the ability of the river to act as a wildlife habitat.

The key issues that impact the AONB and Stour Valley Project Area are:

- Demand for agricultural and potable water supplies.
- The impacts of climate change.
- Loss of wetland habitats.
- Lack of riverside trees.
- Loss of natural processes operating in the river system.
- Requirement to improve ecological condition of catchment through the Water Framework Directive or its successor.
- Increasing demand for recreational use of the river.
- Ely-Ouse to Essex Water Transfer Scheme.
- Expansion of scope for non-native wildlife species.
- Costs of maintaining river structures.

Aim:

Have an ecologically sound river system that contributes to public good.

Objectives:

- The catchment functions as a healthy ecosystem that contributes to public good.
- The river and its tributaries contribute to the natural beauty of the area.
- Wetland habitats, including the rivers and tributaries provide important wildlife habitat.
- Flood defence schemes protect people and property and do not impact the areas natural beauty and wildlife habitat.
- The river provides opportunities for quiet informal recreation that does not detract from the natural beauty of the AONB and Stour Valley project area.
- That projects that benefit the river and its tributaries do not have a negative impact on the area's natural beauty and historic environment.

Management Plan Policies:

RAT1	Support work to conserve and enhance the river and its tributaries landscape quality and wildlife habitat.
RAT2	Support projects to implement the Water Framework Directive, or its successor.
RAT3	Support work to maintain active and conserve historic navigation features where they contribute to the AONB designation and qualities of the Stour Valley project area.
RAT4	Support flood control and water transfer schemes that conserve and enhance the areas landscape and wildlife habitats.
RAT5	Support recreational activity that does not significantly detract from the defined natural beauty of the AONB and qualities of the Stour Valley project area and its habitats sites.
RAT6	Support work for sustainable irrigation schemes for local farms.



3.6 Working Together

As an African proverb says:

> If you want to go quickly, go alone. If you want to go far, go together.

In order to meet the purposes of the AONB designation, it is vital to work together to secure the best outcomes for the purposes of the AONB.

It is a statutory obligation for local authorities to consider the purposes of the AONB and there are obvious benefits to those local authorities in working together to meet this duty. Other organisations, from the public, private, and third sectors have a legitimate interest in the purposes of the AONB and how they affect their own objectives. It is for this reason that working together is important in conserving and enhancing the natural beauty of the AONB and special qualities of the Stour Valley project area.

Defra and local authorities fund a small AONB staff team to help meet their duty of the purposes of the nationally designated landscape. A wider AONB partnership of organisations representing the environmental, agricultural and business sectors has been formed to further the aims and deliver on AONB objectives.

The purpose to conserve and enhance the AONB cannot be met by the staff team and this partnership alone. All public bodies have a duty to consider the purposes of the AONB in undertaking their duties, as do statutory undertakers. A wide section of society contributes in a significant way to meet the purposes of the AONB and contributes to maintaining the special qualities of the Stour Valley project area.

The Government review of National Parks and AONBs, the Landscapes Review, has identified partnership working as a key strength of the AONBs. However, it has identified significant short comings in engaging with all members of society.

Two amenity societies, the Dedham Vale Society and the Colne Stour Countryside Association have many overlapping purposes to the Dedham Vale AONB and Stour Valley Partnership. Parish councils similarly have an interest in the AONB and Stour Valley project area and a statutory duty to consider the purposes of the AONB in decision making. In recent times several parish councils and the amenity societies have supported the staff team through sharing knowledge and financial contributions towards delivering AONB and Stour Valley work.

There are many local community groups that work to improve their local environment and the characteristic features of the AONB and Stour Valley.



Building tree guards at Nayland



Surveying farmland in the Stour Valley

The key issues that impact the AONB and Stour Valley Project Area are:

- Lack of engagement in AONB issues across the whole of society.
- Status and understanding of the AONB designation.
- Partner capacity to meet AONB obligations or support its purposes.

Aim:

Conserve and enhance natural beauty of the AONB and Stour Valley project area.

Objectives:

- Work in partnership with all stakeholders to deliver the purpose of the AONB and maintain the qualities of the Stour Valley project area.
- Develop a co-ordinated approach to conserving and enhancing the natural beauty of the AONB and the qualities of the Stour Valley project area.
- Maximise benefits for landscape, wildlife and people in the area.

Management Plan Policies:

WT1	Work in partnership to deliver the Management Plan objectives.



Dedham Vale Youth Rangers building a stag beetle pyramid



Dedham Vale Youth Rangers

4. Appendices



4.1 Appendix 1: Glossary

AONB:	Area of Outstanding Natural Beauty. An area of land designated by government for the purposes of conservation and in recognition of their landscape quality.
AONB team:	The staff unit employed to undertake the statutory requirements of AONB authorities' responsibilities and to co-ordinate activity to deliver work to deliver the management plan vision.
Dedham Vale AONB:	One of 46 Areas of Outstanding Natural Beauty in England, Wales and Northern Ireland on the Essex/Suffolk Border running from Cattawade to east of Bures.
Defra:	The Department of Environment, Food and Rural Affairs. A government department that provides up to 75% of core funding to AONB team and is responsible for policy and regulation on the natural environment.
Infrastructure:	Physical structures that enable society to operate eg roads, railways' phone masts and electricity transmission networks.
Joint Advisory Committee (JAC):	A grouping of funding partners providing strategic guidance and scrutiny for the AONB team.
Natural Beauty:	A term not defined in legislation but widely accepted to meaning scenic beauty underpinned by a coherent landform, geology, plants and animals and environmental and cultural heritage.
Navigation (River Stour):	A 1705 Act of Parliament that gave powers to named commissioners to deepen channels, create locks & weirs and remove obstacles to navigation on the river.
Partnership:	When written with an upper-case P it relates to an alliance of statutory agencies, local authorities, charitable organisations, voluntary organisations, and membership organisations that have a particular interest in the AONB and Stour Valley.
Special Qualities:	Those aspects of the AONB and Stour Valley that contribute to its natural beauty. This may include landform, geology, wildlife, heritage features, cultural associations, sense of place and scenic quality.
Stour Valley:	An area of land on the Essex Suffolk border running from Cattawade to Great Bradley near the Cambridgeshire border.
Stour Valley project area:	The mid and upper part of the of the Stour Valley that is not designated as AONB.

4.2 Appendix 2: AONB and Stour Valley Facts

4.2.1 Agricultural Survey of Dedham Vale AONB (Source: Defra)

Total number of holdings	Number (2007)	Number (2016)
	171	90
Farm Types	**2007**	**2016**
Cereals	20	14
General Cropping	21	36
Horticulture	10	No data available
Specialist Pig	0	No data available
Specialist Poultry	6	No data available
Dairy	0	0
Grazing Livestock (lowland)	27	31
Mixed	6	5
Other	110	0

Farm Size	2007	2016
<5	99	No data available
5 - < 20	43	36
20 - < 50	**27**	**22**
50 - < 100	11	No data available
< 100	25	21

Land Use Type	Number (2007)	Number (2016)
Total area	9185	7433
Rented	2427	2119
Owned land	6854	6367
Crops and bare fallow	4670	4148
Temporary grass	394	185
Permanent grass	2365	2219
Rough grazing (sole right)	113	12
Woodland	959	636
Other land	259	232
Mixed	6	5

Crops (area)	Number (2007)	Number (2016)
Total Cereals	2834	2487
All other arable crops	No data available	**1057**
Horticultural crops	395	218

Livestock	Number (2007)	Number (2016)
Cattle	1981	2283
Pigs	**1353**	**609**
Sheep	5074	5434
Poultry	No data available	1224
Goats	23	No data available
Horses	No data available	112

Labour	Total 349 on 113 holdings	Total 242 on 90 holdings
Farmers (full time)	50	39
Farmers (part-time)	139	100
Managers (full time)	**12**	No data available
Managers (part-time)	7	No data available
Workers (full-time)	31	24
Workers (part-time)	38	48
Casual	36	24

		Source: Natural England
SSSI		**% of Dedham Vale AONB land area**
Total area of SSSI	138 ha	1.5%
Condition	Favourable	Unfavourable-recovering
	65 ha	73ha
Woodland Cover **Source: National Forest Inventory**		
	Woodland cover (ha)	**% of Dedham Vale AONB land area**
	1151 ha (of which 129 ha is ancient woodland)	12.7%

4.2.2 Economic Impact of Tourism (Source: Destination Research)

	Dedham Vale AONB		Stour Valley project area	
Type	**2016**	**2019**	**2016**	**2019**
Total No. of day trips	743,200	849,000	757,500	838,800
Total day trip spend	£21,720,540	£27,458,100	£22,056,700	£26,824,500
Total staying trips	100,800	103,300	93,000	95,300
Total staying nights	236,400	282,000	251,000	273,100
Total staying spend	£19,483,000	£24,548,000	£20,842,500	£22,550,700
Total Tourism Value (includes associated spending, indirect spend)	£55,065,004	£68,176,942	£40,782,000	£49,480,000
Full-time equivalent jobs	860	1,067	788	921

4.3 Appendix 3: Summary of Management Plan Policies

	Policy	
The Countryside	Support work that contributes to and protects the statutory purposes of the AONB, including impacts on its defined characteristics of landscape and scenic quality, relative wildness, and tranquillity.	CS1
	Resist proposals that significantly negatively impact the AONB's natural beauty and special qualities, including those in its setting.	CS2
	Support work that contributes to local distinctiveness, appropriate climate change mitigation and wildlife recovery in the AONB and Stour Valley project area.	CS3
	Support work to broaden the audiences to the AONB and Stour Valley project area and improve understanding of its natural and built features.	CS4
	Work with the Dedham Vale Society and others to secure Dark Sky status for the AONB.	CS5
	Support the aspiration to extend the AONB boundary	CS6

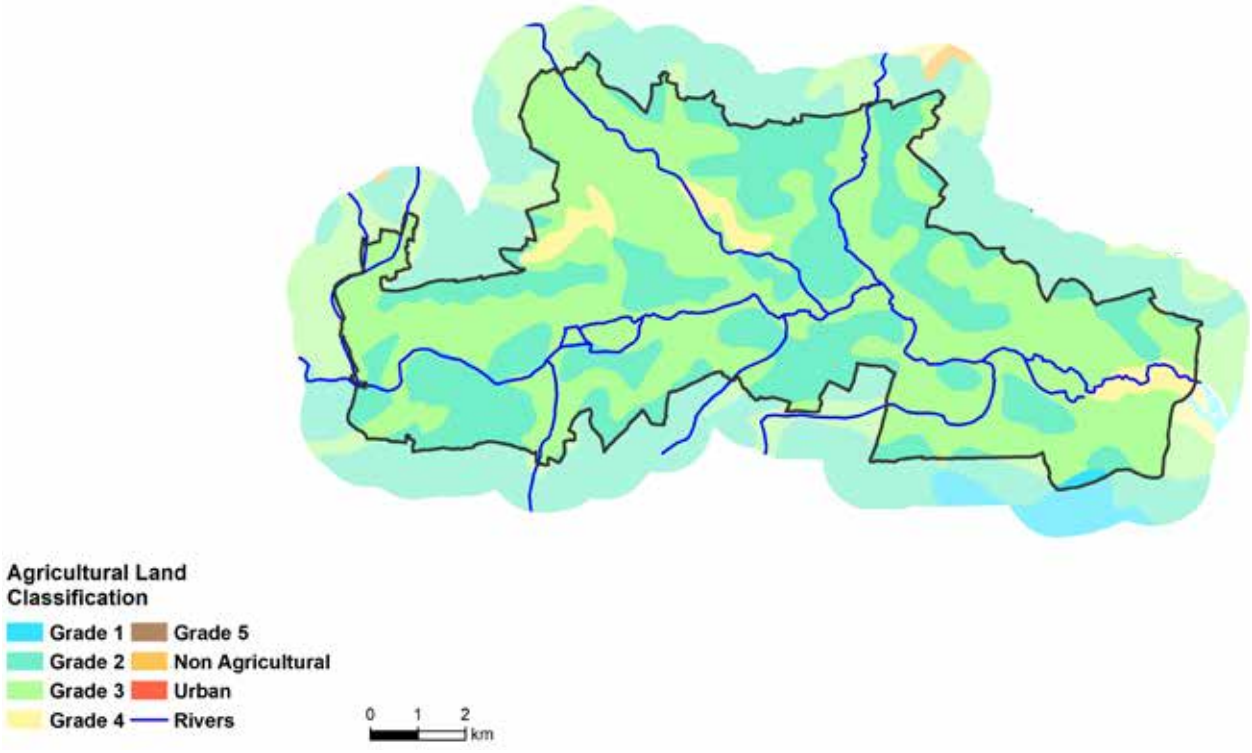
Villages, Infrastructure, and Residents	Develop understanding of the purposes of the AONB designation to residents and infrastructure owners to inform any development proposals.	VIR1
	Champion the purposes of the AONB and characteristics of the Stour Valley project area to Local Planning Authorities and other decision makers.	VIR2
	Conserve and enhance the AONB by supporting work to reduce the negative impacts of proposed and existing infrastructure.	VIR3
	Work with the visitor and tourism industry to maximise the economic, social and wellbeing benefits and minimise any negative impacts of the visitor activity.	VIR4
Enjoying the Area	Support projects to broaden the appeal, understanding and engagement with the area to groups that are currently underrepresented in the current visitor profile.	ETA1
	Support new visitor facilities that reflect the scale and qualities of the AONB and Stour Valley project area and do not significantly detract from its natural beauty.	ETA2
	Support initiatives to encourage more sustainable transport to and from the area and for travel within the area.	ETA3
	Support coordination of promoting tourism to the AONB and Stour Valley project area and minimise any negative impacts of the visitor activity on Habitats sites.	ETA4
	Raise awareness of the AONB designation to visitor service providers and visitors.	ETA5
	Promote behaviours that do not adversely impact the residents or the natural beauty of the AONB and Stour Valley.	ETA6
Climate Change and Nature Recovery	Implement the Colchester Declaration.	CCNR1
	Increase tree cover, where appropriate to the AONB and Stour Valley project area landscape (based on the principles of the Wildlife and Countryside Link paper).	CCNR2
	Support nature-based solutions to combat the impacts of climate change that improve landscape and wildlife habitat where this does not compromise the statutory purposes of the AONB.	CCNR3
	Use AONB Sustainable Development Fund to support projects that address climate change, soil health and wildlife decline.	CCNR4
	Promote understanding of all causes of climate change and wildlife decline, how people can make a difference and the need for adaptation.	CCNR5
	Provide nature-based solutions to help tackle climate change and increase ecosystem resilience.	CCNR6
The River and its Tributaries	Support work to conserve and enhance the river and its tributaries landscape quality and wildlife habitat.	RAT1
	Support projects to implement the Water Framework Directive, or its successor.	RAT2
	Support work to maintain active and conserve historic navigation features where they contribute to the AONB designation and qualities of the Stour Valley project area.	RAT3
	Support flood control and water transfer schemes that conserve and enhance the areas landscape and wildlife habitats.	RAT4
	Support recreational activity that does not significantly detract from the defined natural beauty of the AONB and qualities of the Stour Valley project area and its habitats sites.	RAT5
	Support work for sustainable irrigation schemes for local farms.	RAT6
Working Together	Work in partnership to deliver the Management Plan objectives.	WT1

4.4 Appendix 4: Supporting Maps

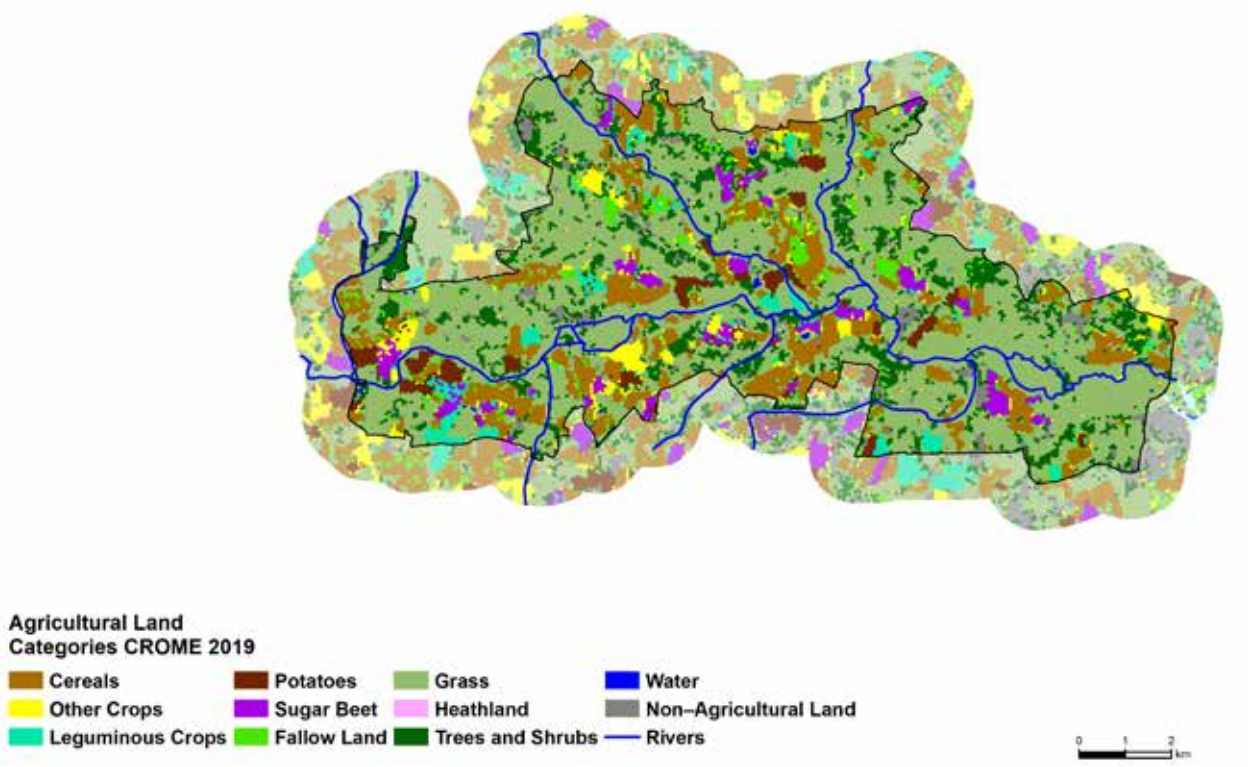
These maps were produced by the University of East Anglia in 2021 for a commission on behalf of the Dedham Vale AONB Partnership as part of a guide to the natural assets of the AONB.



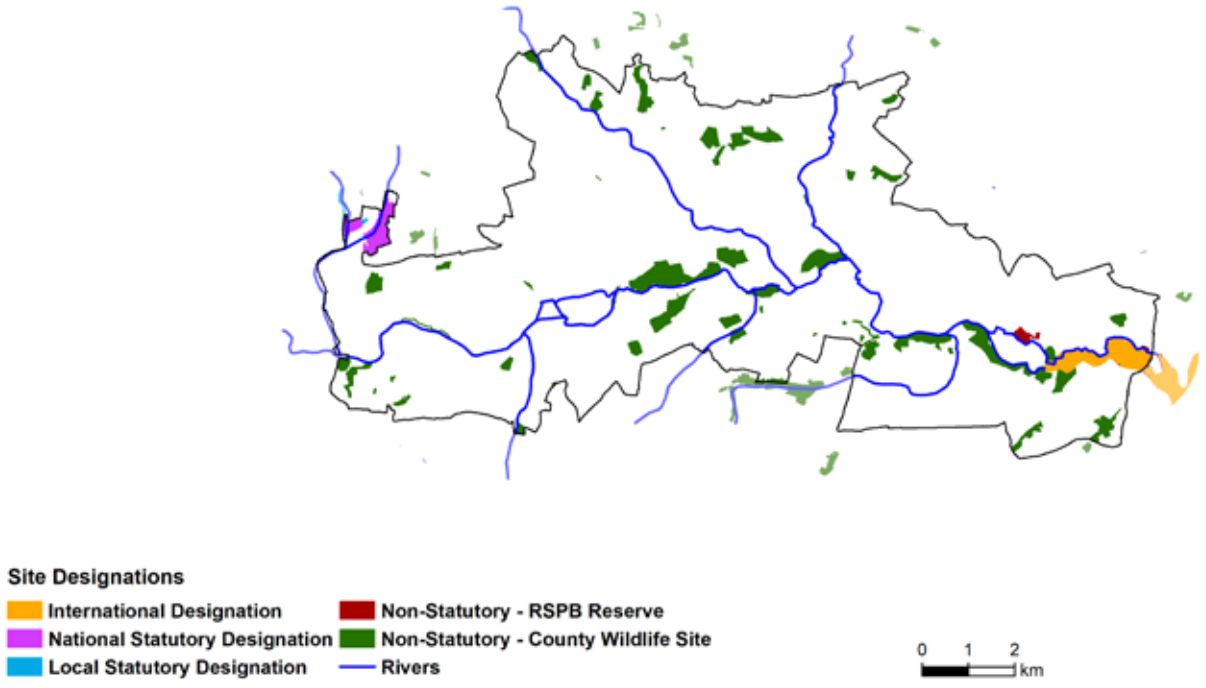
Map 1: AONB boundary - Meridian Data © copyright Ordnance Survey 2020 AONBs
© copyright 2020 Natural England OS Terrain® 50: Open Government Licence ©



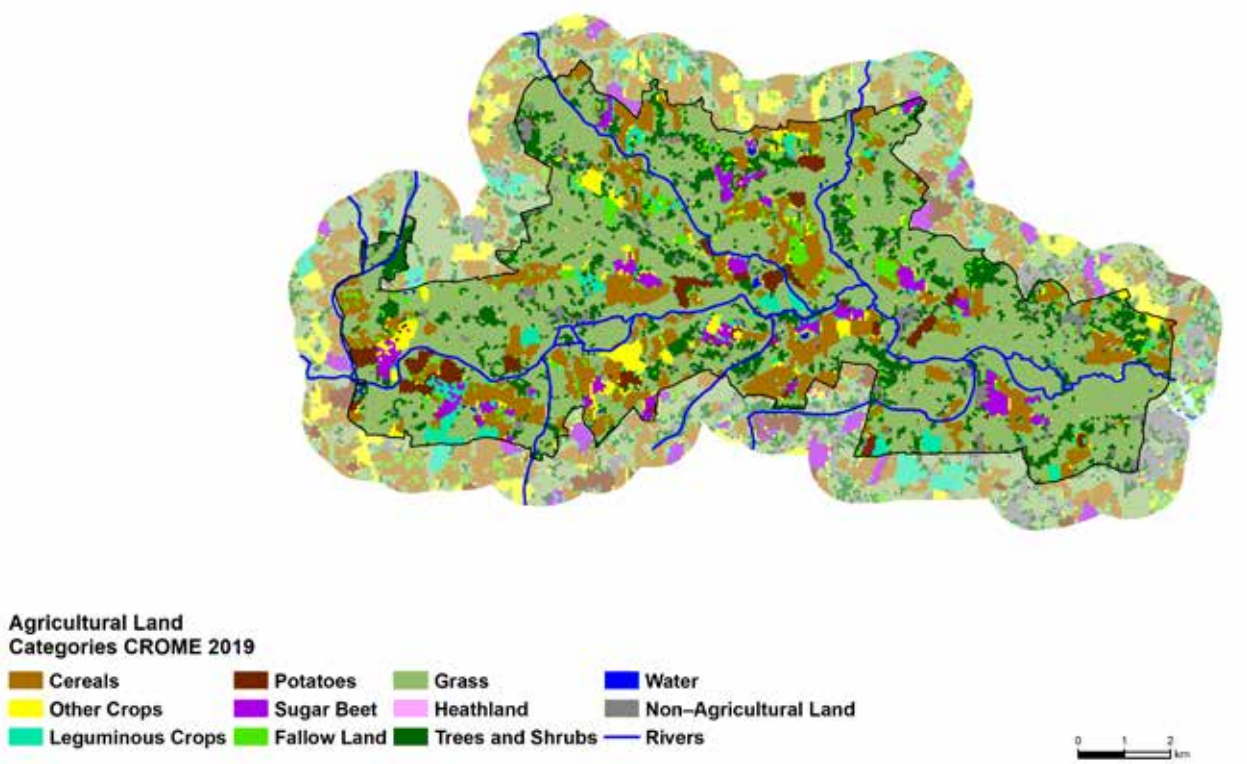
Map 2: Agricultural Land Classification Defra - Agricultural Land Classification: Open Government Licence
© Crown Copyright 2020



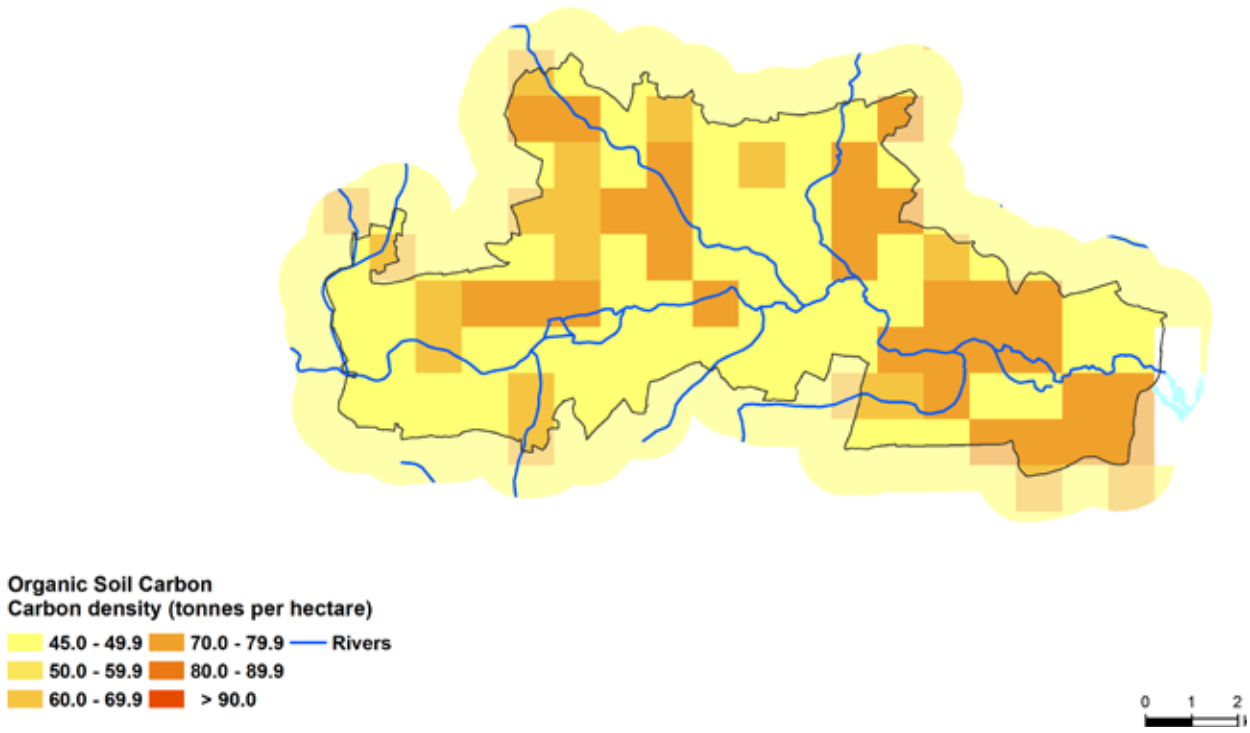
Map 3: Agricultural Land Categories - Crop Map of England (CROME) 2019
Rural Payments Agency - Crop Map of England (CROME) 2019, Open Government Licence ©



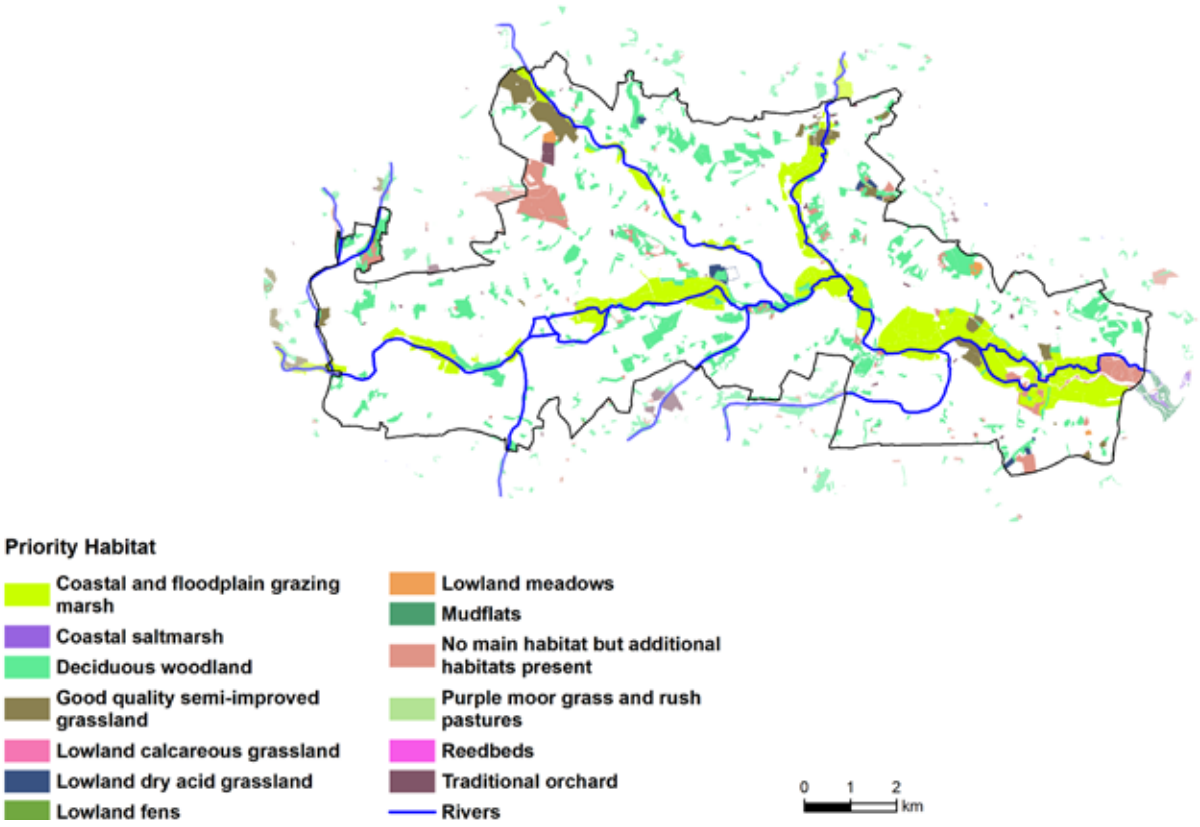
Map 4: Nature conservation site designation
Defra - Magic map data ©



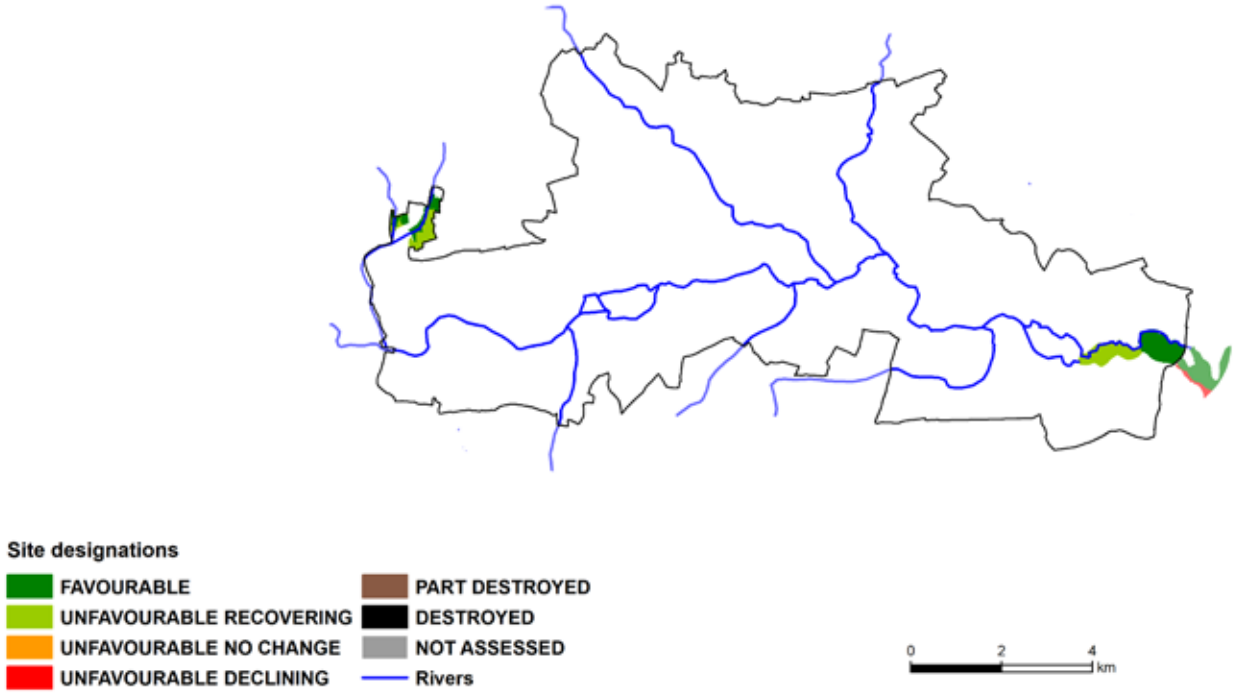
Map 5: Recreational use of land
England Public Rights of Way, Open Government Licence ©
Ordnance Survey Open Greenspace ©
Natural England - Open access land under the CRoW Act 2000 ©



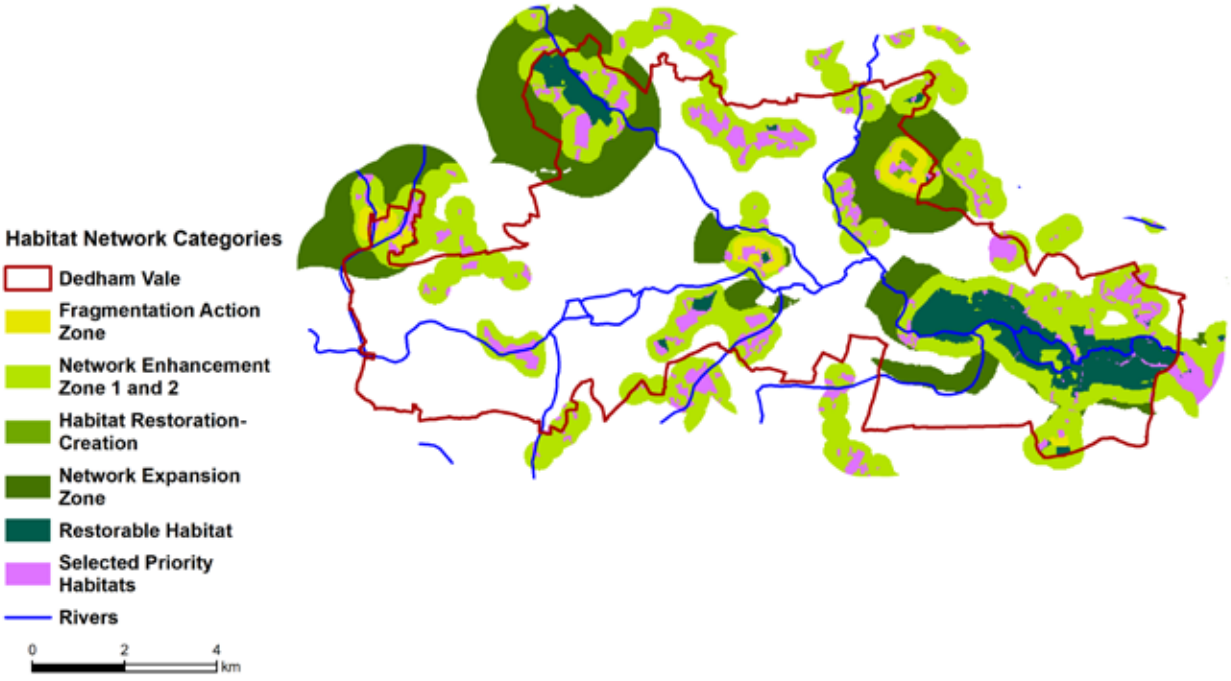
Map 6: Organic soil carbon /carbon density
UK Centre for Ecology and Hydrology, Soil carbon, Mean estimates of carbon density in topsoil (tonnes per hectare)
© CEH & Natural England



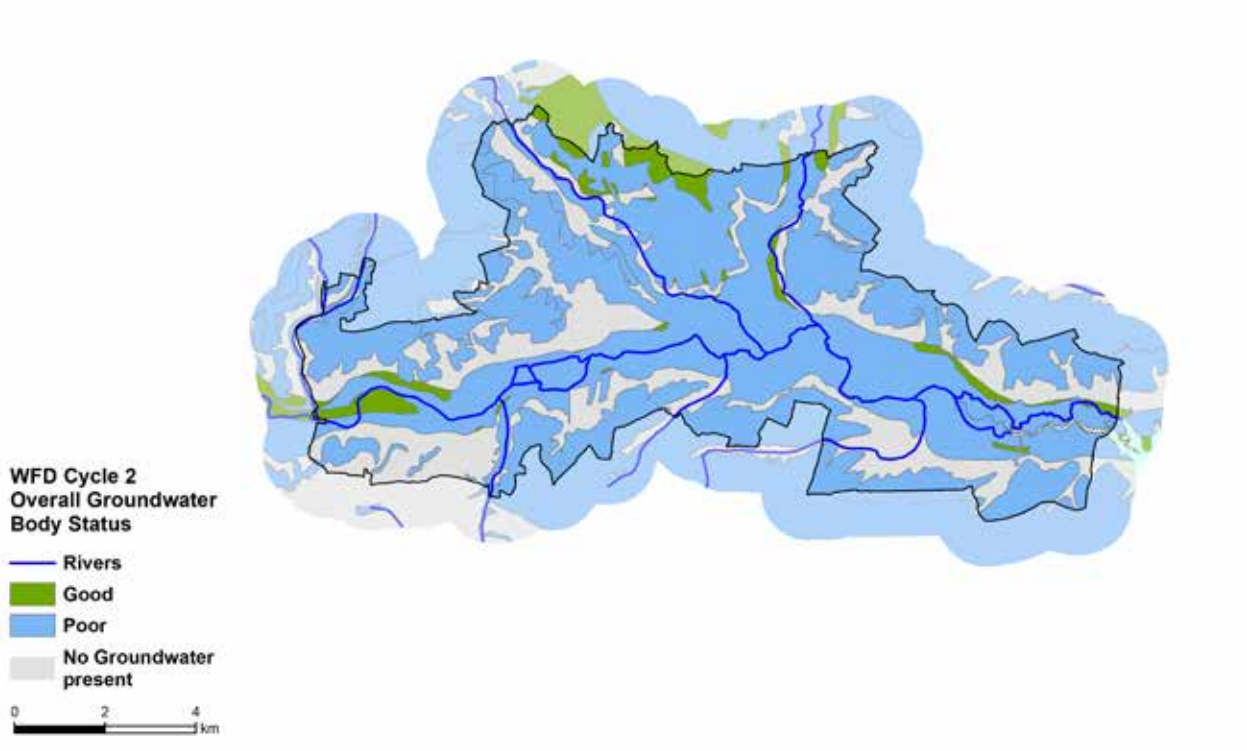
Map 7: Priority habitats
Natural England - Priority Habitat Inventory:
Contains public sector information licensed under the Open Government Licence v2.0 ©



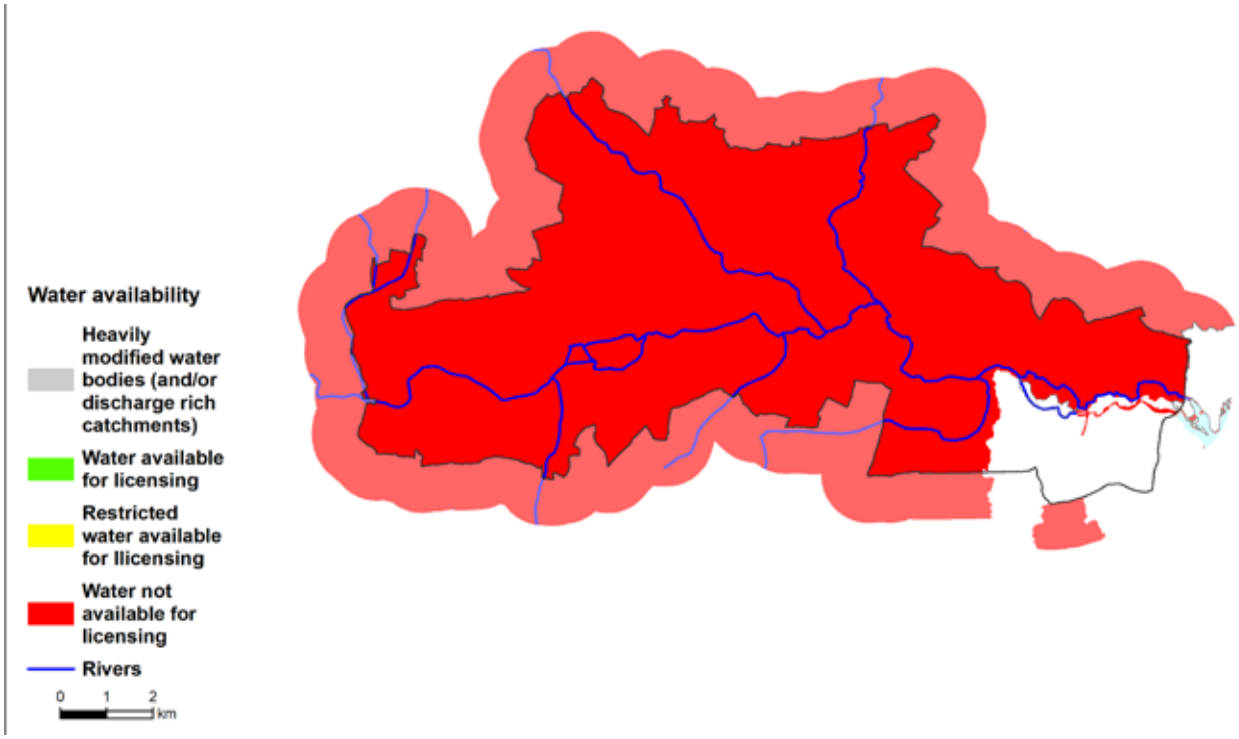
Map 8: SSSI condition
Natural England - Sites of Special Scientific Interest Units (England), Open Government Licence ©



Map 9: Habitat network categories
Natural England - Habitat Networks (England), Open Government Licence ©



Map 10: WFD Cycle 2 Overall groundwater body status
Environment Agency - Water Framework Directive Groundwater Bodies Cycle 2: Open Government Licence ©



Map 11: Water availability
Environment Agency - Water Resource Availability and Abstraction Reliability Cycle 2: Open Government Licence ©



For more information about the Dedham Vale Area of Outstanding Natural Beauty and the Stour Valley Project Area, visit www.dedhamvalestourvalley.org.
You can also follow all the latest news and updates on social media:

Facebook: @dedhamvaleAONB

Instagram: @dedhamvaleAONB

Twitter: @dedhamvaleSVP



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DEDHAM VALE
AREA OF OUTSTANDING NATURAL BEAUTY
& STOUR VALLEY

Landscapes for life .org.uk

DEDHAM VALE
One of the
AONB Family

www.dedhamvalestourvalley.org

Suffolk County Council



North Falls

Local Impact Report Appendix G:

The Suffolk & Essex Coast & Heaths Management Plan 2023 - 2028



Suffolk & Essex Coast & Heaths National Landscape

Management Plan 2023-28

www.coastandheaths-NL.org.uk



Upper Hollesley Common © Gill Moon

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Staverton Thicks © Gill Moon

Executive Summary

This Management Plan provides the agreed policy for the Suffolk Coast & Heaths Area of Outstanding Natural Beauty (AONB) for the period 2023-28. It describes the AONB, sets out the statutory purpose of the AONB designation and meets the duty on AONB local authorities to produce and review a Management Plan every five years.

It sets out a vision for the AONB in the mid-2040s in terms of its environmental, social, and economic indicators. Through a series of themes, the Management Plan explores the opportunities and threats to delivering the statutory purpose of the AONB designation. Management Plan policies have been included to support the delivery of the vision and statutory purpose.



Woodbridge © Gill Moon

Foreword

This Management Plan meets the requirement of the Countryside and Rights of Way Act (2000) that places a duty on local authorities to prepare and publish a plan at five-year intervals.

We hope this plan goes way beyond its legal requirements. In a time of great change, the aspiration for this plan is to balance the environment, social and economic needs of the area, its residents, visitors, and wildlife.

The plan has been developed by a consensus of partners representing environmental, economic, and social interests and has been subject to public consultation. It sets out how to deliver an area that balances the needs of the environment, business and people, a designated landscape fit for the twenty first century.

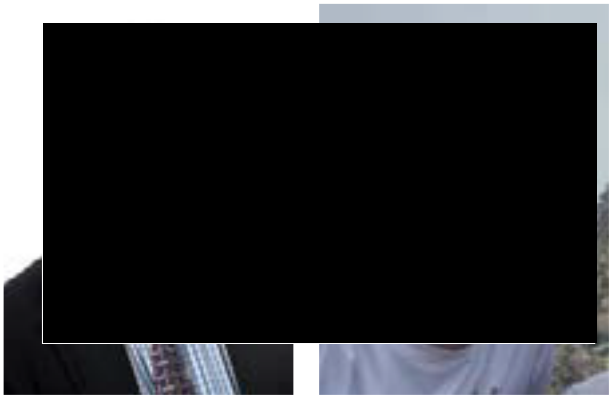


During the lifetime of the previous plan a great deal was achieved to conserve and enhance the area's natural beauty and improve its special qualities. The AONB was extended in 2020 along the southern shore of the Stour Estuary into Essex, and the Freston and Samford Valleys in Suffolk. Working together we can continue to make the Coast & Heaths an outstanding place to live and work in, visit, and for wildlife to thrive.

National Landscapes is the new name for AONBs. This change came about from the recommendations of the Government funded Landscapes Review in 2018. The Landscapes Review Report proposed that AONBs became known as National Landscapes in common usage, although the legal name remains Area of Outstanding Natural Beauty.

This change will come into effect in November 2023, but given the status of this plan, it was decided to use the legal name of the nationally designated landscape for this document.

Cllr Andrew Reid and Nick Collinson, 2023
Chairmen of the Suffolk & Essex Coast & Heaths National Landscape Joint Advisory Committee and Partnership respectively



Cllr Andrew Reid *Nick Collinson*

Suffolk & Essex Coast & Heaths National Landscape Highlights

3,540,000
day and overnight trips in 2021

580 miles (950km)
of rights of way in the Coast & Heaths National Landscape

Volunteers worked **306 days** in 2021

£167,763,204
total tourism value in 2021



Redshank
the flagship species of the Coast & Heaths National Landscape



£233,654
FIPL* grants awarded to **14** projects in **2022-23**

170sq miles
covered by the Coast & Heaths Natural Landscape

Grants totalling **£75,910** were awarded to **34** community groups in 2021-22





1,600ha
covered in heathland

Suffolk & Essex
are the counties included in the Coast & Heaths National Landscape

38sqkm
area of land added as part of **2020** extension



FIPL* Farming In Protected Landscapes

SECTION 1

Introduction



Couple cycling in heathland © The Suffolk Coast

Introduction

The Suffolk Coast & Heaths Area of Outstanding Natural Beauty (AONB) is known locally as the Coast & Heaths AONB. It is a nationally designated landscape that has the legal purpose to conserve and enhance natural beauty.

The informal name evolved following an extension of the AONB into Essex and further parts of Suffolk. The extension was by an Order signed by the Parliamentary Under Secretary of State, Lord Gardiner, with responsibility for AONBs on the authority of the Secretary of State, George Eustice MP, on 7 July 2020.

The legal status of the AONB requires relevant authorities such as statutory bodies and statutory undertakers, such as utility providers, to pay regard to the purpose of the AONB when taking decisions.

The Suffolk Coast & Heaths AONB is one of 38 such designated landscapes in England and Wales. Most of the land in the AONB is in private or charitable ownership. AONB status brings many benefits for residents, visitors, and businesses.



Heather in bloom © Gill Moon



Upper Hollesley Common © Gill Moon

Area of Outstanding Natural Beauty Management Plan status

The purpose of the Suffolk Coast & Heaths Area of Outstanding Natural Beauty Management Plan 2023-2028 is to fulfil the statutory duty placed on local authorities to adopt and publish a plan for the AONB as outlined in Section 89 of the Countryside and Rights of Way Act (2000).

This Management Plan forms the AONB policy for local authorities in the AONB. By adopting this Management Plan, the local authorities have committed to working to deliver its objectives and have regard to the plan in the exercise of their wider responsibilities.

The Suffolk Coast & Heaths AONB Management Plan 2023-2028 informs how relevant authorities will pay regard to the statutory purpose of the AONB.

The Levelling Up and Regeneration Act (2023) amended and strengthened the duty on Relevant Authorities in relation to AONBs and is defined in Section 85 of the Countryside & Rights of Way Act 2000 (as amended) as:

> *In exercising or performing any functions in relation to, or so as to affect, land in an area of outstanding natural beauty in England, a relevant authority other than a devolved Welsh authority must seek to further the purpose of conserving and enhancing the natural beauty of the area of outstanding natural beauty.*

Beyond the legal requirements this plan provides the framework for the co-ordination of action from partnership organisations and others whose activities impact upon the AONB.

Partnership organisations come from a wide range of interests such as wildlife, community, business, environment, and access. By working together to deliver statutory AONB purpose they can further their own aims and benefit people and the environment.

The plan reflects the need for co-ordinated activity to ensure that the purposes of the AONB are met and that communities, businesses, individuals and organisations work together in a coherent manner.

The plan identifies the need to monitor changes within the AONB, be they from the delivery of the plan itself or actions outside the influence of the partnership such as climate change or the actions of others.

Butley © Gill Moon



Area of Outstanding Natural Beauty purpose

An Area of Outstanding Natural Beauty is exactly what it says it is, an outstanding landscape with distinctive character and natural beauty so precious that it is safeguarded in the national interest.

AONBs are landscapes for nature, people, business and culture.

The purpose of the AONB designation is set out in the National Parks and Access to Countryside Act (1949), it is to:

conserve and enhance natural beauty

Further guidance (Areas of Outstanding Natural Beauty: A Policy Statement, Countryside Commission, CCP 352, 1992) which compliments the 1949 Act notes:

In pursuing the primary purpose of designation, account should be taken of the needs of agriculture, forestry, and other rural industries and of the economic and social needs of local communities.

Particular regard should be paid to promoting sustainable forms of social and economic development that in themselves conserve and enhance the environment.

Recreation is not an objective of designation, but the demand for recreation should be met so far as this is consistent with the conservation of natural beauty and the needs of agriculture, forestry and other uses.

The Countryside and Rights of Way Act (2000) notes:

Where it appears to Natural England that an area which is in England but not in a National Park is of such outstanding natural beauty that it is desirable that …. the ªreas [be] designated … for the purpose of conserving and enhancing the natural beauty of the area.



Context

It is widely recognised that there is a climate and a biodiversity crisis. Designated landscapes such as AONBs have a part to play in addressing the drivers of climate change and undertaking projects to slow the loss of nature. These objectives sit at the heart of this Management Plan.

This Management Plan for the Suffolk Coast & Heaths Area of Outstanding Natural Beauty is being developed during a period of change following a government review of AONBs and National Parks.

In May 2018 the government asked for an independent review into whether the protections for National Parks and AONBs are still fit for purpose. In particular, what might be done better, what changes will help and whether the definitions and systems in place are still valid.

The review's final report was published on 21 September 2019. It was led by Julian Glover and supported by an experienced advisory group: Lord Cameron of Dillington, Jim Dixon, Sarah Mukherjee, Dame Fiona Reynolds, and Jake Fiennes.

Government responded to the report on 15 January 2022. Part of the Government's response to the report was to implement a consultation on some aspects of its response to the review that will require changes to legislation. In addition to the consultation the key elements of the government's response include:

- A call for AONBs and National Parks to work more closely together to deliver a coherent national network of beautiful, nature-rich spaces that all parts of society can easily access and enjoy.

- Consideration of a name change for AONBs to National Landscapes with the new title encompassing new purposes. At time of writing (Aug 2022) new purposes may include a second purpose like the current National Park second purpose to promote opportunities for the understanding and enjoyment. This is designed to connect all parts of society with our protected landscapes.

- A recognition that a stronger mission for AONBs to deliver on nature recovery would deliver societal benefits. Achieved through a revised first purpose (to conserve and enhance natural beauty) to encompass this.

- Recognition of a strengthened role for AONBs in the planning system who bring substantial evidence and expertise to the process.

- An urgent need to improve opportunities and remove barriers to access for all parts of society to enjoy our nationally important, designated landscapes.

Government has recognised that any new or revised statutory purpose(s) would require new legislation and that they would need to be reflected in Management Plan reviews. Given the timing of such reviews DEFRA have written to AONBs to give AONBs:

> *an option to delay the publication of upcoming Management Plans by up to 1 year from their original planned review date.*

The guidance, in the form of a letter from the Rt Hon Lord Benyon, Parliamentary Under Secretary of State at DEFRA with responsibility for AONBs on 7 July 2022 continues:

In order to comply with the law without compromising the integrity of future Management Plans, Defra judges that Partnerships could simply produce a light-touch review in which they commit to produce a new Management Plan after the new guidance is published.

Defra has considered what a light-touch review might look like and advises the following: Partnerships would agree and publish one page of text setting out their intentions for the next Management Plan.

Following discussion with AONB Chairs and Local Authority funding partners it was decided not to seek a delay due to several events specific to the Suffolk Coast & Heaths AONB and other opportunities and pressures facing the countryside more generally, including:

- Significant planning pressures on the AONB due to Nationally Significant Infrastructure Projects that are in part being driven by commitments to achieve net Zero by 2050.
- Significantly increased visitor pressures.
- The development of the England Coast Path that will introduce new opportunities for enjoyment of the AONB and visitor offer.
- The new Farming in Protected Landscape programme designed to give farmers and landowners resources to deliver AONB purpose.
- The need to address the twin concerns of climate change and wildlife loss.

The 2023-28 Suffolk Coast & Heaths AONB Management Plan will represent the statutory purpose associated with AONBs at the time of writing. The AONB Partnership will consider a further review or the publication of an addendum when any new purpose(s) are known.

The AONB Management Plan should not be seen in isolation. Other national and local plans and policies influence activity in the nationally designated landscape. These include local development plans, government policy relating to agriculture and the environment, and environmental non-government organisations and government agency plans.



Covehithe © Gill Moon



Aldeburgh © Gill Moon

What is an Area of Outstanding Natural Beauty?

An Area of Outstanding Natural Beauty is an area that is recognised by the United Kingdom Government as having national importance. This importance is reflected by its designation under the National Parks and Access to the Countryside Act (1949).

The primary purpose of the designation is to conserve and enhance natural beauty. In pursuing the primary purpose of the designation, account should be taken of the needs of agriculture, forestry and other rural industries, and of the economic and social needs of local communities. Particular regard should be paid to promoting sustainable forms of social and economic development that in themselves conserve and enhance the environment.

Recreation is not an objective of the designation, but the demand for recreation should be met insofar as this is consistent with the conservation of natural beauty and the needs of agriculture, forestry and other uses.

Around 15% of England is covered by the AONB designation. There are 33 AONBs in England, 4 in Wales, one that straddles the English Welsh border, and 8 in Northern Ireland. The nearest equivalent designation in Scotland is National Scenic Areas of which there are 40 covering a total of 13% of the country.

AONBs are recognised as Category V Protected Landscapes under International Union for Conservation of Nature's (IUCN) global protected area framework, but designated under United Kingdom legislation, meaning the designation has not been impacted by United Kingdom's departure from the European Union.

AONBs are recognised by and subject to several pieces of United Kingdom legislation and policy and local policy, including:

- National Parks and Access to Countryside Act (1949)
- Countryside and Rights of Way Act (2000)
- 25 Year Environment Plan (2018)
- National Planning Policy Framework (2021)
- Local Planning Authority Local Plans (Various)



The Ambling African Women walking group © Ben Heather



The Suffolk Coast & Heaths Area of Outstanding Natural Beauty

The Suffolk Coast & Heaths Area of Outstanding Natural Beauty covers an area of around 170 square miles (441 square kilometres) stretching from Kessingland near Lowestoft, in the north, to Parkeston near Harwich on the southern shore of the Stour Estuary to the south. To the east the boundary is formed by the North Sea and the western boundary is largely to the east of the A12 and encompasses Suffolk's estuaries.

The character of the AONB is a product of the underlying geology and its associated natural habitats. It is shaped by the effects of the sea and the interaction with people and the landscape. It is a gently rolling landscape, with the estuaries a common and dominant feature. Where the land does rise, commanding views across the landscape are rewarding.

AONBs are designated for their natural beauty. The natural beauty of AONBs is defined by 6 characteristics:

- Landscape quality
- Scenic quality
- Relative wildness
- Relative tranquillity
- Natural heritage features
- Cultural heritage

There features are described in a Natural Beauty and Special Qualities document on our website at www.coastandheaths-NL.org.uk.

Detailed assessment of the AONB landscape can be seen on the Suffolk Landscape website at www.suffolklandscape.org.uk and Natural England's National Character Area number 82 see www.gov.uk/government/publications/national-character-area-profiles-data-for-local-decision-making/national-character-area-profiles.

Farmland dominates much of the AONB, interspersed with picturesque villages and the occasional small seaside town. There are forestry plantations, low lying freshwater marshes and extensive tracts of heathland. The coastal fringe is dominated by estuaries, grazing marshes and lowland heath.

Large tracts of the land are in conservation management by organisations such as the National Trust, Natural England, Essex and Suffolk Wildlife Trusts and the RSPB. These include the internationally important National Trust sites of Sutton Hoo and Orford Ness, Essex Wildlife Trust's Wrabness reserve, Suffolk Wildlife Trust's Hazelwood Marshes and Trimley Marshes and RSPB Minsmere. The Forestry Commission owned Tunstall and Rendlesham Forests are designated as Special Protection Areas.



Covehithe © Gill Moon

There are significant proportions of the AONB that are designated as Special Areas of Conservation, Special Protection Areas and as Ramsar sites. These are shown in Appendix 1 - Maps.

There are many excellent examples of public and private land being managed in a way to deliver AONB benefit and public good. Some of this work is supported through agri-environment schemes including the Farming in Protected Landscapes programme funded by Defra.

Where the AONB joins the sea, shingle beaches often stretch for many miles. Orford Ness, the great shingle spit between Aldeburgh and Shingle Street, is the largest of its kind in Europe. In some places, soft cliffs rise behind the beach such as at Dunwich and Pakefield, demonstrating the changing and dynamic nature of the coast in this part of England.

Significant parts of the AONB coastline are not actively defended and are vulnerable to erosion and/or flooding. East Suffolk Council, working with Great Yarmouth Borough Council, North Norfolk District Council and the Broads Authority are preparing a combined Coastal Adaptation Supplementary Planning Document (SPD), which will provide guidance on the implementation of the relevant Local Plan policies.

A dominant feature of the coast are the five river estuaries. The Blyth, Alde and Ore, Deben, Orwell, and Stour estuaries are the locations of some of England's finest wildlife habitats, intertidal areas of mudflats and saltmarsh.

In some places the mouths of rivers have been blocked creating large areas of brackish or freshwater marshland, such as at Minsmere, and Easton and Benacre Broads. Creation and

management of these sites is highly sophisticated. They require significant resources, technical expertise and planning to execute properly.

Management is continual to maintain ideal conditions for wildlife, especially in the face of more extreme climatic shifts. At Minsmere, tidal exchange is regulated via the Environment Agency sluice, and fresh water is abstracted from the river to supplement water levels on the scrape while being mindful of avoiding inappropriate flooding.

Along many of the estuaries there are centuries-old river walls to claim or protect farmland from the sea, which now form part of the estuarine landscape.

There are areas of extensive reedbeds such as at Westwood, the UK's largest reedbed, this is a significant landscape feature and wildlife habitat.

Much of the area was once heathland, known as the Sandlings. Although significant tracts remain, much of it has been fragmented, converted to farmland, planted for coniferous woodland, or developed for housing or military use. Some areas of planted woodland have been designated for wildlife conservation and also provide excellent recreation opportunities.

In 2023 the AONB remains a lightly populated area that is dominated by agriculture, however, there are several large-scale industrial energy generation and transmission projects proposed which will have a significant impact on the AONB. These are part of delivering the Government's net zero targets and targets to deliver 50GW of electricity production from offshore wind farms off the east coast.

The Suffolk Coast being identified as a site for a new nuclear power station has raised concern and debate about the compatibility of major development and the ability to deliver the statutory purpose of the AONB designation. Balancing the national need for energy, meeting targets for net zero, and safeguarding the environment within which such projects are proposed is clearly a complex matter. The lengthy consultation process has raised awareness of the AONB and brought opportunities to consider how best any adverse impacts on the AONB can be mitigated and compensated for.
In common with many other designated landscapes across the country, affordable housing stock for permanent residents is influenced by the demand for second home ownership and properties used exclusively for holiday lets. This has an influence on the social and economic characteristics of the area.

There is considerable cultural interest, with many parts of the AONB famed for their association with artists and musicians. Snape Maltings is a world class centre for the arts, Benjamin Britten, arguably the greatest composer of the 20th century, was born in Lowestoft and founded Aldeburgh Music and the Aldeburgh Festival in the 1940s. In recent years the Latitude festival, held at Henham Park in the AONB has been entertaining thousands of people.

The built heritage within the AONB makes an important contribution to its character. There are designated built conservation areas in the AONB, including those in Aldeburgh and Southwold, that seek to protect this part of the AONB character. There are many listed buildings located throughout the AONB including lighthouses, Martello towers and sea-facing merchant houses which define the historic link between the AONB and the sea. There are also several non-designated heritage assets which are defined according to criteria adopted by the local authority.

The human influence over millennia provides a rich heritage. From internationally important archaeological sites, such as the Anglo-Saxon Sutton Hoo, to military structures such as the Napoleonic Martello towers and World War structures to defend the nation from possible invasion. Other twentieth century developments at Orford Ness and Bawdsey played a significant part in international warfare, with both nuclear weapons testing and the development of radar taking place here.

Land Use Planning in the AONB

Local Planning Authorities are responsible for preparing Local Plans for their administrative areas. Where these fall within the Suffolk Coast & Heaths Area of Outstanding Natural Beauty (AONB) the Local Planning Authorities should ensure the designation and purpose is recognised. Policy contained within Local Plans can significantly contribute to the delivery of AONB purpose.

This AONB Management Plan meets the requirement of the Countryside and Rights of Way Act (2000) section 89 duty on relevant local authorities to:

> *prepare and publish a plan which formulates their policy for the management of the area of outstanding natural beauty and for the carrying out of their functions in relation to it.*

A map of the AONB showing the district councils administrative areas is shown in Appendix 1.

Where Parish or Town Councils are preparing Neighbourhood Plans within, adjacent to or partially covering the AONB they should be designed to meet the obligations put on statutory bodies and statutory undertakers as required by section 85 of the Countryside and Rights of Way Act (2000).

Local Plan policies are one of the most important drivers of land use planning in AONBs. Where Local Plans are developed in AONBs they should accommodate the National Planning Policy Framework including paragraph 176 which states that:

> *Great weight should be given to conserving and enhancing landscape and scenic beauty in National Parks, the Broads and Areas of Outstanding Natural Beauty which have the highest status of protection in relation to these issues.*

Paragraph 176 continues and notes that:

> *The scale and extent of development within all these designated areas should be limited, while development within their setting should be sensitively located and designed to avoid or minimise adverse impacts on the designated areas.*

Dunwich © Gill Moon



Paragraph 177 says:

> *When considering applications for development within National Parks, the Broads and Areas of Outstanding Natural Beauty, permission should be refused for major development other than in exceptional circumstances, and where it can be demonstrated that the development is in the public interest. Consideration of such applications should include an assessment of:*
>
> *a) the need for the development, including in terms of any national considerations, and the impact of permitting it, or refusing it, upon the local economy;*
>
> *b) the cost of, and scope for, developing outside the designated area, or meeting the need for it in some other way; and*
>
> *c) any detrimental effect on the environment, the landscape and recreational opportunities, and the extent to which that could be moderated.*

Paragraph 174 notes:

> *Planning policies and decisions should contribute to and enhance the natural and local environment by:*
>
> *(d) minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures;*

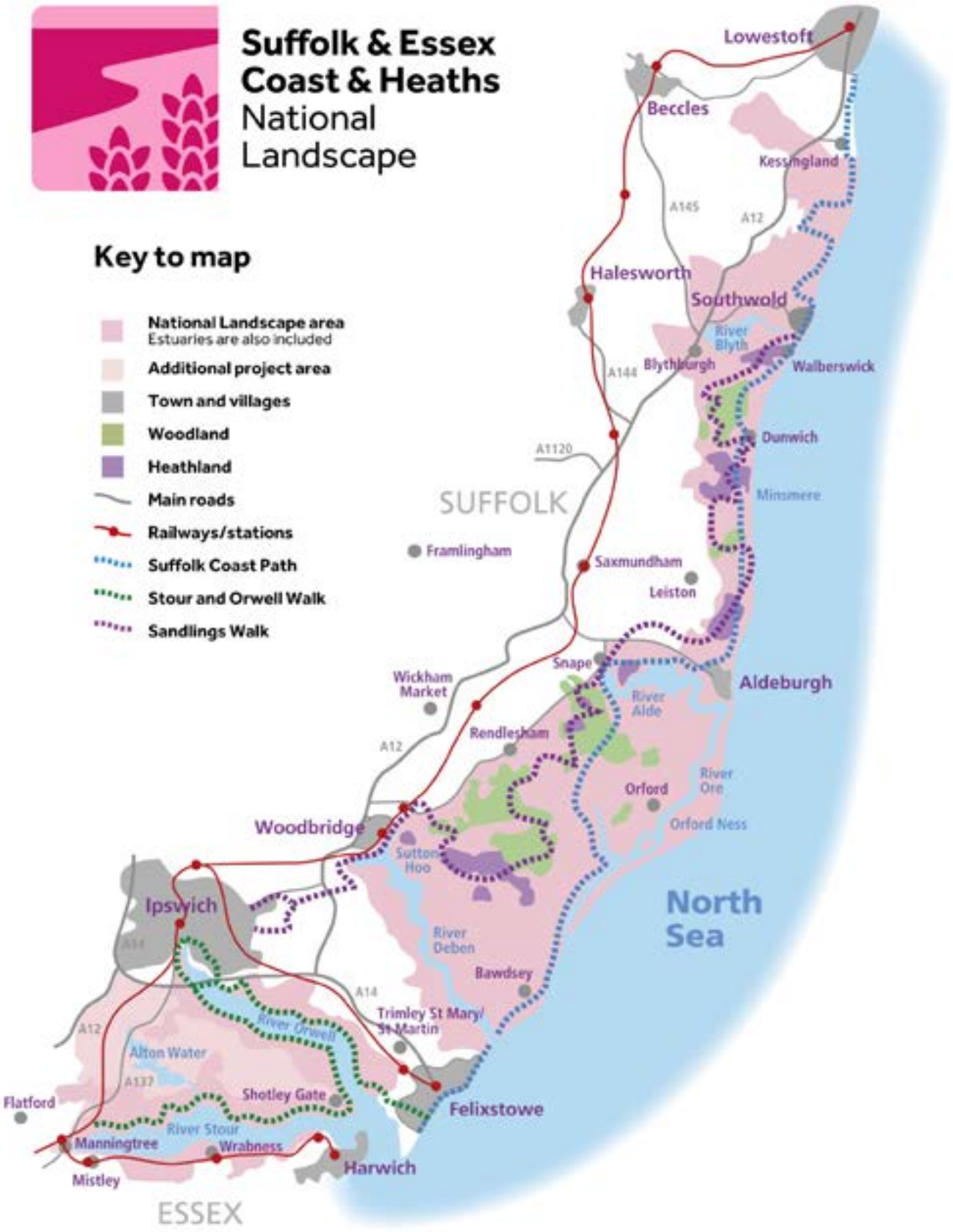
Development is not precluded by the AONB designation. AONBs are and should be seen as exemplars of good development, with proposals balancing the three pillars of sustainable development: economic, environmental and social factors. Development proposals are expected to meet a higher standard of planning and design to ensure that the statutory purposes of the AONB are met.

Where proposals for development are of national importance, they are determined by the relevant Secretary of State following a recommendation from the Planning Inspectorate. The process, set out in the Planning Act (2008) and subsequent reviews and revisions, was introduced to streamline the decision-making process for major infrastructure projects, with the aim to make it fairer and faster for communities and applicants alike.



This Development Consent Order process, as it is known, relates to what are known locally as the energy projects. Within the AONB several such projects are at various stages of the process. Some are under consultation; others have obtained consent or are under construction and operational. These include electricity transmission networks, offshore wind farms with associated onshore infrastructure, and new nuclear electricity generation.

Some of the issues surrounding these Nationally Significant Infrastructure Projects and the AONB are explored in Appendix 3.


Suffolk & Essex Coast & Heaths National Landscape
Key to map
National Landscape area
Estuaries are also included
Additional project area
Town and villages
Woodland
Heathland
Main roads
Railways/stations
Suffolk Coast Path
Stour and Orwell Walk
Sandlings Walk
Lowestoft
Beccles
Kessingland
A145
A12
Halesworth
Southwold
River Blyth
A144
Blythburgh
Walberswick
Dunwich
A1120
SUFFOLK
Minsmere
Framlingham
Saxmundham
Leiston
Snape
Aldeburgh
Wickham Market
River Alde
Rendlesham
A12
Orford
River Ore
Orford Ness
Woodbridge
Sutton Hoo
Ipswich
A14
River Deben
North Sea
Bawdsey
A14
Trimley St Mary/ St Martin
River Orwell
A12
Alton Water
A137
Flatford
Shotley Gate
Felixstowe
River Stour
Manningtree
Wrabness
Harwich
Mistley
ESSEX

Additional project areas

There are areas adjacent to the AONB that are considered important for the context of the nationally designated landscape. These areas are valued landscapes as defined by the National Planning Policy Framework and are an important part of the setting of the AONB. The Shotley Peninsula, along with other areas, have been subject to a Landscape Character Assessment that identifies the links to the current AONB and the importance of a co-ordinated land management approach. These areas form what is known as an additional project area and are shown on the map on previous page.

This Landscape Character Assessment may inform planning decisions in several ways:

- Informing policy within emerging planning documents.
- In development control where it can be used to understand the key characteristics of the landscape and its special qualities and therefore provide an evidence base from which the impacts of individual applications can be assessed and potential mitigation considered.
- To engage the local community to support them to articulate what is special about their area and make choices about future change.



Bawdsey © Gill Moon



Rendlesham Forest © Gill Moon

Relationship with the Suffolk Heritage Coast

Heritage Coasts were established to conserve the best stretches of undeveloped coast in England. A heritage coast is defined by agreement between the relevant maritime local authorities and Natural England.

Heritage Coasts were established to:

- conserve, protect and enhance the natural beauty of the coastline, their terrestrial, coastal and marine flora and fauna and their heritage features.
- encourage and help the public to enjoy, understand and appreciate these areas.
- maintain and improve the health of inshore waters affecting heritage coasts and their beaches through appropriate environmental management measures.
- take account of the needs of agriculture, forestry and fishing and the economic and social needs of the small communities on these coasts.

There are no statutory requirements or powers associated with the Heritage Coast definition. However, the National Planning Policy Framework, para 178, as revised in 2021 states:

> *Within areas defined as Heritage Coast (and that do not already fall within one of the designated areas mentioned in paragraph 176 [that includes AONBs]), planning policies and decisions should be consistent with the special character of the area and the importance of its conservation. Major development within a Heritage Coast is unlikely to be appropriate, unless it is compatible with its special character.*

The Heritage Coast purpose includes objectives for conserving the environmental health and biodiversity of inshore waters and beaches, and to extend opportunities for recreational education, sporting and tourist activities that draw on, and are consistent with, the conservation of their heritage features.

The Suffolk Heritage Coast was defined in 1973 and is largely contained within the AONB, although the defined area runs 3km out to sea, parallel with the eastern AONB boundary. It runs from Kessingland to Felixstowe and incorporates the Blyth, Alde and Ore, and lower Deben estuaries.



East Lane © Gill Moon

Area of Outstanding Natural Beauty Partnership

In 1993 the Suffolk Coast & Heaths AONB Partnership was formed. This is made up of organisations with an interest in AONB. Membership of the Partnership evolves over time but includes representatives from local authorities; businesses; environmental organisations; farming bodies; government agencies; community bodies and tourism industries.

The AONB Partnership work together to deliver the purpose of the AONB designation which in turn reflects individual organisational objectives. A list of AONB Partnership members is given in Appendix 4.

The AONB staff team, funded by DEFRA and local authorities and hosted by Suffolk County Council, provides the secretariat for the AONB Partnership.



Tree Planting © Gregg Brown

Review of the 2018-2023 Plan

The 2018-2023 AONB Management Plan was the third version of the document since the Countryside & Rights of Way Act 2000 placed a duty on local authorities to produce and review such documents.

The 2018-23 plan contained 33 objectives. Of these, 31 of the 33 have been assessed as being at least in part delivered, a fulfilment rate of 94%. Notable partnership working successes from the last plan include:

- Delivery of the Suffolk Marine Pioneer Project.
- Securing funding of over £1m to deliver low voltage power cable undergrounding project via Ofgem scheme.
- Secured funding of over £259,000 to deliver landscape enhancement projects via the Landscape Enhancement Initiative Ofgem scheme.
- Secured £140,000 funding from National Lottery Heritage Fund to deliver awareness and engagement projects.
- Distributed over £80,000 per year through AONB grants funded by section 106 agreements and DEFRA, supporting over 200 individuals, societies and businesses.
- Facilitated over 200 volunteer days per year in non-Covid impacted years.
- Supported more than 20 Beachwatch events each year (even during Pandemic restrictions), involving over 1,000 community volunteers.
- Worked with partners to act as advocates for the AONB in Nationally Significant Infrastructure Project hearings and consultations for proposals such as
- Sizewell C and offshore wind farms.
- Worked in partnership to act as an advocate for the AONB to inform local planning authorities on AONB issues.
- Worked with partners, including Natural England, to deliver boundary extension for the Suffolk Coast & Heaths AONB.
- Partnership working to inform the Designated Landscapes Review.
- Secured copy and advertising revenue for annual AONB newspapers and distributed 25,000 copies each year.
- Delivered a planning event with partners that attracted 170 delegates.
- Facilitated, with partners, a national AONB conference.
- Worked in partnership to raise awareness of the AONB during fiftieth anniversary celebrations.
- Worked with partners to support delivery of Suffolk Walking Festival.
- Partnership working to publish State of the AONB report.
- Published Use of Colour in Development Guide that was produced with partners to guide development in AONB.
- Published annual Volume and Value study of tourism in the AONB.
- Supported community activity for projects delivering AONB purpose.
- Delivering a Farming in Protected Landscapes programme – building relations with landowners and investing over £100,000 in farmer-led projects for climate, nature, people and place.
- Engaged in 6 nationally Significant Infrastructure project consultations and over 100 Town and Country Planning Act applications.

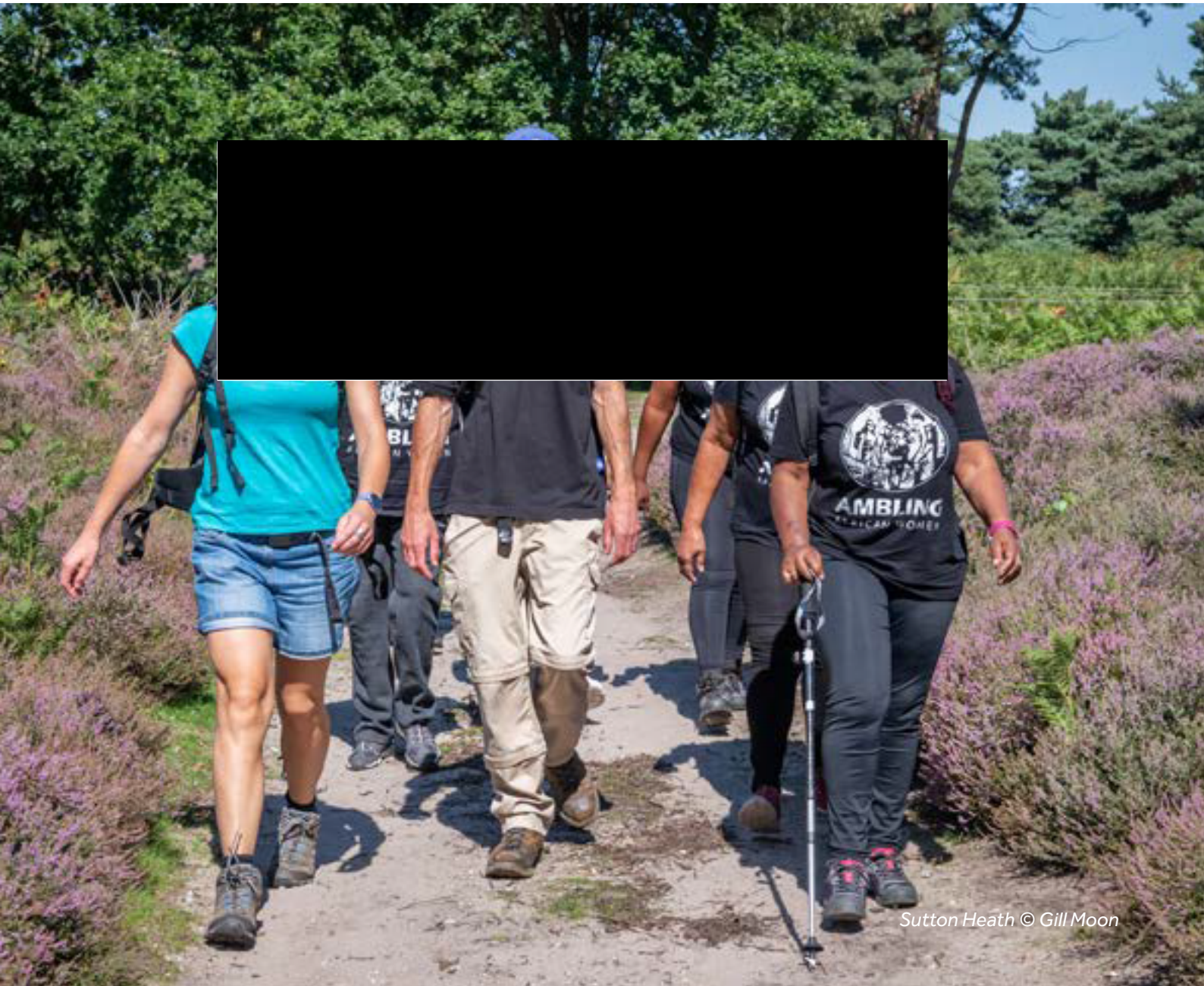
While there were many successes during the period of 2018-23, the period covered a period of significant challenge. This included a number of Nationally Significant Infrastructure Project proposals that are likely to have an impact on the AONB. The Covid pandemic carried with it a significant amount of recreational pressures at specific locations.



Bawdsey © Gill Moon

SECTION 2

Vision for the Future



Sutton Heath © Gill Moon

The Suffok Coast & Heaths in the mid-2040s

The 20+ year vision builds on the aspirations and delivery of previous AONB Management Plans. It has been divided into two sections; a summary of the vision and consideration of how environmental, social, and economic aspects can support the delivery of the summary vision.

The summary vision stems from the primary purpose of the AONB designation to conserve and enhance natural beauty. The objectives contained in this Management Plan seek to deliver that vision.

The summary vision:

The Suffolk Coast & Heaths AONB is recognised as a special place by residents and visitors alike for its landscapes, wildlife and heritage. The impacts of climate change are being mitigated and adaptation is the norm. It is contributing to wildlife recovery and provides opportunities for all sections of society to recharge and improve their physical and mental health. The farming sector is thriving and is supported to deliver projects for the public good, the tourism sector is trading on the backdrop of an outstanding landscape. Nationally significant infrastructure projects seek to avoid harm to the area's natural beauty and contribute to delivering the AONB purpose.



Aldeburgh Beach © Gregg Brown

Environmental Vision

By the mid-2040s the Suffolk Coast & Heaths Area of Outstanding Natural Beauty (AONB) landscape is at the forefront of adapting to the impacts of climate change, particularly on the coast, mitigating many of the impacts being felt and addressing the causes of climate change at an AONB level.

Decisions relating to development will recognise the benefit of long-term planning to consider immediate and future impacts on the reasons for the AONB designation and purpose.

Landscapes rich in wildlife that are conserved and enhanced contribute to wildlife recovery and human wellbeing. Individual features, including individual species and habitats, are thriving and their management is supported through well-resourced public and private mechanisms including Biodiversity Net Gain. Biodiversity Net Gain is a government strategy to develop land and contribute to the recovery of nature, which came into force in November 2023. It is a way of making sure that habitat for wildlife is in a better state than it was before development took place.

Sustainable transport opportunities and infrastructure will be enhanced to reduce the environmental impact of travel. Walking, cycling and public transport will be the norm and where individual transportation is undertaken more sustainable fuels are used backed up by suitable infrastructure.

Where nationally significant infrastructure projects have been developed in the AONB or its setting, the unavoidable negative impacts have been minimised, mitigated and compensated for in so far as Development Consent Orders require.



Features that make up the defined natural beauty of the AONB, such as landscape quality, scenic quality, relative wildness, relative tranquillity, natural heritage features and cultural heritage are conserved and enhanced.

Biodiversity Net Gain is delivering measurable improvements for biodiversity by creating or enhancing habitats in association with development. AONB partners are advocating for more than the statutory 10% Biodiversity Net Gain requirement.

Wildlife is recovering and there is a widespread social, political and economic support to ensure that wildlife continues to recover.

Social Vision

By the mid-2040s the residents of and visitors to the Suffolk Coast & Heaths Area of Outstanding Natural Beauty will have a deep appreciation, understanding and respect of the area's nature, natural beauty and designation.

Barriers to enjoyment and access to the AONB, such as awareness of opportunity and access to transport are recognised and removed where possible. All parts of society can enjoy the nationally important, designated landscape and enjoy it in a way that does not detract from its natural beauty.

Local communities have an important role and a mechanism to influence decision making on topics that effect their quality of life and local environment through engagement in planning processes and improving their understanding of what makes the nationally designated landscape special.

Communities recognise the significance of the nationally designated landscape they live in and the importance of sharing the benefits of the AONB to visitors who contribute to the viability of many local businesses. Visitors recognise and act upon their responsibilities to residents and the environment.

There are a range of opportunities for people to get actively involved in caring for their landscape. The challenge of sustainable living and carbon emission reduction has been embraced by communities and local businesses. There is support for people affected by the impacts of climate change and plans in place to support adaptation.

There are a range of opportunities for people to access the landscape and benefit from the advantages that it brings. The impacts of greater access are mitigated by increased understanding of activity that can have a negative impact on area. The Recreational Disturbance Avoidance Mitigation Strategies in Essex and Suffolk are a mechanism to minimise negative impacts and support engagement and understanding.

The England Coast Path is an important part of access to the AONB bringing health benefits and providing economic opportunities.

Beach Clean Volunteers on Felixstowe beach © Gill Moon





Southwold ©Gill Moon

Economic Vision

By the mid-2040s the Suffolk Coast & Heaths Area of Outstanding Natural Beauty has new and established enterprises that are thriving and contributing to AONB purpose.

Within a broad-based local economy, sustainable tourism is widespread and tourism businesses are increasingly involved in careful stewardship of the area. Local food and drink, quiet informal recreation, wildlife watching, landscape quality, cultural heritage and sustainable living are key attractions of the area.

Development contributes to the statutory AONB purpose and is designed to be an environmental exemplar. Nationally Significant Infrastructure Projects such as energy production and its associated infrastructure should seek to avoid damage to the natural beauty of the AONB. Where residual damage cannot be avoided this should be minimised, mitigated, and compensated for in so far as Development Consent Orders require.

The tourism industry is flourishing due to the high-quality landscapes and wildlife sites. Landscapes and nature seen in protected sites and across the AONB provide a significant driver for sustainable tourism. More sustainable travel options are available to residents and visitors. Information on activities, transport and sustainable activities are promoted and readily available through a variety of means.

Farming operations contribute to the natural beauty of the area. Farming is a cornerstone of economic activity in the area. Agricultural operations are supported to contribute to the delivery of public good such as food and sustainable soil health and best practice in land management contributes to delivering a clean, sustainable water supply. The balance between the commercial and environmental needs for water are carefully balanced. Farming continues to support wildlife recovery, access, and climate change adaptation.



Gorse spider mites © Gill Moon

SECTION 3

Themes



Sutton Heath © Gill Moon

Landscape

The concept of landscape is one that is sometimes difficult to understand. It relates to the outcome of the interaction between the natural environment and human activity.

The human concept of a sense of place is a powerful driver and although much of the AONB is in private ownership there is undoubtedly a public influence in landscape through the development of public policy around environmental controls, agri-environment support mechanisms and development control. This concept is widely accepted and the public good from outstanding landscapes includes significant benefits.

The AONB has a Dark Sky Discovery site. Dark skies are important for nature, around 60% of wildlife is most active at night and humans can benefit from dark skies to help sleep and to enjoy awe inspiring skies brimming with stars.

The benefits of all landscapes are recognised within the European Landscape Convention. The European Landscape Convention requires 'landscape to be integrated into regional and town planning policies and in cultural, environmental, agricultural, social and economic policies, as well as any other policies with possible direct or indirect impacts on landscape'.

Natural England produce a series of National Character Area studies including one for the Suffolk Coast & Heaths. These studies include descriptions and are intended to articulate Natural England's objectives for the area. There is much that is synonymous with a range of other plans and documents including this Management Plan. The document can be down loaded from https://www.gov.uk/government/publications/national-character-area-profiles-data-for-local-decision-making/national-character-area-profiles.

This Management Plan seeks to set out a series of objectives to deliver the AONB purpose while acknowledging a variety of competing needs that may negatively impact the natural beauty of the area. It is worth noting that land use changes, development, and climate both within and outside the nationally designated area can have an impact upon its defined natural beauty.

Minsmere © Gill Moon



Coast and Estuaries

The transition between the land and the sea is one of the most complex areas of the Suffolk Coast & Heaths Area of Outstanding Natural Beauty (AONB). The opportunities for wildlife in the intertidal zone, the impact on human senses such as visual, sound and feel, and overlapping policy make this part of the AONB stand out.

Many of the AONB partnership organisations have statutory or organisational obligations and responsibilities to these areas. It is estimated that the AONB has 47 miles of coast. The distance is increased to 176 miles if the estuaries are included.

The coast and estuaries are subject to area Marine Plans, produced by the Marine Management Organisation (MMO). There are two plans, inshore and offshore. The inshore marine plan area includes the coastline and extends from mean high water out to 12 nautical miles, including inland areas subject to tidal influence. The offshore marine plan areas cover the marine area from 12 nautical miles out to the maritime borders with the Netherlands, Belgium and France.



The vision for the East Marine Inshore Plan states:

By 2034 sustainable, effective and efficient use of the East Inshore and East Offshore Marine Plan Areas has been achieved, leading to economic development while protecting and enhancing the marine and coastal environment, offering local communities new jobs, improved health and well-being. As a result of an integrated approach that respects other sectors and interests, the East Marine Plan areas are providing a significant contribution, particularly through offshore wind, to the energy generated in the United Kingdom and to targets on climate change.

Coastal Partnership East brings together the coastal management resources and expertise from Great Yarmouth Borough Council, North Norfolk District Council, and East Suffolk Council. The Essex Coast Partnership brings together statutory bodies and other organisations to inform management decisions in the southern part of the AONB.

As well as the existing internationally designated marine wildlife areas of the estuaries, such as Special Areas of Conservation, Special Protection Areas and Ramsar sites, there are designated offshore Special Protection Areas such as Outer Thames aimed at breeding little tern and common tern and non-breeding red-throated diver. There is a Southern North Sea Special Area of Conservation which is a marine designated site that is primarily designated for the conservation of harbour porpoise.

The Orford Inshore Marine Conservation Zones is an inshore site that extends into offshore waters and covers an area of approximately 72 km². The site is located off the Suffolk coast in the Southern North Sea approximately 14 km offshore from the Alde Ore Estuary. It is dominated by habitats composed of subtidal mixed sediments. These sediments contain a mixture of different sized material from pebbles to finer silts and finer mud sediments that are important as nursery and spawning grounds for many fish species, including Dover sole, lemon sole and sand eels. Colourful species of burrowing anemones can be found within the sediment, alongside sea cucumbers, urchins and starfish.

The emerging England Coast Path will bring enhanced opportunities to experience the AONB for many. This new National Trail will follow the coastline of England and when complete will be about 2,800 miles in length. The England Coast Path has been possible because of a new law in the UK, the Right of Coastal Access, giving to people for the first time the right of access around all England's open coast, both along the England Coast Path and, usually, over the associated 'coastal margin'.

Natural England's Coastal Access Scheme, which sets out how the scheme will be delivered, was approved by the Secretary of State on 9 July 2013.



Skylark at Dunwich © Gill Moon

There are five estuary partnerships in the AONB. For the Alde and Ore, Blyth, and Deben estuaries these are very much community led. In the Stour and Orwell, the partnership is more focused on the statutory authorities, businesses and interested stakeholders. The coastal area between Bawdsey and the mouth of the Ore is covered by the Bawdsey Coastal Partnership.

These partnerships have formulated plans that set out the aspirations for estuary or coastal management over a defined period and seek to reconcile and balance the sometimes competing interests placed upon them.

The coast and estuaries remain vitally important places for rare wildlife and the habitats that support them. They also offer authentic and revitalising experiences for people, whether this is a family day on the beach, or a bracing winter walk alongside one of the estuaries.

District local planning authorities within the AONB that have a coastal fringe in their jurisdiction, including East Suffolk Council, Ipswich Borough Council, Babergh District Council and Tendring District Council all have Local Plan policies relating to coastal management.

Some districts have Supplementary Planning Documents that contain guidance and expand on policies within the development plan. These Supplementary Planning Documents show how the councils expect their planning policies to be addressed by planning applications, and how the policies will be implemented by the councils when determining planning applications. In addition to the districts, the counties of Essex and Suffolk have plan policies for the coastal areas.

Shoreline Management Plans are developed by Coastal Groups with members mainly from local councils and the Environment Agency. They identify the most sustainable approach to managing the flood and coastal erosion risks in the:

- Short-term (0 to 20 years)
- Medium term (20 to 50 years)
- Long term (50 to 100 years)

A large section of the AONB coast is defined as Heritage Coast as described in the section of this plan entitled Relationship with the Suffolk Heritage Coast.



Nature Recovery

Wildlife in the Suffolk Coast & Heaths Area of Outstanding Natural Beauty is under threat. According to the national State of Nature report in 2019, of the 7,615 species found in England that have been assessed using the International Union for Nature Conservation (IUCN) Regional Red List criteria, and for which sufficient data were available, 971 (13%) are currently threatened with extinction from Great Britain.

The same report recorded that 41% of recorded species are in decline.

While these records are of grave concern there is hope. Many landowners and wildlife organisations have the knowledge to help species recover and there are many outstanding examples of where this has been done. Indeed, within the AONB there have been considerable successes to support species recovery.

From November 2023 the requirements of Biodiversity Net Gain will be applied when determining planning applications. Biodiversity Net Gain is a way to contribute to the recovery of nature while developing land. It is making sure the habitat for wildlife is in a better state than it was before development.

The knowledge, skills and desire all appear to be in place to deliver nature recovery, supported by the aspirations and proposals contained in the Landscapes Review Report. Wildlife organisations, the farming and landowning community have successfully increased species numbers and reintroduced some species to former populated habitats. The Government pledged to protect 30% of the United Kingdom's land and sea by 2030.

Government has suggested that the 26% of England that is designated as National Park or AONB will play a significant part meeting this target it is worth noting that while AONB's statutory purpose, to conserve and enhance natural beauty, includes 'natural heritage' AONBs are not specifically designated for nature protection.

The Landscapes Review report, published in 2019, first proposal says:

> *National Landscapes [proposed new name for AONBs] should have a renewed mission to recover and enhance nature…*

And in proposal 4:

> *National Landscapes should form the backbone of Nature Recovery Networks…*

If government accept the proposals in the review report and provide appropriate powers, purposes and resources, the AONB can build on its already impressive ability to deliver nature recovery.

The AONB has developed its own Nature Recovery Plan. The plan has been developed with significant support from AONB partners and other stakeholders. It provides a framework to deliver nature recovery across the AONB. The targets are drawn from the 'Colchester Declaration' an offer made by the national AONB network to government to deliver nature recovery and reduce the impacts of climate change.

This offer was subject to appropriate funding to deliver the targets, its aspiration is for a key part in nature recovery work in the AONB and the emerging Local Nature Recovery Strategy.

The DEFRA funded Farming in Protected Landscapes programme has four objectives one of which is to support nature recovery. The successes of this programme could be taken forward into the emerging Environmental Land Management Scheme to support wildlife recovery in the AONB.

The AONB has a good track record and provides further opportunity for multiple organisations to work together to secure funding, including from the mitigation packages provided by the nationally significant infrastructure projects, to deliver significant wildlife recovery projects.

The national AONB network set out its offer, known as the 'Colchester Declaration', to government at its 2019 conference on how it could contribute to the addressing the twin issues of wildlife decline and impacts of climate change. The opportunities identified in the government sponsored Designated Landscapes Review report provide a roadmap of how AONBs can contribute to addressing these issues.

Nature Recovery Zones in the Suffolk Coast & Heaths AONB

(See Appendix 1 for additional maps).



The Suffolk Coast is particularly important for several species of bird, including bittern; nightjar; little tern; stone curlew; woodlark; marsh harrier; avocet; redshank (selected as the flagship species for the AONB aspirations for nature recovery). To be viable and resilient, the populations of these birds must inhabit the wider landscape across the AONB and not just in nature reserves. The AONB designation is a useful tool in bringing together different interests to achieve nature recovery goals.

The Suffolk Wader Strategy network brings together environmental Non-Government Organisations, farmers and landowners and others to provide suitable habitat for lapwing, avocet and redshank (the AONB's flagship species) across the wider landscape.

In 2023, these species are mostly restricted to breeding on nature reserves and work to increase this range in the pursuit of healthy, resilient populations will be vital for their long-term viability. The importance of joined up work, will be vital in delivering common aspiration.



Redshank, the flagship species

Land Use and Planning

The Suffolk Coast & Heaths Area of Outstanding Natural Beauty is a predominately farmed environment with significant areas of land held and managed by environmental charities for nature conservation purposes.

The Forestry Commission owns, and Forestry England manages, a large estate in the AONB. The forests of Dunwich, Tunstall and Rendlesham, known collectively as the Sandlings Forests, provide texture to the landscape and introduce features that bring some height to an area that predominantly has a landform of less than 15m above sea level. These estates are subject to forest plans.

The AONB is sparsely populated relative to much of the southeast of England and contains the towns of Aldeburgh and Southwold. Beyond the AONB boundary there are larger towns such as Harwich, Manningtree, Ipswich, Woodbridge, Leiston, Halesworth and Lowestoft.

There is large scale military infrastructure in the AONB, much of it not in use or redundant. From archaeological remains through to the iconic Martello towers from the Napoleonic period, and second world war defences against attack to the former United States Air Force base at Bentwaters, and the former Royal Air Force base at Woodbridge. Bawdsey Manor, at the mouth of the Deben estuary is where operational radar was developed.

The AONB has had a long history of being the location for generating electricity for transmission to the rest of the country via National Grid's distribution network. Sizewell A nuclear power station started generating electricity in 1966 and Sizewell B nuclear power station connected to the National Grid in 1995.

Current proposals for large scale energy projects that impact on the AONB are considered in Appendix 3 of this Management Plan.

There are six local planning authorities (East Suffolk, Tendring, Babergh, Ipswich, Suffolk, and Essex) that have at least part of the AONB in their jurisdiction and have policies relevant to the AONB in their respective Local Plans.

The National Planning Policy Framework is also a material consideration when considering land use planning and determining planning applications:

Public bodies and statutory undertakers are required to pay regard to the purpose of the AONB, to conserve and enhance natural beauty, when decision making, as outlined in section 85 of the Countryside and Rights of Way Act 2000.

The AONB Partnership has agreed several Position Statements, and continues to review, refine, and add to them. These outline the view the Partnership takes on specific topics and offer guidance.
In addition, the AONB Partnership has commissioned studies to support development appropriate to the AONB and to support local planning authorities in their decision making. These include:

- This AONB Management Plan
- The selection and use of colour in development
- The defined natural beauty and special qualities of the AONB
- Planning in additional project areas
- Guidance note on preparing Neighbourhood Plans in the AONB



In Essex and Suffolk, Recreational Disturbance Avoidance and Mitigation Strategies, known as RAMS have been developed. These strategies set out a long-term approach to address increased recreational pressures on designated Habitats Sites (Special Protection Areas, Special Conservation Areas and Ramsar Sites).

Residential developments within the zone of influence of such designated sites are required to pay a proportionate tariff to fund mitigation measures to minimise any negative impacts.

These measures have the potential to contribute to delivering AONB purpose, to conserve and enhance natural beauty.

Biodiversity Net Gain, a way to contribute to the recovery of nature while developing land, is another mechanism to contribute to delivering AONB purpose by ensuring habitat for wildlife is in a better state than it was before development.

For larger development proposals, a landscape and visual impact assessment is often required to help identify impacts. With larger developments, there is a need to consider proposals on an individual basis to assess their potential impact upon the AONB, its purpose and the reasons for designation.



Dunwich Beach © Gill Moon

In accordance with Local Plan policy, new housing schemes within the AONB should include affordable housing where appropriate.

Development should respond to local character and history and reflect the identity of local surroundings and materials, while not preventing or discouraging appropriate innovation.

Piecemeal development can produce cumulative adverse impacts. Examples may include highway developments such as introduction of curb stones, painted markings or a proliferation of road signs that can have an adverse impact on the character and natural beauty of the AONB. Similarly, poorly designed extensions, agricultural buildings and utility infrastructure can have a similar effect.

Farming

Farming in the AONB, as elsewhere in the United Kingdom is subject to enormous change driven by many factors including:

- The United Kingdom's exit from the European Union leading to changes in agri-environment schemes, changes in the availability of seasonal labour and changing market conditions.
- New technologies.
- Development and adoption by farmers of new approaches, including regenerative agriculture and agro-ecology, collaborative working such as through farming clusters and innovative responses to reductions in availability and increase in cost of farm inputs.
- Regulatory pressures and societal expectations of more sustainable land management.
- A changing climate.
- Pressures on water supply for irrigation.
- Changes in global markets far removed from the local landscape.

Catchment Sensitive Farming plays an important part in meeting the Water Framework Directive, and work undertaken particularly by Natural England and the Environment Agency, continues to offer advice to farmers especially in areas where diffuse pollution can be a problem. In the past such diffuse pollution has had an impact on designated wildlife sites within the AONB.

Arable farming within the AONB remains a dynamic activity, influenced by market forces and by the support provided by agri-environment schemes. The change from heathland and grassland to arable is considered to be a factor in the decline in biodiversity. Crop preferences and farming methods may be subject to rapid changes as farmers respond to the opportunities and threats provided by the evolving economic and geopolitical climate. Climate change too, is having an increasing influence on decision making in farming.

The use of plastic covers and aerial irrigation rigs from early season through to the summer helps to extend the growing season. While this is a useful tool for food production there are negative visual and environmental impacts.

Stones are often removed to prevent damage to vegetable crops and harvesting equipment. This can increase the financial value of the crops, as more class 1 crops can be produced, but the process has a significant adverse impact on local soil structure and can impair drainage and exacerbate 'capping'. There is potential for damage to the archaeological record too.

Water abstraction for irrigation is often at the environmental limits. The creation of winter-filled reservoirs, managed aquifer recharge and use of water otherwise pumped into the sea and estuaries, can be seen as contributing to a solution. Such developments need careful siting and design to avoid adverse impacts to the AONB purpose, to conserve and enhance natural beauty. Such schemes, if designed well, can contribute to that AONB purpose.

Turf production is now commonplace in the AONB. Turf helps to retain the open vistas of the AONB, but its vibrant green colour and uniform texture can impact on the landscape and wildlife value. The continual loss of soil from turf production can damage the archaeological resource and the practice can reduce the ability of the land to contribute to nature recovery.

Outdoor pigs are certainly favoured by the market and parts of the AONB have a widespread reputation for the production of quality pork. Market conditions and other factors in the early 2020s have presented significant headwinds for the industry. Outdoor pig units can have landscape and biodiversity impacts as the pens, straw stacks and fencing can become dominant in the landscape and reduce potential for wildlife. The feeding regimes can attract large numbers of gulls and corvids, so supporting artificially large local populations all year round, with a potential knock-on effect of increasing predation of nesting birds in surrounding areas. Outdoor pig units on valley sides are also vulnerable to run-off, resulting in soil loss and diffuse pollution.

The increasing size of farm machinery can affect the verges on minor roads, and the additional weight can impact on soil structure, making some areas more vulnerable to run-off under storm conditions, and can also further compromise the soil's ability to function well. Noise from farm-related traffic is part



Wader fencing to protect breeding redshank at RSPB North Warren Reserve in Thorpeness (AONB part funded)

of the rural scene, but in some cases where farm activities are industrialised, in or adjacent to small communities, it can have an adverse effect on the quality of life of residents.

To remain competitive, meet consumer demand, reduce food miles and to support food security it is important that productive agriculture continues to be part of the AONB's landscape. Indeed, much of the character of the AONB can be attributed to thousands of years of agricultural practices.

Dairy and beef farming is at an historically low level in the AONB. Increased production costs and poor returns have mostly made it unviable here. Flood plain and coastal grazing marshes are now largely converted to arable. There are huge opportunities to recover nature and help nature adapt to climate change by restoring grazing marshes and saltmarsh on these flood plains.

There is an aspiration by many to progress opportunities to recover nature by restoring grazing marshes and wet features, as identified in the AONB Nature Recovery Plan and the Suffolk Wader Strategy.

Grazing of the remaining areas is now largely done by beef cattle or sheep. Most grazed marshes are within agri-environment schemes, and many are managed by conservation organisations.

Sheep farming on heather-dominated heaths is not commercially viable and is only undertaken to support nature conservation.

There is slow growth in equestrian grazing leading to the development and apportioning of land into paddocks. The associated infrastructure required for the management of horses can bring visual intrusion and without careful design may offer little biodiversity or landscape gain. This is normally associated with settlement edges.

The Environmental Land Management (ELM) programme, which at the time of writing is designed to deliver environmental improvements at varying levels and over different scales, from individual field-level through to landscape-scale changes, replaces EU support and environmental programmes, and forms the backbone of the delivery of 'public goods for public money'. Some elements of ELM are already in place with others being introduced over the coming years.

Farmers, landowners and the AONB have been working together to deliver a DEFRA funded programme called Farming in Protected Landscapes. This time limited programme supports farmers delivering projects to further the AONB purpose and focuses on:

- Delivering nature recovery
- Reducing the drivers and mitigating the impacts of climate change
- Support for wider public access
- Developing the sense of place of the AONB

It is hoped that the successes of the Farming in Protected Landscapes programme will be carried forward into the emerging Environmental Land Management Scheme.

Forestry and Woodland

Large areas of coniferous forest were planted in the 1920s on former heath that is now AONB. Established trees, particularly birch and pine, act as seed sources which have promoted the spread of trees across the heaths. The forests, Dunwich, Tunstall and Rendlesham, known collectively as the Sandlings forests, are owned and managed by the Forestry Commission. The estate is designated as Open Access Land and provides a vertical and textural element in the landscape. These areas are now recognised as an important part of the local area for both wildlife and people.

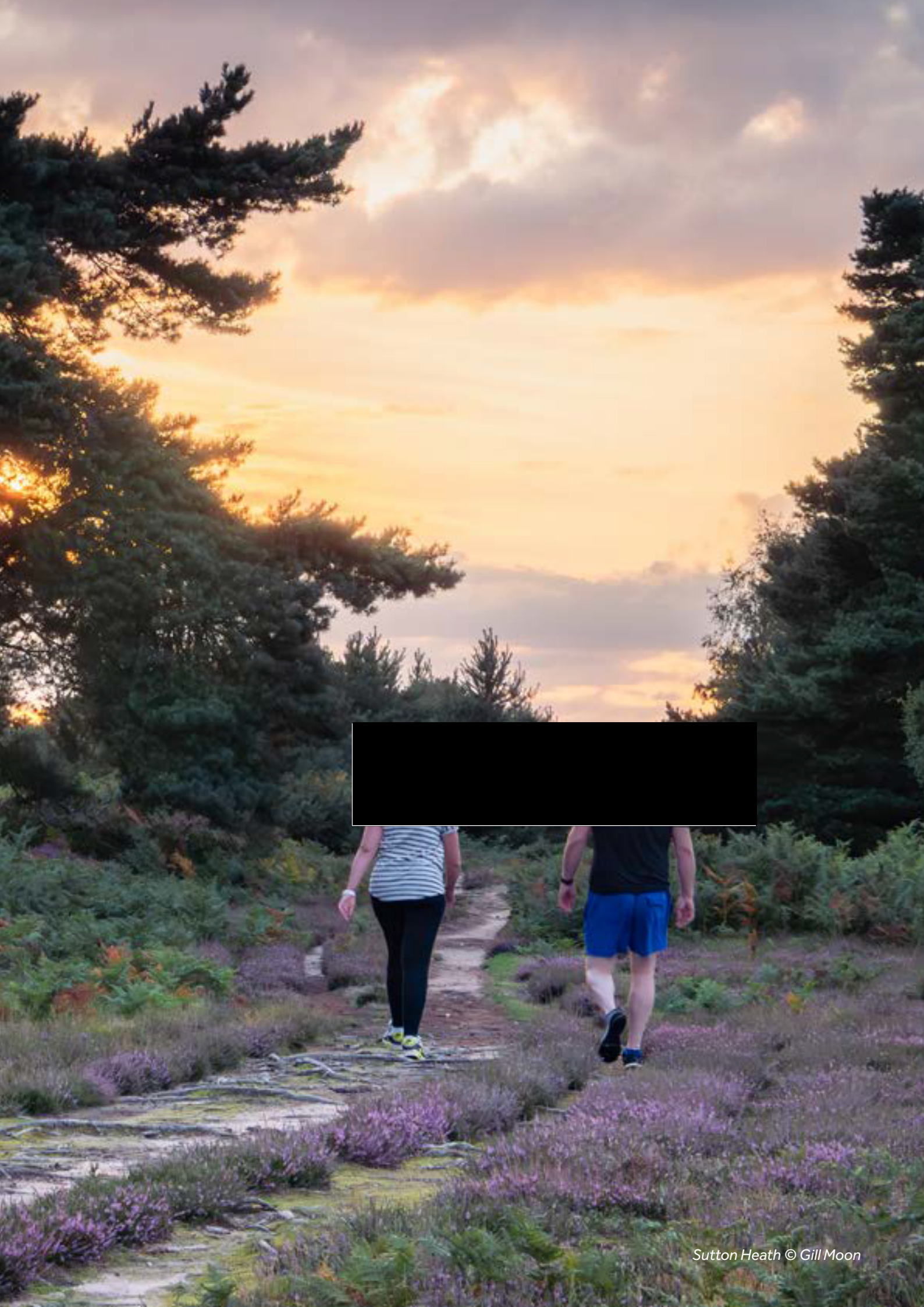
In addition to the forests owned by the Forestry Commission, there are several smaller, privately owned woods in the AONB, some of which are in active conservation management. While they all offer amenity benefit some also provide locally sourced woodland products, recreational opportunities or community benefit for learning and volunteering.

There is a need to increase the numbers and extent of native woodland in the AONB in appropriate locations for reasons of landscape enhancement, offsetting the drivers of climate change and delivering wildlife benefits.

The concept of the right tree in the right place is very important in the AONB. The AONB has important habitats for wildlife, carbon sequestration and landscape character. Inappropriate tree planting could have a significant negative impact on these factors and careful consideration of where tree planting takes place can avoid unintended negative impacts.



Hollesley Common © Gill Moon



Sutton Heath © Gill Moon



The

Landscapes for All

The area that forms the Suffolk Coast & Heaths Area of Outstanding Natural Beauty is a desirable place to live and visit.

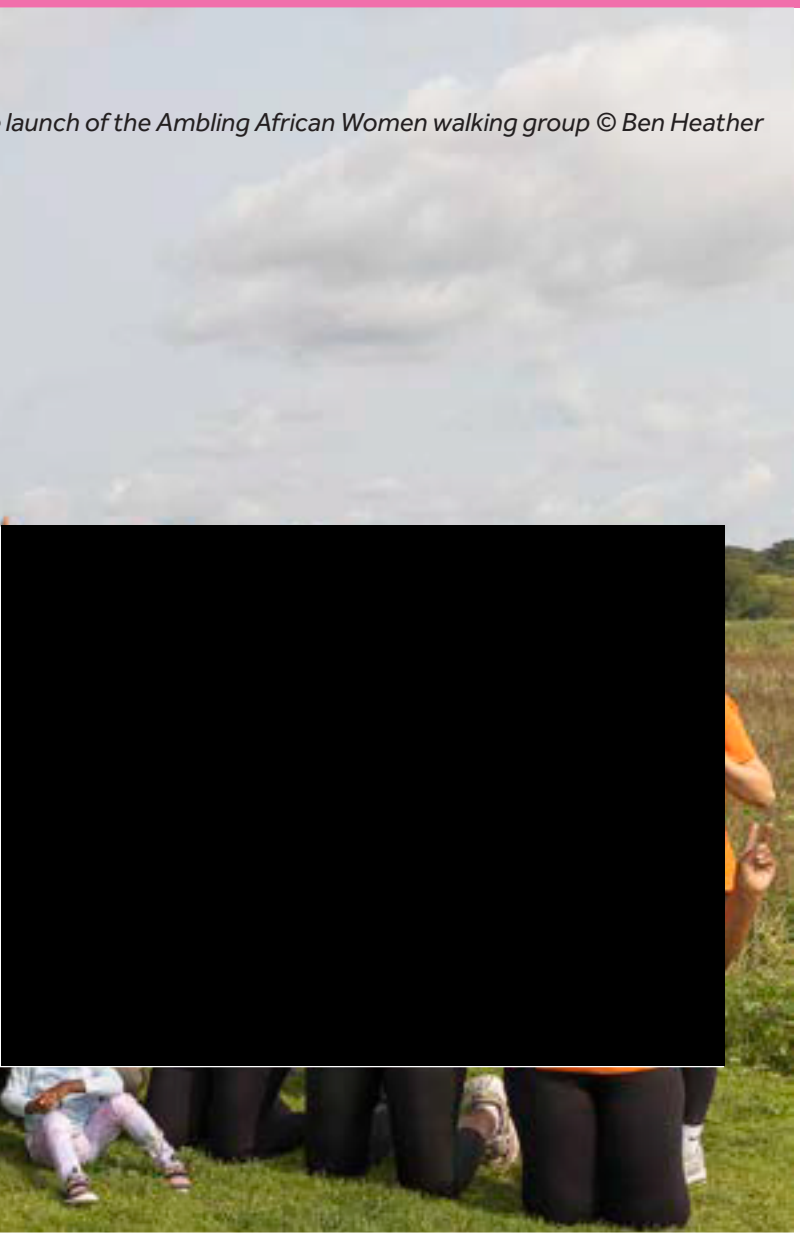
In recent time, as the availability of leisure time and the ability to travel long distances for some has increased, visitors to the area have discovered the heady mix of outstanding landscapes, accessible wildlife, and excellent hospitality.

However, there are some sections of society that are underrepresented when looking at the composition of visitors to the AONB. The nationally designated landscape is a place that should benefit all of society.

The visitor economy in the AONB was worth £228mn in 2019 and supported over 5,000 jobs. Much of the visitor economy is based on the AONB's natural beauty, including its recreational opportunities, landscapes, wildlife viewing opportunities and relative tranquillity. There will be a wide range of opportunities that arise from the Nationally Significant Infrastructure Projects for new job opportunities that may benefit all sections of society.

Enjoyment of the AONB is not limited to those visiting the areas. Several surveys show that residents value the coast and countryside where they live and use it for enjoyment and recreation.

It is important to recognise that the AONB is not a visitor attraction. It is a place where people live and work. The balance between the needs of visitors, acknowledging the benefits that can accrue from a healthy visitor economy, and residents is important. Resentment can build up if visitors exhibit anti-social behaviours. Pressures on the housing market can build from the increasing numbers of properties being rented out to the holiday market. While



launch of the Ambling African Women walking group © Ben Heather

these issues are beyond the scope of the AONB designation, work to promote the area as a visitor destination needs to respect local communities and the environment.

The AONB Partnership have an aspiration to raise awareness and understanding of the natural beauty of the AONB. People that appreciate the AONB are more likely involve themselves in the conservation and enhancement of the area.

A positive and balanced approach to developing access to the AONB is essential if people are to have an enjoyable experience and not have a negative impact on the natural beauty of the area. Visitors need to recognise the responsibilities that come with access to the area.

The impact of the Coronavirus pandemic influenced the behaviours of many, through individual choice and public policy from the start of 2020. Travel restrictions meant more people explored their local areas. Often these areas had insufficient infrastructure to cope with a significant increase in visitor numbers, sometimes causing tensions between the resident population and visitors. New habits have been formed and this opportunity of increasing numbers of people enjoying the AONB needs to be taken to enhance AONB purpose and contribute to local economic wellbeing.

It is anticipated that the stretch of the England Coast Path coming through the AONB will be opened during the lifetime of this Management Plan. This is a great opportunity for people to experience the AONB. It will be important that any negative impacts from increased disturbance will have been mitigated for in the development of this new National Trail, as outlined in the development programme. AONB partners will seek to encourage appropriate behaviours from those using this exciting new right of access.

Furthermore, the creation of a new National Trail is designed to develop and support economic wellbeing of coastal communities.

The importance and popularity of the Suffolk Coast & Heaths AONB for recreation is reflected in the high demand for facilities. Such facilities, that may attract new visitors to the AONB, need to recognise the status of the nationally designated landscape.

The AONB has a wide range of self-guided walking and riding guides available produced by many different organisations. These guides encourage low impact enjoyment of the area and should be encouraged.

There is a limited amount of land in the AONB that is registered as Open Access

Land. This gives the right to roam across designated areas such as the Sandlings heaths and registered commons. The Forestry Commission has also dedicated its entire estate to Open Access, so there is now a significant area in the AONB that is accessible to people.

The AONB is home to some of the country's finest nature reserves. These include RSPB Minsmere, The National Trust's Dunwich Heath, the Suffolk Wildlife Trust's Trimley Marshes, and Essex Wildlife Trust's Copperas Wood to name a few.

There are other accessible sites in the AONB and nearby including East Suffolk Council's Landguard Point as well as the forests, coastline, and land at Kenton Hills (Sizewell Belts).

Beaches are an understandable draw to those wishing to enjoy the AONB landscapes, but some are particularly vulnerable to visitor pressure. The highly specialised vegetation found on some shingle beaches can easily be inadvertently damaged by trampling. Ground nesting birds, such as little terns, can be accidentally disturbed, particularly where walkers and dogs stray off public rights of way.

Projects to prevent accidental, and wilful, disturbance can play a key part in maintaining bird populations. There are examples of excellent co-operation between AONB partners to deliver projects that seek to avoid such disturbance.

Litter and waste can be obvious on beaches. As well as being unsightly, it has a negative impact on wildlife. Some is sea-borne, and some is simply left by those visiting the beach. In other areas the careless discarding of waste can be dangerous, leading to fires or injury to those unaware of its presence.

As part of increasing people's opportunities to enjoy the area while lessoning negative impacts at a local and international scale it will be important to further develop more sustainable transport opportunities and infrastructure. The East Suffolk and Essex and South Suffolk Community Rail Partnerships are keen to work with others to increase promotion of public transport. Cycling and walking are more sustainable modes of transport for increasing numbers of people and are promoted by a wide range of organisations.

Vehicles using alternatives to fossil fuels can improve local air quality and reduce the drivers of climate change. It is likely that during the lifetime of this Management Plan conventionally powered cars will continue to be the first choice for most, but increased availability of electric cars and charging infrastructure will become more common. Improving linkages and providing options for more sustainable transport will benefit the AONB and its residents.

The history associated with the area that forms the AONB is fascinating and contains important cultural artefacts and historic buildings in the area. Sutton Hoo is the most high-profile area but there are numerous other important sites and buildings that give a glimpse into past lives. The archaeology, both above and below ground, remains a largely untold story and projects to realise the potential of this part of the area's landscape history should be sought.



Climate Change

Climate change is a significant challenge for everyone, including the Suffolk Coast & Heaths Area of Outstanding Natural Beauty. If the AONB is to continue to deliver its statutory purpose, to conserve and enhance natural beauty, it is essential that society will need to change and adapt. Solutions can be and will need to be appropriate to the purpose of a nationally designated landscape.

Climate change is likely to lead to increasingly warmer, drier summers and milder, wetter winters and an increase in extreme weather events.

Climate change is likely to increase the risk of fluvial flooding and coastal flooding that will have a detrimental impact on people and property, farming and wildlife.

The impact on the AONB is likely to be considerable, leading to changes in:

- Landscape: Changes to vegetation and land management decisions, including farming operations.
- Natural resources: Including a reduction in the availability of water for irrigation and pressure on some species.



Covehithe © Gill Moon

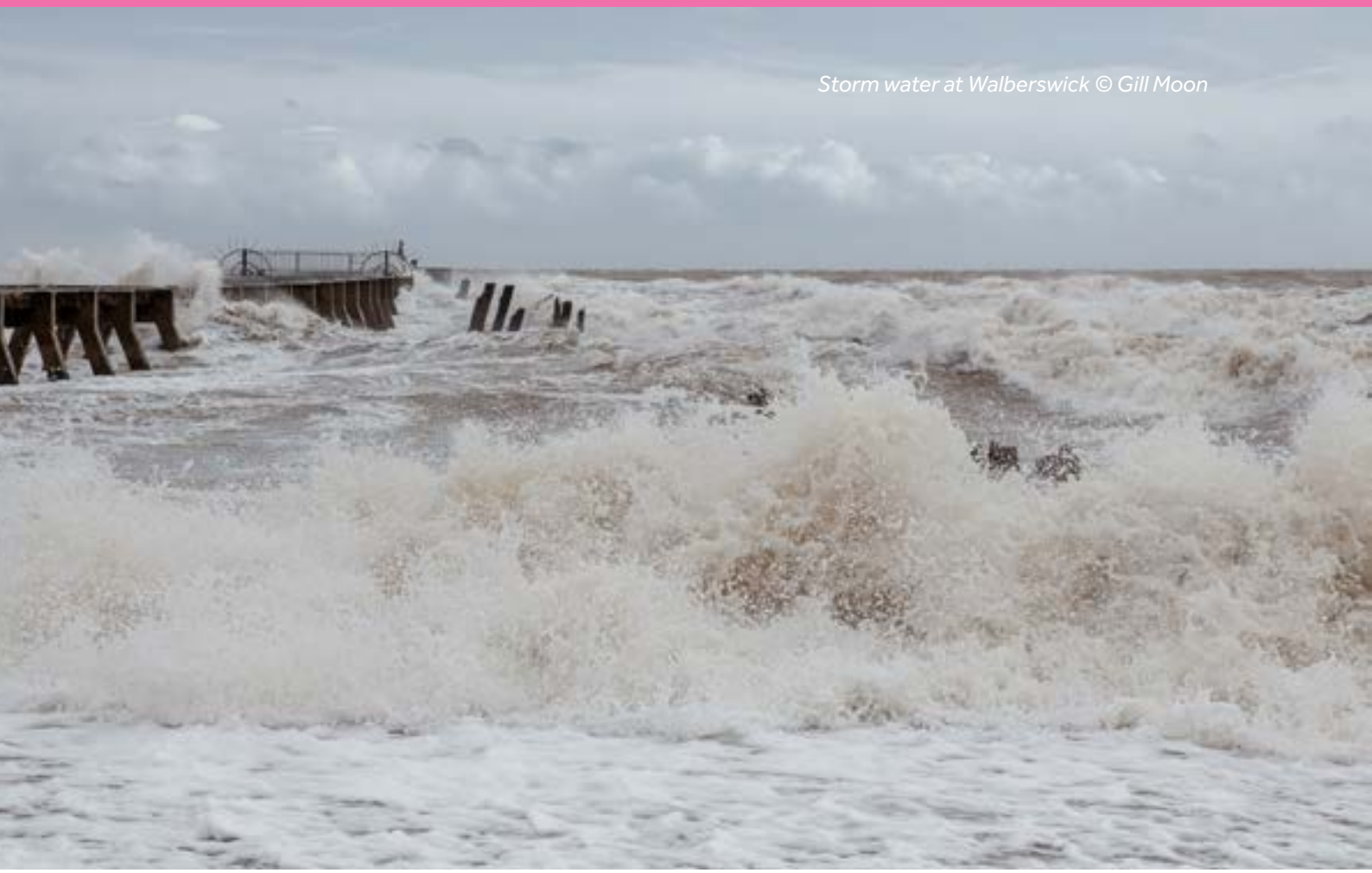
- Wildlife: A reduction in quality and condition of habitats leading to populations of species becoming more vulnerable to population decline or extinction.
- Historic environment: An increase in the extremes of wetting and drying, leading to accelerated decay of stonework and an increased risk of subsidence. Increased flooding and erosion may cause damage to buildings and to archaeological sites.
- Land management: Changes in farming practices, linked to changes in the climate and farming policy (driven by the United Kingdom's exit from the European Union) will lead to changes in the landscape of the AONB.
- Climate change has contributed to an increasing prevalence of tree pests and diseases in the AONB alongside other drivers such as increased global trade, travel, and the importation of diseased material. Ash Dieback will have an increasing impact on woodland and trees in the AONB.
- Tourism: The natural beauty of the AONB is recognised as a key driver for the tourism industry. Changes to the AONB's landscape, wildlife, climate, and land management will have an impact on the tourism offer of the area.
- Walking and cycling: More sustainable travel by visitors and those commuting can help reduce the drivers of climate change and add to the safety and attractiveness of the AONB.

Although there is potential to reduce the extent of climate change through mitigation measures, significant impacts are now inevitable because of past greenhouse gas emissions. Moreover, further increases in greenhouse gasses are unavoidable, even under the most optimistic of scenarios.

The AONB team will promote the Farming in Protected Landscapes programme and Sustainable Development Fund grant schemes to fund projects to minimise the drivers of climate change.

Non-native invasive species are present in the AONB and have a harmful impact, particularly on biodiversity. Climate change has been a contributing factor to this increase. These include Himalayan balsam and New Zealand pigmy weed in rivers and ponds. There is an increasing risk of further plant and animal pests and disease becoming established in the AONB and having a harmful impact on landscape, biodiversity, and the economy.

The risks posed by the consequences of climate change can be reduced through a range of adaptation and mitigation measures. Nature recovery, restoration of habitats and ecological networks have a large part to play in mitigating and adapting to climate change.



Storm water at Walberswick © Gill Moon

Working Together

The Suffolk Coast & Heaths Area of Outstanding Natural Beauty is a high-quality landscape which is recognised by its designated status. This does not necessarily ensure its natural beauty will be safeguarded. For the AONB to deliver its statutory purpose all those with an interest in the area will need to work in partnership to conserve and enhance its natural beauty. Landscape will change, as all landscapes do. We need to be collective stewards of that change as a Partnership.

As an AONB that covers over 170 square miles, and with so many differing interests, it is beyond the scope of any one organisation to ensure its wellbeing. It is vital, a simple necessity, that organisations work in partnership and with the communities of the area to conserve and enhance the AONB's natural beauty. This Management Plan is a blueprint for action to ensure the area is conserved and enhanced for future generations and to enjoy the benefits that the landscape delivers.

The AONB team is well placed to co-ordinate the AONB Partnership, but it is those communities and partnership organisations, who, by working together, will be able to deliver AONB purpose most effectively.

Strong community engagement is vital to the purposes of the AONB, as is relevance of the AONB to that community. Communities have repeatedly demonstrated pride in their local area and a commitment to ensure the AONB retains its natural beauty. Virtually all this involvement is on a voluntary basis. It includes management of areas important for nature and public spaces, engaging in the planning system to protect the AONB's natural beauty from inappropriate development, and acting in ways to conserve and enhance the area.

Statutory bodies (such as local authorities and publicly funded organisations) and statutory undertakers (such as those that provide utilities) have a duty to further the purpose of the AONB. Many other charitable and membership organisations have overlapping aims with the AONB purpose, and tourism and amenity groups have an interest in seeing the AONB purpose delivered.

The AONB team administers several small grant funds, supporting communities, businesses and societies that undertake projects that are beneficial to meeting AONB purpose and delivering environmental, social, and economic well-being benefits to the area.

The AONB team is the only organisation specifically set up to be an advocate of the designated landscape and encourage the conservation and enhancement of natural beauty. However, it has limited resources and the work it does in partnership with those with a statutory obligation or a shared goal means that more can be achieved to deliver AONB purpose. The strength of the AONB is in its partnerships and where those partners have competing needs the AONB team has an important role acting as an 'honest broker' to deliver the best outcome for the AONB.



Coast & Vale Youth Rangers © Gregg Brown



Tunstall Heathland © Gill Moon

SECTION 4

Management Plan Policies



Landscape

- Land management conserves and enhances the natural beauty of the AONB whilst balancing the competing pressures of nature recovery, tackling climate change, food production, supporting livelihoods and public access.
- Features that contribute to the AONB's natural beauty are conserved and enhanced.
- Projects to remove features that detract from AONB landscape quality are supported.
- Landscape change over the plan period is curated to ensure AONB natural beauty indicators and special qualities are conserved and enhanced for future generations.
- Proposals that are likely to impact on the dark skies of the AONB should have regard to these dark skies by seeking to avoid and minimise light pollution.
- Measures should be taken to increase the area of dark skies in the AONB by removing and reducing existing sources of light pollution and seeking further dark sky status for the AONB.
- Local distinctiveness of the AONB is conserved and enhanced and better understood.

Coast and Estuaries

- The management of coast and estuaries in and adjacent to the AONB consider the statutory purpose of the nationally designated landscape.
- Communities, businesses and statutory bodies are supported to deliver activity in the coast, marine and estuarine areas in and adjacent to the nationally designated landscape to deliver statutory purpose.
- The defined Heritage Coast and purpose is recognised in decision making.
- The protection of the coast and adaptation projects should recognise the AONB's statutory purpose and natural beauty.

Nature Recovery

- The Suffolk Coast & Heaths AONB's Nature Recovery Plan is recognised in Local Nature Recovery Strategies for the area.
- Work to deliver targets in the AONB Nature Recovery Plan is undertaken.
- Nature based solutions and climate change mitigation and adaptation are prioritised to address environmental problems and contribute to nature recovery.
- The offer set out in the 'Colchester Declaration', relating to nature recovery and adaptation to climate change is recognised and delivered.

Land Use and Planning

- Land management in the nationally designated landscape and its setting should have regard to and help deliver the AONB statutory purpose of conserving and enhancing natural beauty.
- Projects to remove features that detract from AONB statutory purpose are supported.
- Noise pollution and visual disturbance are avoided and minimised to maintain and enhance tranquillity across the AONB.
- Proposals that are likely to impact on the historic and cultural heritage of the AONB should have regard to these features and seek to conserve and enhance them.
- Proposals for development considered under the Planning Act 2000 (and subsequent revisions) in the AONB and its setting, such as Nationally Significant Infrastructure Projects, should have regard to AONB purpose and adhere to the mitigation hierarchy.
- Nationally Significant Infrastructure Project compensation and mitigation funds are used to deliver AONB purpose.
- Neighbourhood Plans in and adjacent to the nationally designated landscape recognise the AONB purpose.

Landscapes for All

- The AONB is enjoyed in a responsible way by everyone.
- The visitor economy is based on the natural beauty of the AONB.
- Local communities understand the AONB designation and support activity to deliver AONB purpose.
- Those visiting and enjoying the AONB are encouraged to act in a way that does not negatively impact the natural beauty and defined features of the AONB.
- Tourism facilities, including access provision, does not detract from AONB purpose.
- The AONB is an affordable place to live and somewhere that is economically vibrant, such that local people can find jobs in the area.

Climate Change

- Climate change mitigation is part of all new development, infrastructure, and transport decisions.
- Climate change mitigation, including nature recovery, should be a key component of land management practices.
- Greenhouse gas emissions should be reduced through a range of measures, including:
- Development decisions,
- Energy conservation,
- Small scale renewables that do not detract from AONB purpose,
- Promotion of more sustainable transport.
- Projects that deliver climate change adaptation that do not detract from AONB purpose are supported.

Working Together

- The AONB Partnership works together and with others to deliver AONB purpose.
- The AONB Partnership represents all relevant interests in the AONB and acts as an advocate for AONB purpose.
- Grant aid is available for individuals, communities, businesses and organisations to deliver AONB purpose.
- People and organisations work together to curate landscape conservation and enhancement.



East Lane © Gill Moon



SECTION 5

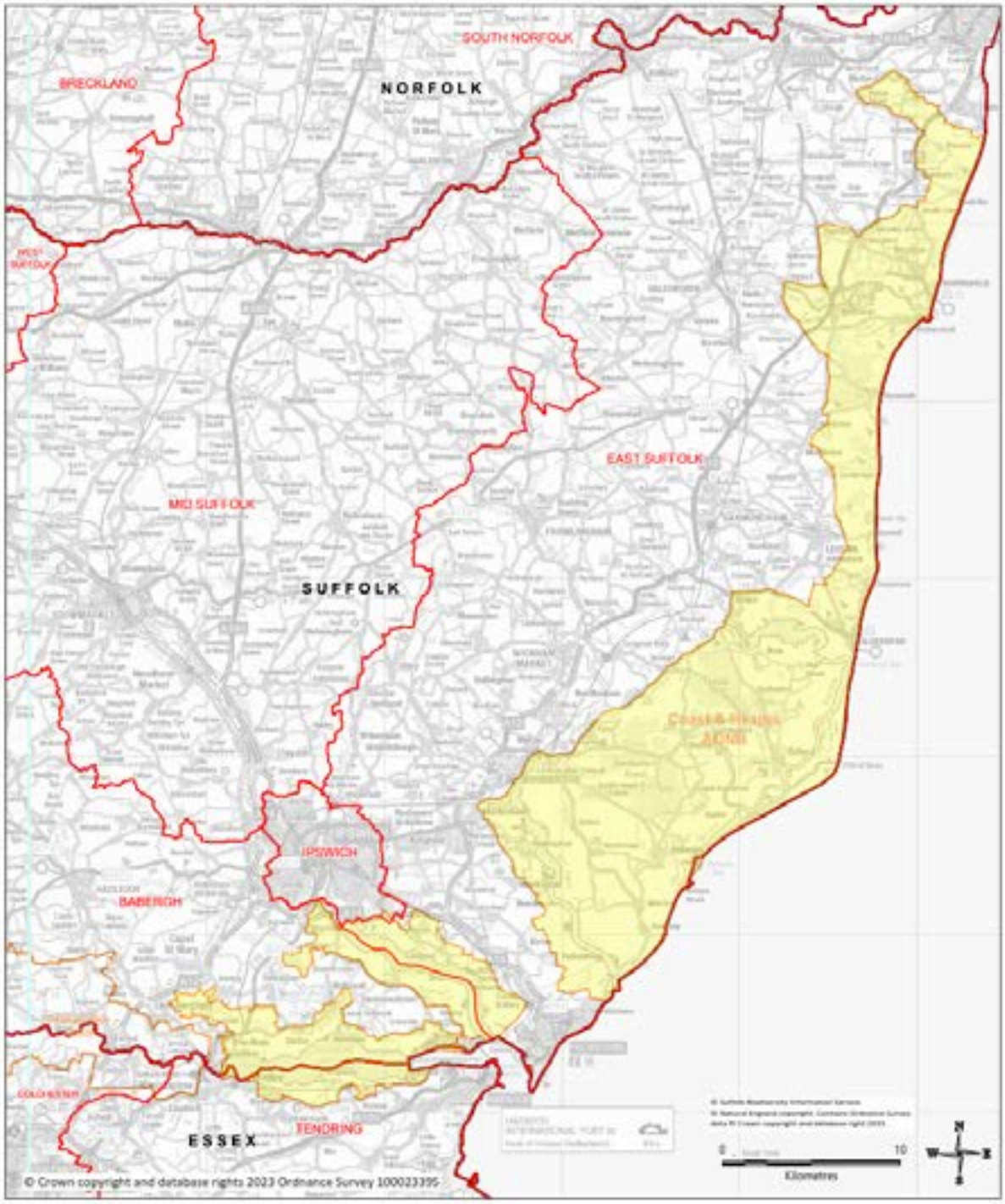
Appendices

Please note, some figures recorded in the following appendices have seen increases where figures are provided for different years, in many cases this is due to the increased area of the Area of Outstanding Natural Beauty following the extension on 7th July 2020.

Appendix 1

Maps

1. District Boundaries



Coast & Heaths AONB

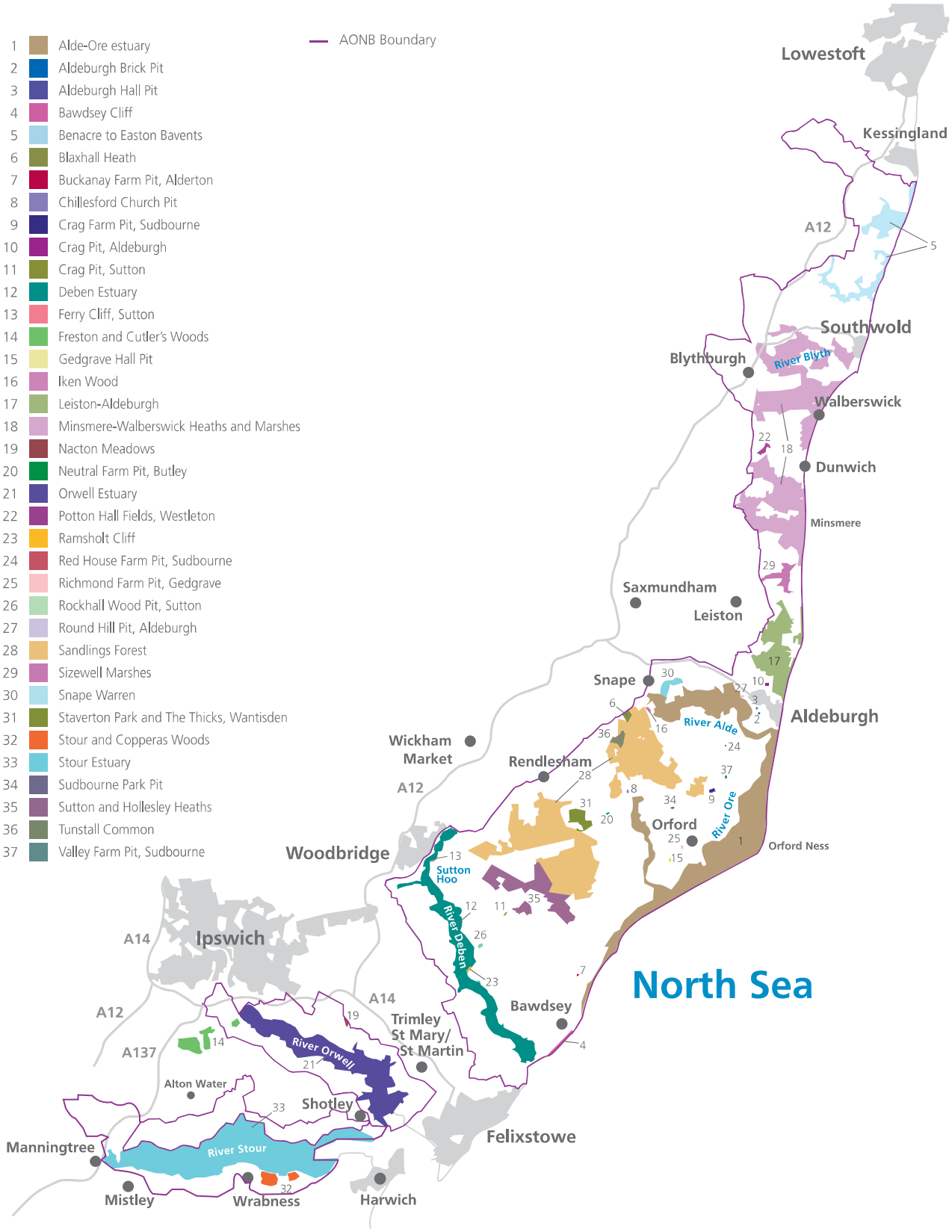
- Area of Outstanding Natural Beauty
- Coast & Heaths Area of Outstanding Natural Beauty
- District or Borough boundary
- County boundary

SBIS
SUFFOLK BIODIVERSITY INFORMATION SERVICE

Date: 26/04/2023 | Drawn by Jane Mason

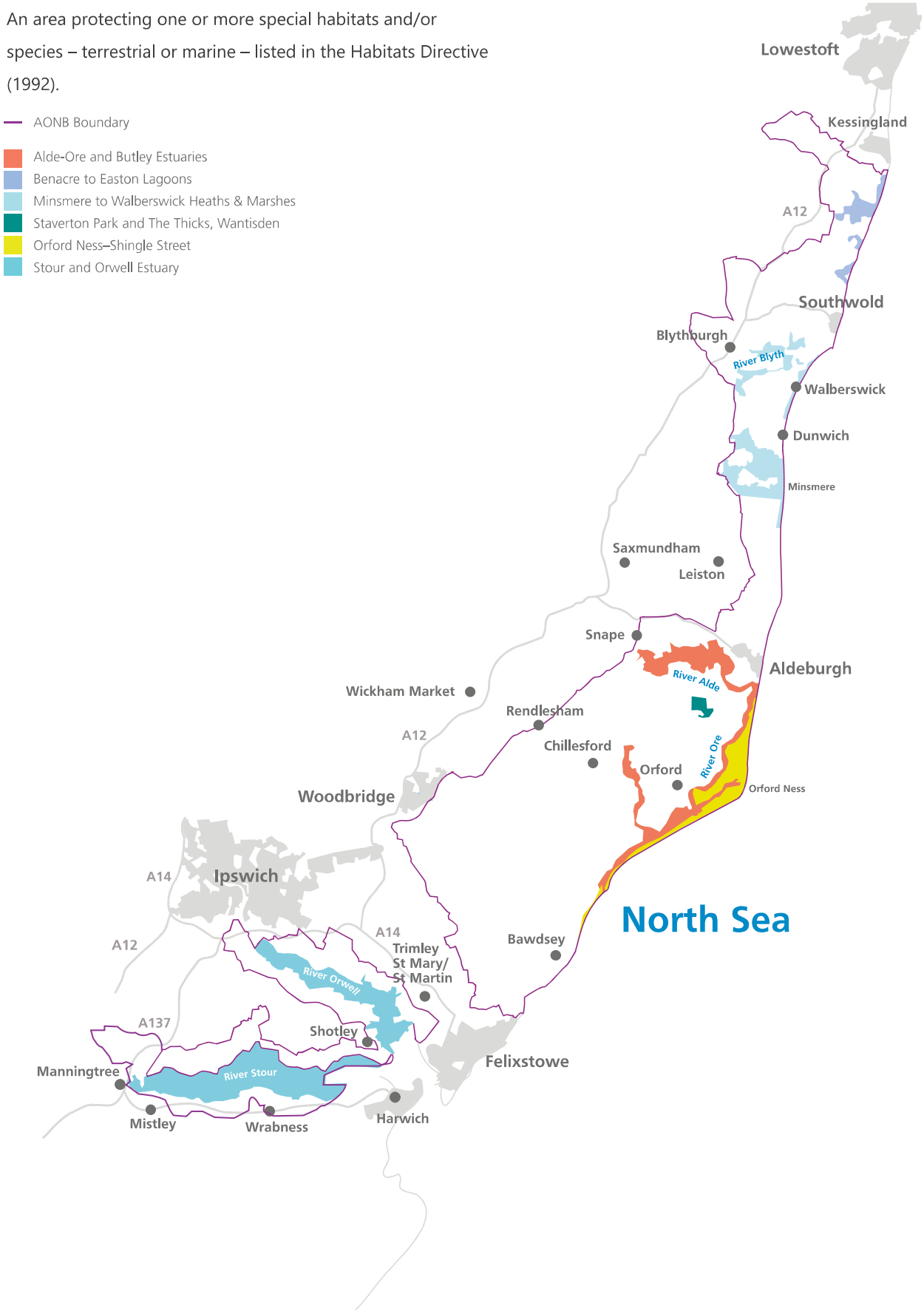
Sites of Special Scientific Interest

Areas that have extremely high conservation value because of fauna, flora, geological or physiological features.



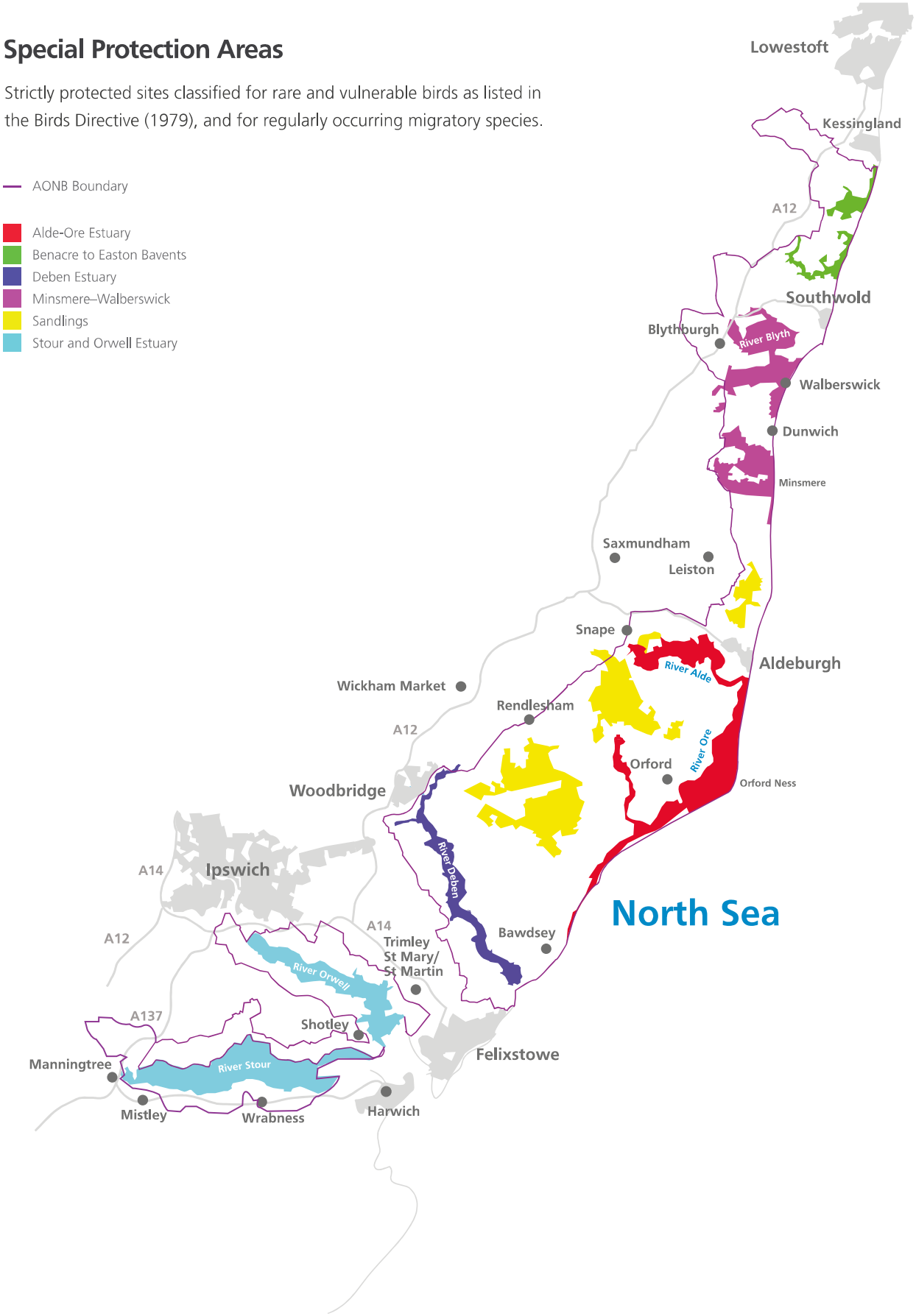
Special Areas of Conservation

An area protecting one or more special habitats and/or species – terrestrial or marine – listed in the Habitats Directive (1992).



Special Protection Areas

Strictly protected sites classified for rare and vulnerable birds as listed in the Birds Directive (1979), and for regularly occurring migratory species.

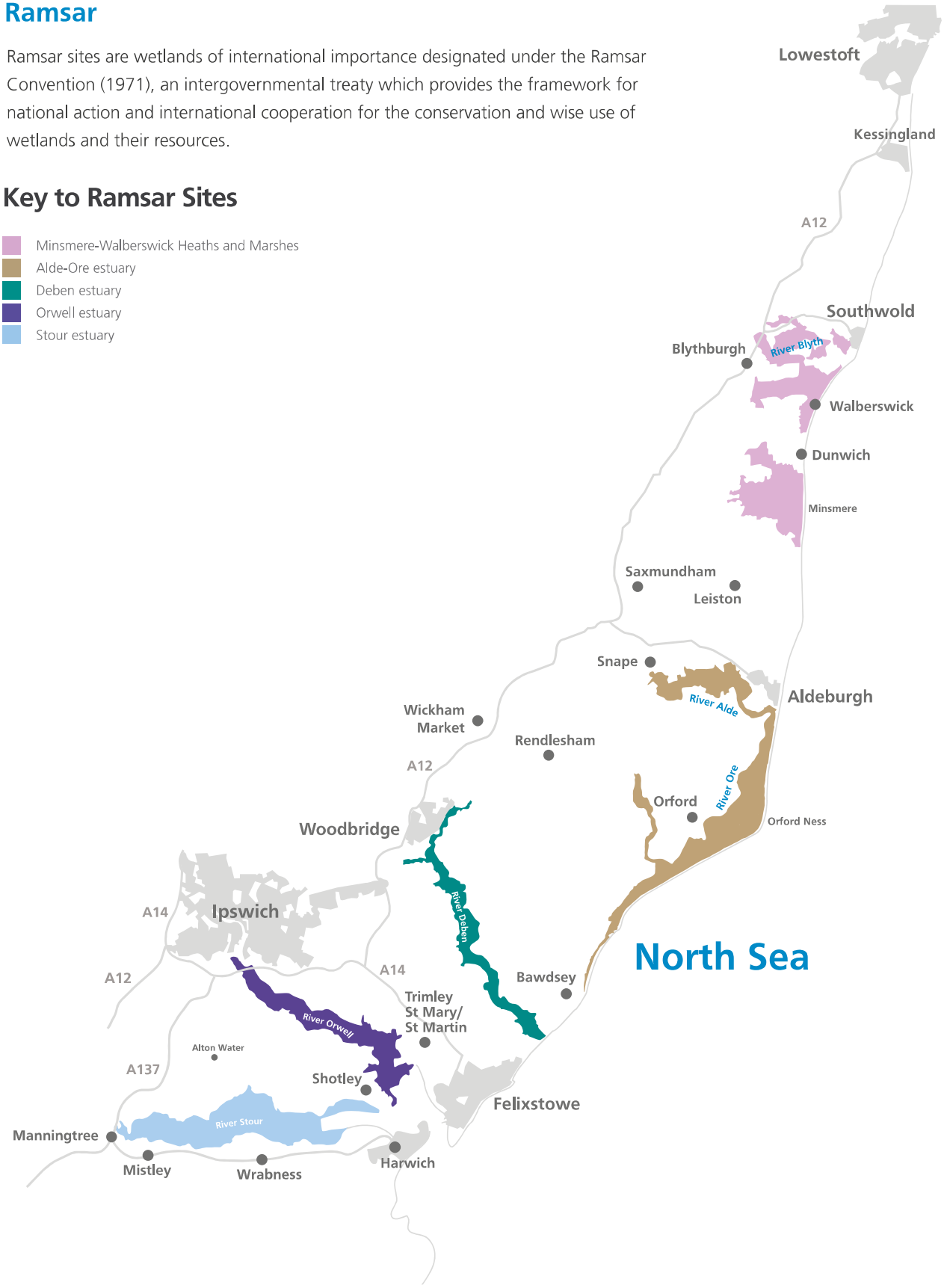


Ramsar

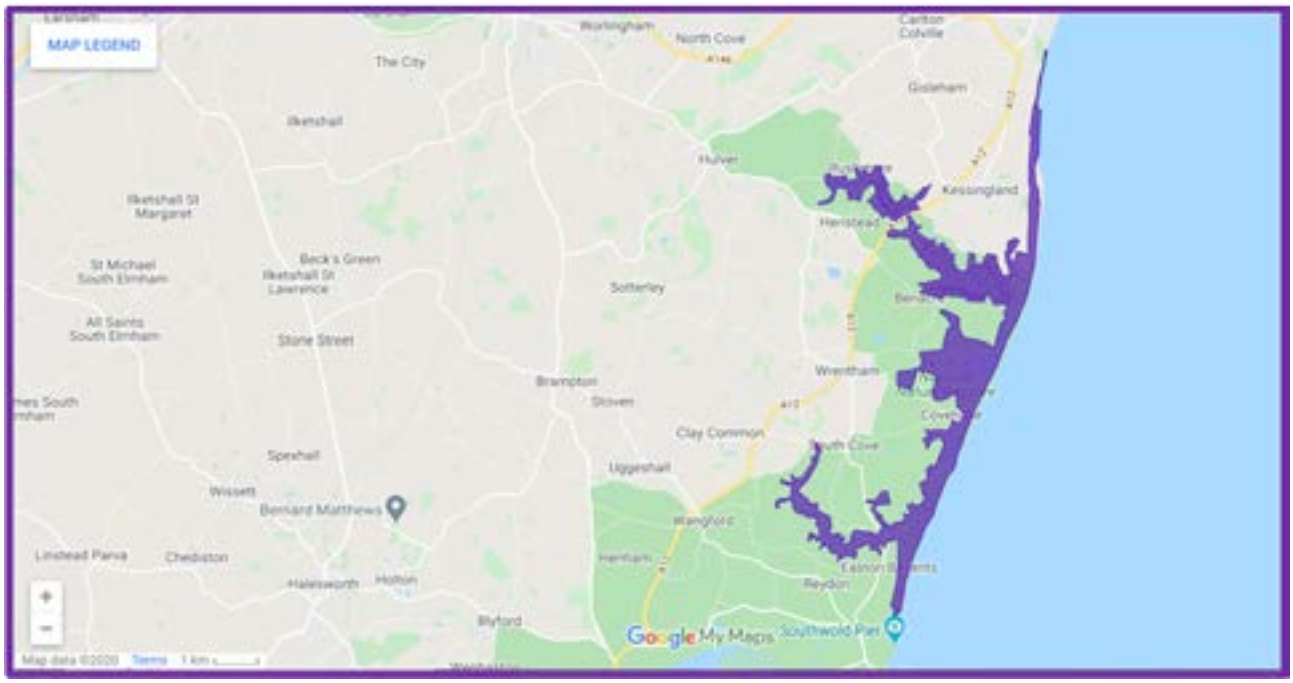
Ramsar sites are wetlands of international importance designated under the Ramsar Convention (1971), an intergovernmental treaty which provides the framework for national action and international cooperation for the conservation and wise use of wetlands and their resources.

Key to Ramsar Sites

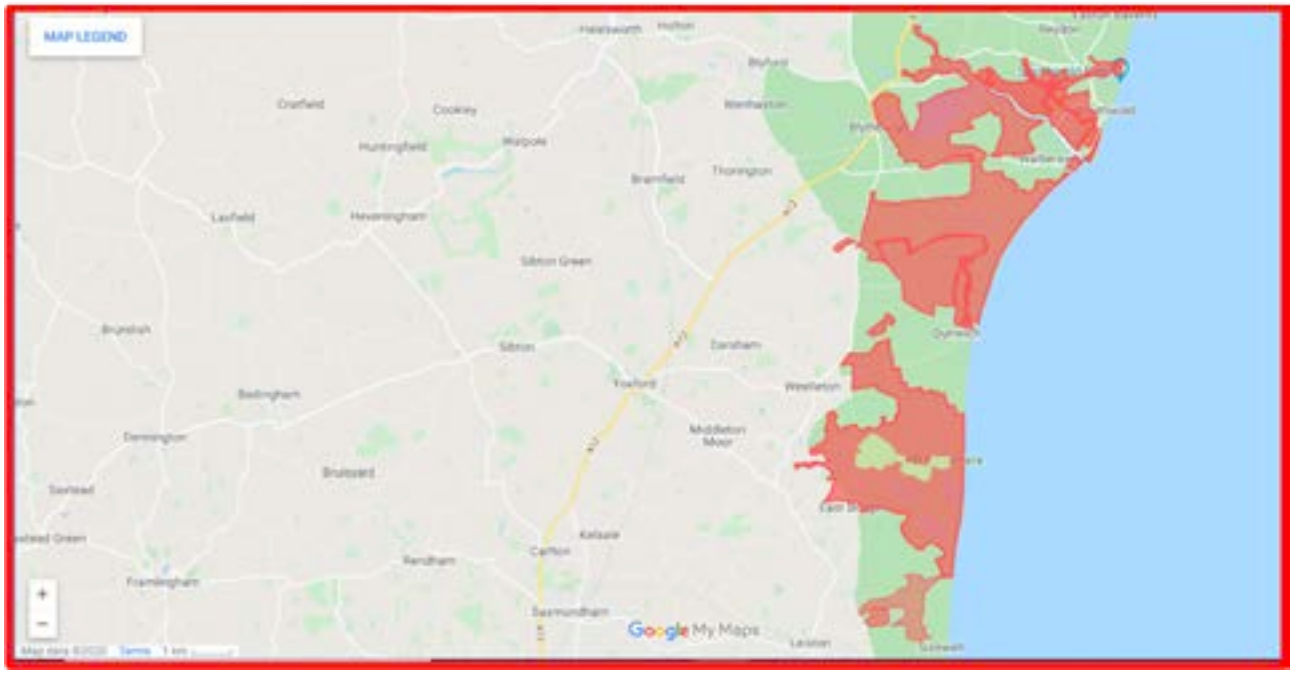
- Minsmere-Walberswick Heaths and Marshes
- Alde-Ore estuary
- Deben estuary
- Orwell estuary
- Stour estuary



Nature Recovery Core Zone A: Pakefield to Easton Bavents



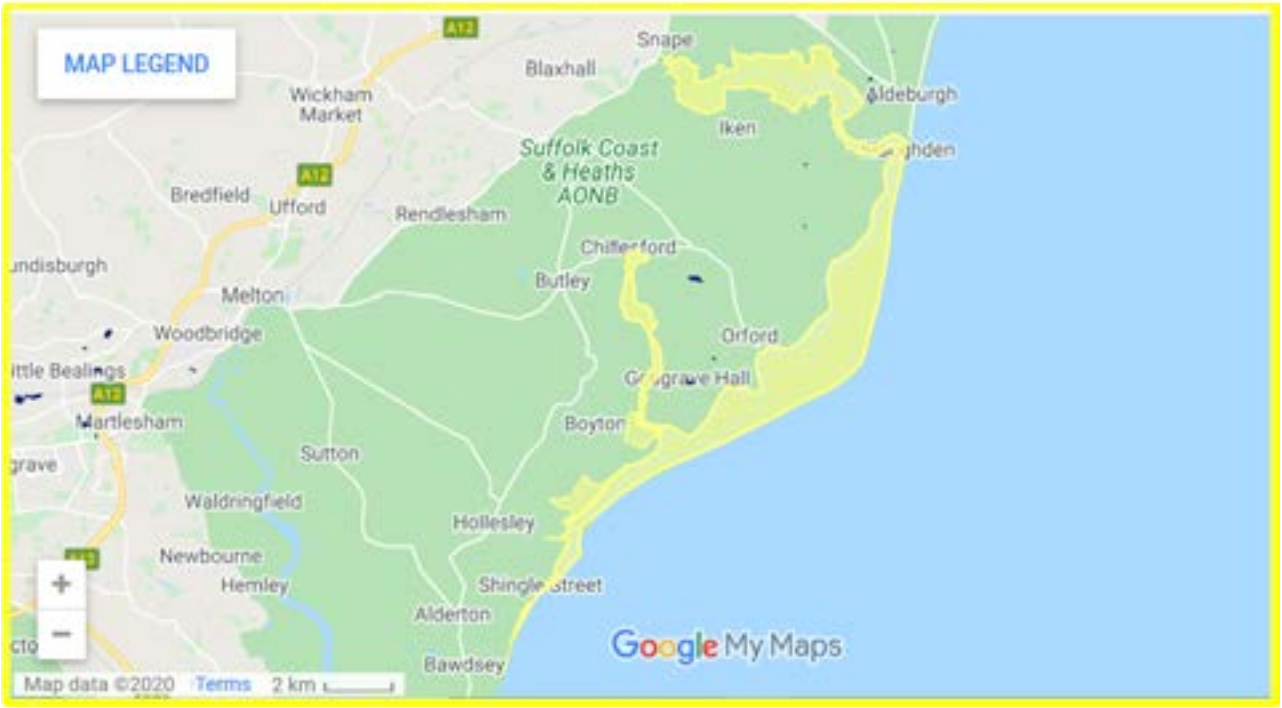
Nature Recovery Core Zone B: Minsmere to Walberswick Heaths and Marshes



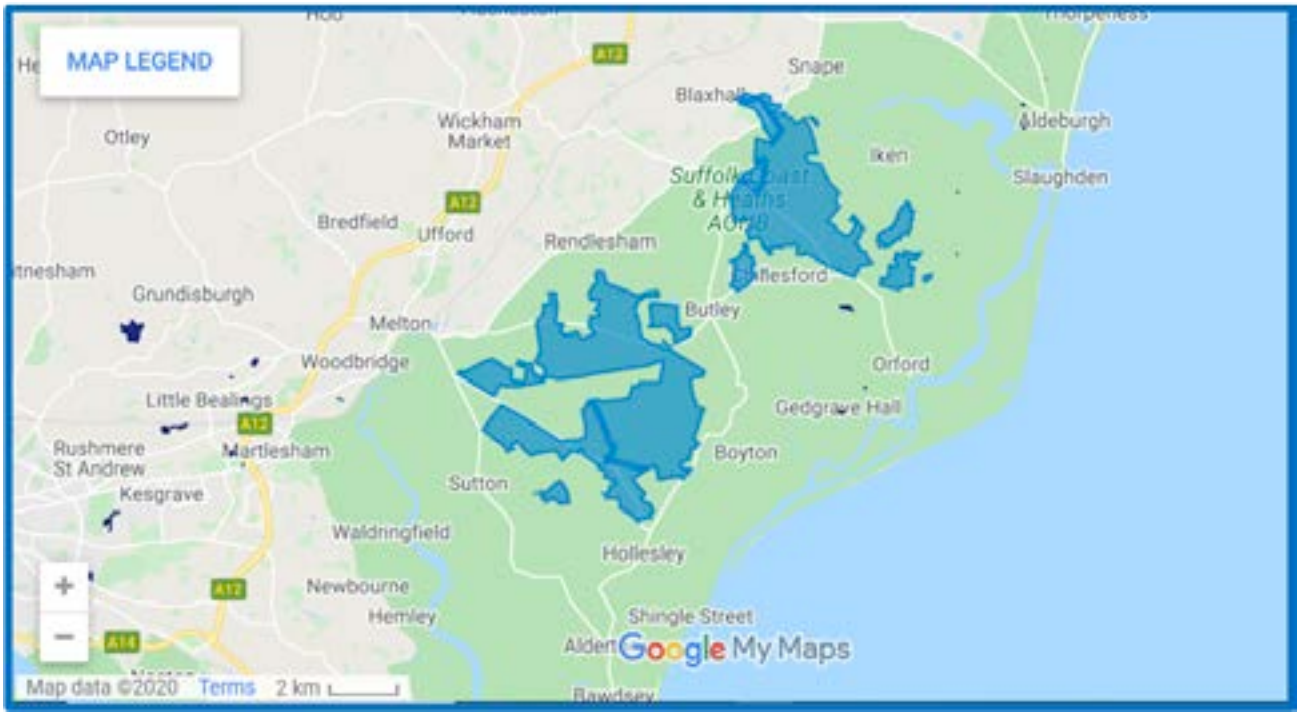
Nature Recovery Core Zone C: Leiston to Aldeburgh



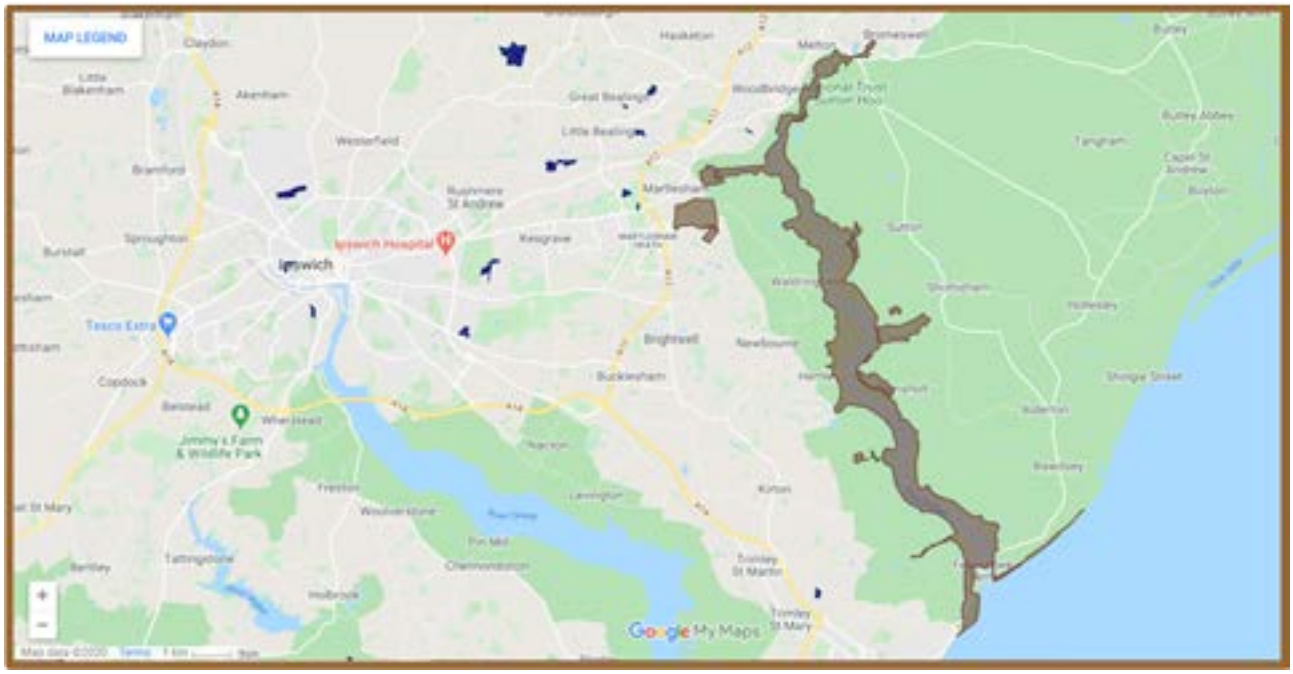
Nature Recovery Core Zone D: Alde – Ore Estuary



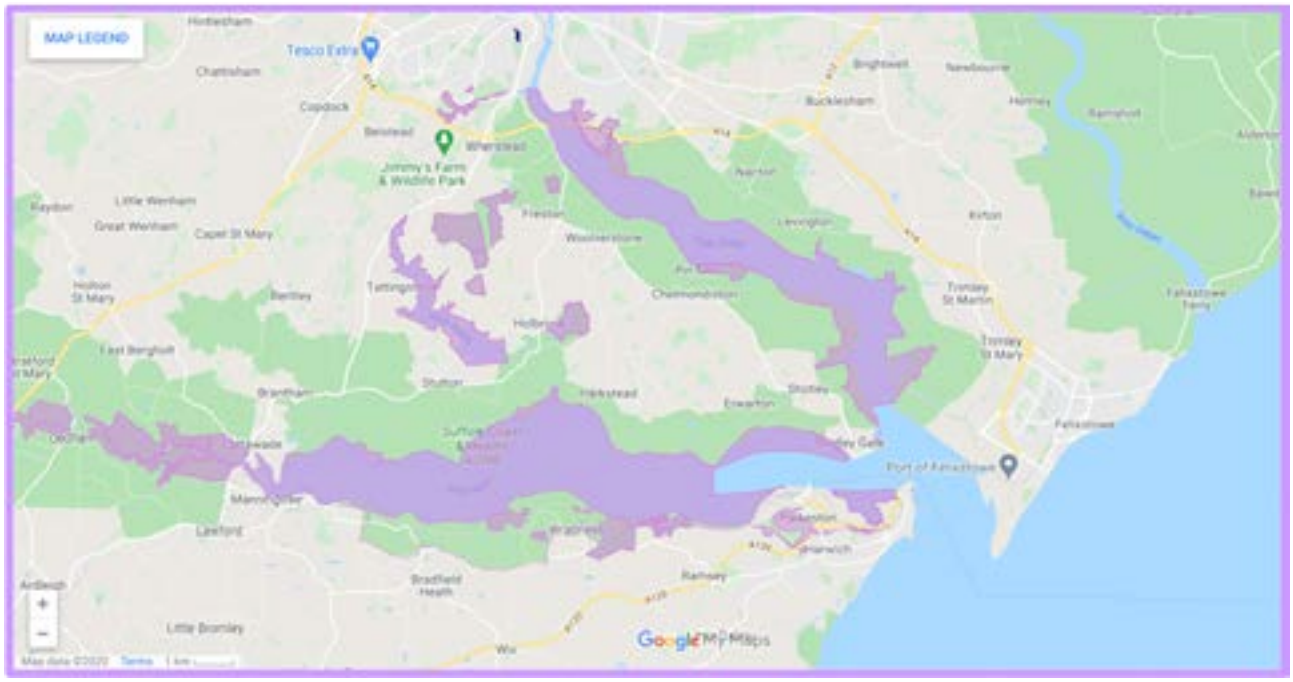
Nature Recovery Core Zone E: Sandlings Forest and Surrounding Areas



Nature Recovery Core Zone F: Deben Estuary and Surrounding Areas



Nature Recovery Core Zone G:
Stour & Orwell Estuaries and Surrounding Areas



Appendix 2
Data

1. AONB area (ha)

	Area (ha)
Suffolk Coast & Heaths AONB pre-2020 boundary review	40,556.91
Suffolk Coast & Heaths AONB area added in 2020 boundary review	3,792.82
Total Suffolk Coast & Heaths AONB Area	**44,349.72**

2. Landscape Character type (Source: SBIS)

Suffolk Landscape Character Assessment	Post-2020/1 extension boundary		Pre-2020/1 extension boundary		
Landscape Character Type	**Area (ha)**	**% of AONB**	**Area (ha)**	**% of AONB**	**% change due to extension (using current data)**
Ancient estate claylands	688.83	1.55	688.42	1.70	0.06
Ancient estate farmlands	1,181.38	2.66	769.22	1.90	53.58
Coastal Dunes shingle ridges	737.00	1.66	737.00	1.82	0.00
Coastal levels	7,192.81	16.22	7,191.43	17.73	0.02
Estate sandlands	15,878.20	35.80	15,878.20	39.15	0.00
Open coastal fens	489.58	1.10	489.58	1.21	0.00
Plateau claylands	0.84	0.00	0.84	0.00	0.00
Plateau estate farmlands	1,515.98	3.42	1,499.66	3.70	1.09
Plateau farmlands	194.70	0.44	31.32	0.08	521.74
Rolling estate farmlands	1,545.07	3.48	1,490.58	3.68	3.66
Rolling estate sandlands	6,119.24	13.80	6,119.24	15.09	0.00
Rolling valley farmlands	453.24	1.02	21.29	0.05	2,028.60
Rolling valley farmlands and furze	555.09	1.25	555.10	1.37	0.00
Saltmarsh & intertidal flats	2,913.49	6.57	2,024.45	4.99	43.92
Urban	287.47	0.65	287.47	0.71	0.00
Valley meadowlands	472.74	1.07	464.74	1.15	1.72
Valley meadows & fens	436.22	0.98	436.22	1.08	0.00
Wooded fens	303.85	0.69	303.85	0.75	0.00
TOTAL	**40,965.72**	**92.37**	**38,988.61**	**96.13**	**5.07**

Landscape Character Assessment of the Essex Coast		
Type name	**Area (ha)**	**% of AONB**
Diverse Coastal Marshland	0.20	0.00
River Terrace Farmland	554.21	1.25
Rolling Clay Farmlands	77.38	0.17
Unvegetated Foreshore	908.91	2.05
Vale-Top Farmlands	63.03	0.14
TOTAL	**1,603.74**	**3.62**

For maps and descriptions of Landscape Character Types found in the AONB, refer to the documents in the Landscape Character Library at www.coastandheaths-NL.org.uk/managing/reference-library/landscape-character-library

3. Main habitats (Source: SBIS)

This dataset originates from Natural England's Priority Habitat Inventory (PHI) v3.0 November 2022. The PHI is a spatial dataset that describes the geographic location and extent of 25 priority habitats in England. It maps most of the terrestrial semi-natural habitat types that were identified as being the most threatened and requiring conservation action under the UK Biodiversity Action Plan (UK BAP). Overlapping habitats where priority habitat definitions allow different priority habitats to coexist in the same place can now be included.

	Post-2020/1 extension boundary	Pre-2020/1 extension boundary		2018 Management Plan figures				
Main habitats	**Area (ha)**	**% of AONB**	**Area (ha)**	**% of AONB**	**% change due to extension (using current data)**	**Area (ha) 2018**	**% of AONB 2018**	**% change due to extension and data since 2018**
Coastal and floodplain grazing marsh	3,293.59	7.43	3,276.06	8.08	0.53	3,256.40	8.03	1.14
Coastal and floodplain grazing marsh, Coastal saltmarsh	14.34	0.03	14.34	0.04	0.00			
Coastal saltmarsh	1,142.65	2.58	1,055.44	2.60	8.26	1,045.98	2.58	9.24
Coastal saltmarsh, Saline lagoons	3.06	0.01	3.06	0.01	0.00			
Coastal sand dunes	33.38	0.08	33.38	0.08	0.00	35.60	0.09	-6.24
Coastal sand dunes, Coastal vegetated shingle	2.11	0.00	2.11	0.01	0.00			
Coastal vegetated shingle	580.33	1.31	580.33	1.43	0.00	568.40	1.4	2.10
Coastal vegetated shingle, Lowland heathland	0.03	0.00	0.03	0.00	0.00			
Coastal vegetated shingle, Saline lagoons	2.82	0.01	2.82	0.01	0.00			
Deciduous woodland	3,149.12	7.10	2,746.56	6.77	14.66	2,555.98	6.31	23.21

	Post-2020/1 extension boundary	Pre-2020/1 extension boundary		2018 Management Plan figures				
Main habitats	**Area (ha)**	**% of AONB**	**Area (ha)**	**% of AONB**	**% change due to extension (using current data)**	**Area (ha) 2018**	**% of AONB 2018**	**% change due to extension and data since 2018**
Deciduous	0.10	0.00	0.10	0.00	0.00			
Good quality semi improved grassland	219.63	0.50	205.15	0.51	7.06	211.13	0.52	4.03
Lowland dry acid grassland	419.05	0.94	405.65	1.00	3.30	400.57	0.99	4.61
Lowland dry acid grassland,Lowland heathland	3.16	0.01	3.16	0.01	0.00			
Lowland fens	159.65	0.36	159.24	0.39	0.26	159.37	0.39	0.18
Lowland heathland	1,376.94	3.10	1,376.94	3.40	0.00	1,295.27	3.2	6.31
Lowland	0.18	0.00	0.18	0.00	0.00			
Lowland meadows	14.31	0.03	14.31	0.04	0.00	14.11	0.03	1.41
Maritime cliff and slope	42.16	0.10	42.16	0.10	0.00	49.72	0.12	-15.21
Mudflats	2,863.54	6.46	1,599.07	3.94	79.07	1,595.85	3.94	79.44
No main habitat but additional habitats present	2,614.68	5.90	2,533.42	6.25	3.21	2,630.50	6.49	-0.60
Purple moor grass and rush pastures	3.73	0.01	3.73	0.01	0.00	2.91	0.01	28.14
Reedbeds	362.71	0.82	358.15	0.88	1.27	354.54	0.87	2.30
Reedbeds, Coastal saltmarsh	49.44	0.11	43.34	0.11	14.07			
Saline lagoons	119.58	0.27	119.58	0.29	0.00	73.54	0.18	62.60
Traditional orchard	9.89	0.02	4.86	0.01	103.44	3.61	0.01	173.93
TOTAL	**16,480.18**	**37.16**	**14,583.17**	**35.96**	**13.01**	**14,253.48**	**35.16**	**15.62**

4. Wildlife designation (Source: SBIS 2023)

Note: There is considerable overlap between these designated areas. Totals were calculated by merging all data-sets into one area of Wildlife Designations.

	Post-2020 boundary extension		Pre-2020 boundary extension			2018 Management Plan Figures		
Wildlife Designation	**Area (ha)**	**% of AONB**	**Area (ha)**	**% of AONB**	**% change due to extension (using current data)**	**Area (ha) 2018**	**% of AONB 2018**	**% change due to extension and data since 2018**
County Wildlife Sites (CWS) (Suffolk)	2,377.59	5.36	2,272.80	5.60	4.61	4,800	11.84	-50.47
Local Wildlife Sites (LWS) (Essex)	43.57	0.10						
CWS/LoWS combined	2,421.16	5.46	2,272.80	5.60	6.53	4,800	11.84	-49.56
Special Area of Conservation (SAC)	4,087.88	9.22	4,087.88	10.08	0.00	4,087	10.08	0.02
Special Protection Area (SPA)	13,071.56	29.47	11,039.38	27.22	18.41	10,467	25.82	24.88
Ramsar	8,780.58	19.80	6,748.40	16.64	30.11	6,748	16.65	30.12
Site of Special Scientific Interest (SSSI)	13,727.35	30.95	11,487.44	28.32	19.50	11,487	28.34	19.50
Total of merged boundaries	16,321.74	36.80	13,933.48	34.36	17.14	13,814	34.08	18.15

5. Condition of SSSIs (Source: SBIS using SSSI Units, Natural England 2023)

	Post 2020 boundary extension			2018 Management Plan figures			
CONDITION	**Area (ha)**	**% of AONB**	**% of SSSI**	**Area (ha) 2018**	**% of AONB 2018**	**% of SSSI 2018**	**% change due to boundary extension and data since 2018**
Favourable	6,780.70	15.29	49.39	4,682.00	11.55	40.76	44.82
Unfavourable Recovering	5,208.47	11.74	37.94	5,241.00	12.93	45.63	-0.62
Unfavourable No Change	743.27	1.68	5.41	603.00	1.49	5.25	23.26
Unfavourable Declining	988.50	2.23	7.20	952.00	2.35	8.29	3.83
Part Destroyed	5.34	0.01	0.04	5.00	0.01	0.05	6.76
Destroyed	3.38	0.01	0.02	3.00	0.01	0.03	12.58
TOTAL SSSI	**13,729.66**	**30.96**	**100.00**	**11,487.00**	**28.34**	**100.00**	**19.52**

6. Public and voluntary sector ownership of nature reserves and forests (Source: SBIS)

N.B. There is considerable overlap between these areas. Totals were calculated by combining all datasets into one area of Ownership.

	Post 2020 boundary extension			2018 Management Plan figures			
Reserves/Forest	**Area (ha)**	**% of AONB**	**Number**	**Area (ha) 2018**	**% of AONB 2018**	**Number 2018**	**% change due to extension and data since 2018**
Local Nature Reserves	76.38	0.17	3	49.00	0.12	2	55.87
National Nature Reserves	1,960.69	4.42	4	2,284.00	5.63	4	-14.16
Suffolk Wildlife Trust	923.27	2.08	16	1,471.00	3.63	21	-37.23
Essex Wildlife Trust *	43.25	0.10	2				
RSPB	2,443.33	5.51	6	2,106.00	5.19	6	16.02
National Trust	895.04	2.02	4	895.00	2.21	4	0.00
Forestry Commission woodland	2,946.41	6.64	14	2,948.00	7.27	15	-0.05
Total of merged boundaries	7,917.12	17.85		8,120.00	20.03		-2.50



Wrabness © Gregg Brown

7. Agricultural Survey of Suffolk Coast & Heaths AONB (Source: Defra)

	2016	2021
Total holdings	163	142
Farm types		
Cereal	15	9
General Cropping	68	57
Horticulture	≤5	5
Specialist Pigs	16	24
Specialist Poultry	≤5	≤5
Dairy	0	≤5
Grazing Livestock (lowland)	46	36
Mixed	9	5
Other	≤5	≤5
Farm Size in hectares		
≤5	19	27
≥=5 and ≤20	40	20
≥=20 and ≤50	29	26
≥=50 and ≤100	22	17
≥=100	53	52
Land Use (area hectares)		
Total area	23,422	23,604
Rented land	5,358	4,665
Owned land	19,980	20,787
Crops and bare fallow	12,757	13,036
Temporary grass	672	973
Permanent grass	4,684	4,768
Rough grazing (sole right)	633	623
Woodland	2,481	2,852
Other land	2,195	1,352
Labour (number of people)		
Farmers full-time	113	126
Farmers part-time	138	138
Salaried managers full-time	31	36
Salaried managers part-time	17	8
Employees full-time	177	183
Employees part-time	54	63
Casual workers	169	62
Total labour	699	616

8. Land in agri-environment schemes (Source: Defra)

2019 is the most recent available data, and therefore does not take account of the extended AONB.

	2018 Area (Ha)	Number of agreements	% of AONB land area	2019 Area (ha)	Number of agreements
		2018	2018		2019
Entry level stewardship	1534	14	3.78	64	2
Organic Entry level + higher-level stewardship	664	2	1.64	375	1
Higher level stewardship	1097	17	2.71	1184	18
Entry level + higher level stewardship	12,223	65	30.15	12,061	64
Countryside Stewardship	288	16	0.71	3107.87	31
Environmental Stewardship	5551.5		13.69		



9. Water abstraction (Source: Environment Agency)

Water abstraction licences, summary (comparison between September 2018 and March 2023)

Table 1.

	Sept 2018		March 2023	
Source type	**Number of licences**	**Maximum annual authorised quantity (Megalitres)**	**Number of licences**	**Maximum annual authorised quantity (Megalitres)**
Groundwater	71	4812.159	76	6006.749
Surface water	87	7282.949	96	8747.383
Total	158	12095.108	172	14754.132

*Information provided for the current version of live licences (March 2023)
*Maximum annual authorised quantity is the quantity that can be abstracted under an individual licence within the authorised period of abstraction specified by the licence.
*The authorised quantity shown does not reflect conditions which may restrict abstraction and/or any 'licence to licence' aggregate quantity conditions
* The Environment Agency does not licence all abstraction activity (e.g. the Agency does not licence abstraction up to 20m3 /day).

Table 2.

	Number of licences	
Primary purpose of abstracted water: groundwater	**2018**	**2023**
Agriculture	61	64
Amenity	1	1
Industrial, Commercial and Public Services	9	8
Water supply	5	9
Primary purpose of abstracted water: surface water	**Number of licences**	
Agriculture	83	92
Environmental	2	3
Industrial, Commercial and Public Services	2	1
Water supply	2	2

* Information provided for the current version of live licences (March 2023)
*If a licence authorises abstraction of water for more than one purpose category it has been included in the count for each category. This means the total number of licences in table 2 is greater than table 1.
* The Environment Agency does not licence all abstraction activity (e.g. the Agency does not licence abstraction up to 20m3 /day).
Please refer to Open Government Licence which explains the permitted use of this information.

10. Estuarine and River Water Framework Directive Overall Status (Source: Environment Agency)

Estuary	Total Area (km2)	Classification item					
		Overall Water Body Status		Ecological Status		Chemical Status	
		2016	2019	2016	2019	2016	2019
Blyth	3	Moderate	Overall water body status not published in 2019 data	Moderate	Moderate	Good	Fail
Alde-Ore	11	Moderate		Moderate	Moderate	Good	Fail
Deben	8	Moderate		Moderate	Moderate	Good	Fail
Orwell	13	Moderate		Moderate	Moderate	Good	Fail
Stour	26	Moderate		Moderate	Moderate	Good	Fail

*2019 is the latest available data at time of 2023 AONB Management Plan Review

*Important note, for the 2019 assessment of chemical status EA have changed some methods and increased the evidence base. Due to these changes, all water bodies now fail chemical status and this assessment is not comparable to previous years assessments.

River	Total River Length	River Length in AONB (km)	WFD Overall Status		Ecological Status		Chemical Status	
			2016	2019	2016	2019	2016	2019
Lothingland Hundred	23	11	Moderate	WFD Overall Status not published in 2019 data	Moderate	Moderate	Good	Fail
Easton Broad	8	4	Moderate		Moderate	Moderate	Good	Fail
Wang	13	3	Moderate		Moderate	Moderate	Good	Fail
Blyth	6	2	Moderate		Moderate	Moderate	Good	Fail
Wenhaston Watercourse	7	1	Moderate		Moderate	Moderate	Good	Fail
Minsmere Old River	21	4	Moderate		Moderate	Moderate	Good	Fail
Leiston Beck	5	5	Moderate		Moderate	Moderate	Good	Fail
Hundred River	11	4	Moderate		Moderate	Moderate	Good	Fail
Butley	6	6	Good		Good	Good	Good	Fail
Tang	4	4	Poor		Poor	Poor	Good	Fail
Shottisham Mill River	5	5	Moderate		Moderate	Moderate	Good	Fail
Black Ditch Hollesley	4	4	Moderate		Moderate	Moderate	Good	Fail
Sutton Brook	15	8	-			Poor		Fail
Wrabness Brook	7	3	-		-	Good	-	Fail
Ramsey River	14	14	-		-	Moderate		Fail

The above refers to the Water Framework Directive classification of the rivers and estuaries in the Suffolk Coast & Heaths AONB. The Water Framework Directive requires the Environment Agency to consider a broad range of environmental quality elements in each water body and to assign these with a status. The classification categories are high, good, moderate, poor and bad with overall ecological status being determined by the worst scoring element. Full details of the classifications and the environmental factors monitored by the Environment Agency can be found at http://environment.data.gov.uk/catchment-planning/

11. Public rights of way, open access (Source: Suffolk County Council and Essex County Council)

	2018		2023	
	km	% of total	km	% of total
Footpaths	496.45	74.73	520.66	74.32
Bridleways	106.69	16.06	113.32	16.18
Restricted Byways	28.80	4.34	33.90	4.84
Byways	32.36	4.87	32.66	4.66
Total	**664.30**		**700.54**	

Open Access Land		
	Area (ha)	% of AONB
2012 (note data was absent in 2018)	4311	10.68
2023	4190	9.45

12. Economic impact of tourism (Source: Destination Research)

	% change						
	2017	2019	2020	2021	Pre-pandemic levels 2021 v 2019	Year on year comparison 2021 v 2020	Comparison with last Management Plan data 2021 v 2017
Day trips							
Day trips Volume	3,860,768	4,347,000	2,142,000	3,320,000	-24%	55%	-14%
Day trips Value	£84,496,075	£95,357,000	£45,810,000	£70,972,000	-26%	55%	-16%
Overnight trips							
Number of overnight trips	306,600	322,800	154,000	220,000	-32%	43%	-28%
Number of nights	1,267,000	1,366,000	673,000	915,000	-33%	36%	-28%
Overnight trip value	£78,933,000	£82,327,000	£38,403,000	£55,753,000	-32%	45%	-29%
Total Value	**£210,068,409**	**£228,351,595**	**£119,770,477**	**£167,763,204**	**-27%**	**40%**	**-20%**
Actual Jobs	4,655	5,056	3,807	3,997	-21%	5%	-14%

13. Heritage assets

Historic England Statutory Figures (Source: Historic England)

	2018	2022
Listed Buildings Grade 1, 2 & 2*	676	713
Scheduled Monuments	40	43
Registered Parks & Gardens	2	2

14. Heritage at risk (Source: Historic England)

	2017	2021	% of total heritage assets at risk by category 2021
Listed Buildings at risk	2	3	0.4%
Places of worship at risk	1	3	Not available
Scheduled monuments at risk	7	7	16.3%
Registered Parks & Gardens at risk	1	1	50%

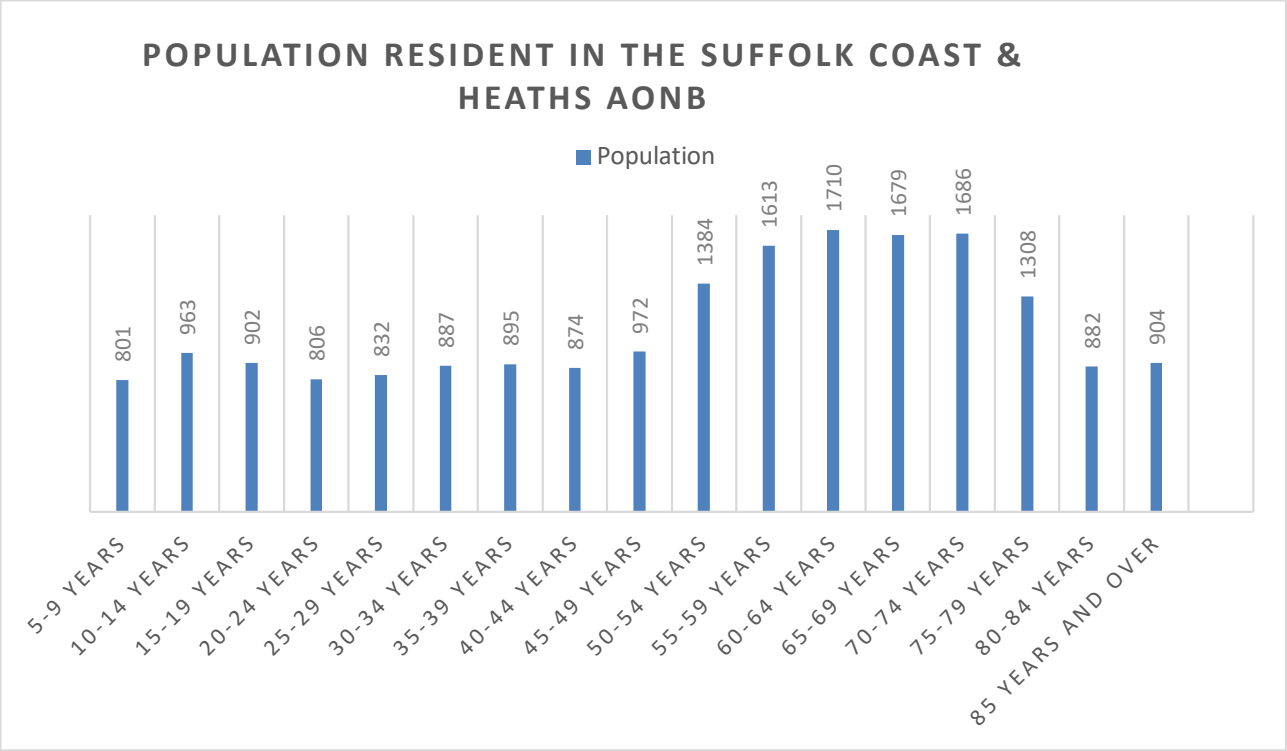
15. County GeoSites (Source: SBIS)

Further information available at www.geosuffolk.co.uk and www.geoessex.org.uk/tendring

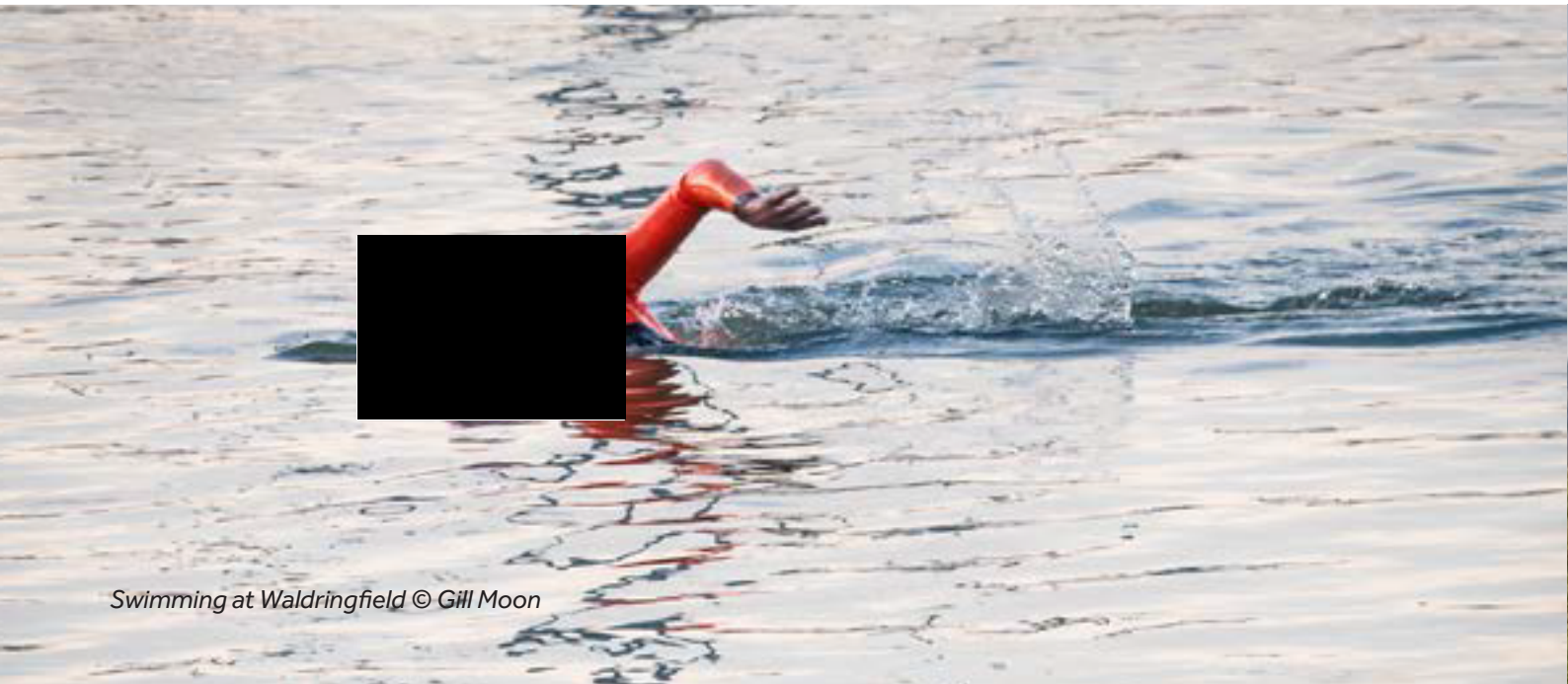
	2018			2023			
	Area (ha)	% of AONB	Number	Area (ha)	% of AONB	Number	% change due to extension of AONB and data changes since 2018
Suffolk Geodiversity Sites	21	0.05	17	27.82	0.06	17	32.48
Essex Local Geological Sites	-	-	-	7.43	0.02	1	-
Total	**21**	**0.05**	**17**	**32.25**	**0.08**	**18**	**67.86**

16. Population resident in the Suffolk Coast & Heaths AONB
(Source Office for National Statistics, Estimates for census 2021).

Total population 19,788. Chart below shows population by age group.



Supporting Maps:
These maps were produced by the University of East Anglia in 2021 for a commission on behalf of the Suffolk Coast & Heaths Partnership as part of a guide to the natural assets of the AONB.



Swimming at Waldringfield © Gill Moon

Appendix 3

Nationally Significant Infrastructure Projects impacting the AONB:

The AONB is subject to several proposals and planning approvals for Nationally Significant Infrastructure Projects that will have an impact on the AONB

As of November 2022, these nationally Significant Infrastructure Projects impacting the AONB included:

- Sizewell C (New nuclear) — Development Consent achieved
- East Anglia ONE (Offshore wind) — Operational
- East Anglia ONE North (Offshore wind) — Development Consent achieved
- East Anglia TWO (Offshore wind) — Development Consent achieved
- East Anglia THREE (Offshore wind) — Development Consent achieved
- Greater Gabbard (Offshore wind) — Operational
- Galloper (Offshore wind) — Operational
- Five Estuaries (Offshore wind) — Proposed
- North Falls (Offshore wind) — Proposed
- SeaLink (Electricity connection) — Proposed
- Nautilus (Electricity connection) — Proposed
- LionLink (Electricity connection) — Proposed

These projects will have a variety of impacts on the AONB. Impacts will be felt across all of the designating qualities: Landscape quality, Scenic quality, Relative wildness, Relative tranquillity, Natural heritage features and Cultural heritage.

Construction, operation and decommissioning periods for the Nationally Significant Infrastructure Projects vary but will be measured in years. There will be cumulative impacts on the AONB from the multiple Nationally Significant Infrastructure Projects as construction, operational and decommissioning phases will overlap.

Promoters of schemes currently proposed, consented, in construction or operational have acknowledged impacts on the nationally designated AONB. National Policy Statements, Local Plans, Policy and Guidance seek to ensure that impacts on the AONB are avoided, minimised, mitigated for and compensated for.

The AONB Partnership provide advice on how to reduce negative impacts on the AONB by engaging in consultation and planning processes. The Partnership is well placed to advise on the best use of any compensation and mitigation funds provided to offset impacts on the AONB.



Sizewell © Gill Moon

Appendix 4

Partnership members as of September 2023:

- Babergh District Council
- Community Action Suffolk
- Country Land and Business Association (CLA)
- The Crown Estate
- East Suffolk Council
- Environment Agency
- Essex County Council
- Essex and Suffolk Rivers Trust
- Forestry England
- Historic England
- Ipswich Borough Council
- Marine Management Organisation (MMO)
- National Farmers' Union (NFU)
- National Trust
- Natural England
- RSPB
- Suffolk Association of Local Councils (SALC)
- Suffolk Coast Acting for Resilience (SCAR)
- The Suffolk Coast Ltd
- Suffolk County Council
- Suffolk Farming & Wildlife Advisory Group
- Suffolk Preservation Society
- Suffolk Wildlife Trust
- Tendring District Council
- WildEast



Ambling African Women at Snape © Ben Heather



Tunstall © Gill Moon



Waldringfield © Gill Moon

Suffolk County Council



North Falls

Local Impact Report Appendix H:

The Suffolk Coast and Heaths AONB – Natural Beauty and Special Qualities Indicators

LDĀDESIGN

Suffolk Coast and Heaths Area of Outstanding Natural Beauty (AONB)

Natural Beauty and Special Qualities Indicators

V1.8

Version Date: 21 November 2016

1.0 Introduction

Discussions have been held between the Suffolk Coast and Heaths AONB Partnership, Suffolk County Council, Suffolk Coastal District Council and EDF Energy with the purpose of establishing what constitutes the natural beauty and special qualities of the Suffolk Coast and Heaths AONB.

The findings of these discussions are contained in the following tables. The Natural Beauty and Special Qualities Indicators described cover the whole of the AONB, and not just the Sizewell site and its immediate hinterland.

This document sets out the Natural Beauty and Special Qualities of the Suffolk Coast and Heaths Area of Outstanding Natural Beauty (AONB). The document has been developed by EDF Energy, as part of their preparatory work for the proposed Sizewell project in consultation and agreement with the AONB Partnership, Suffolk Coastal District Council and Suffolk County Council.

It follows a rigorous criteria based approach, building on the existing Natural England process for the designation of protected landscapes. It forms an important part of the baseline to help inform the design of the proposed development and against which to judge the effects of the proposed development on the protected landscape and its special qualities, but clearly will be of significant wider benefit to the AONB Partnership in articulating what is characteristic and special about this nationally important landscape including its relationship to adjacent offshore areas.

2.0 Natural Beauty Indicators

The Natural Beauty Indicators for the Suffolk Coast and Heaths AONB presented below are structured to follow Natural England's guidance for assessing landscapes for designation as National Park or Area of Outstanding Natural Beauty in England[i]:

Factor	Example Sub-Factor	Example Indicator	Suffolk Coast and Heaths AONB Indicator
Landscape quality	Intactness of the landscape in visual, functional and ecological perspectives	Characteristic natural and man-made elements are well represented throughout	Close-knit interrelationship of semi-natural and cultural landscapes (notably sea, coast, estuaries, reedbeds, Sandlings heath, forest, farmland and market towns) and built heritage features (such as Martello towers, pill boxes, river walls), creating a juxtaposition of elements in a relatively small area. The AONB contains important areas of heath and acid grassland, and it supports a high number of protected species populations. As such it has importance in a national context for biodiversity.
	The condition of the landscape's features and elements	Landscape elements are in good condition	Strong overall character, albeit that the evolving nature of intensively farmed arable land with agricultural fleece/polythene and outdoor pig rearing can divide opinion on landscape condition in visually sensitive locations such as on valley sides.
	The influence of incongruous features or elements (whether man-made or natural) on the perceived natural beauty of the area	Incongruous elements are not present to a significant degree, are not visually intrusive, have only localised influence or are temporary in nature	A small number of large scale and long established elements on the coast of the AONB divide opinion, being regarded by some as incongruous features and by others as enigmatic; for example the complex military site at Orford Ness. The power stations at Sizewell also divide opinion in this way, however in many views, particularly of the B station, the apparent uncluttered simple appearance and outline as well as the lack of visible human activity, partially mitigate the adverse visual impacts. Offshore wind turbines at Greater Gabbard, Galloper and the more distant London Array are visible from some stretches of the coastline. These create a cluttered horizon and, like the large scale elements onshore, also divide opinion.
Scenic quality	A distinctive sense of place	Landscape character lends a clear and recognisable sense of place	Unique character defined by semi-natural and cultural landscapes (notably sea, coast, estuaries, reedbeds, Sandlings heath, forest, farmland and villages) and built heritage features (such as Martello towers, pill boxes, river walls), creating a juxtaposition elements in a relatively small area.
	Striking landform	Landform shows a strong sense of scale or contrast	Sea cliffs and shingle beaches contrasting to flat and gently rolling Sandlings heaths and farmland. Extensive shingle beaches and shallow bays provide opportunities for long distance and panoramic views including out to sea and along the Heritage Coast. Views to coastal landform also possible from locations offshore.

			Landscape displays a 'rhythm' dictated by a series of east-west rivers and estuaries, and the interfluves that lie between them.
		There are striking landform types or coastal configurations	Coastal cliffs, shingle spits, estuaries and beaches are striking landform features.
	Visual interest in patterns of land cover	Land cover and vegetation types form an appealing pattern or composition in relation to each other and/or to landform which may be appreciated from either a vantage point or as one travels through a landscape	Varied habitats and land cover in intricate mosaic corresponding to natural geography (landform, geology, soils & climate) and displaying seasonal differences, either as a result of natural processes or past and current farming and land management regimes. Elevated vantage points provide impressive views over low lying coastal marshes, estuaries,beaches and expansive long distance views out to sea. Views to the coastline from out at sea are also noted.
	Appeal to the senses	Strong aesthetic qualities, reflecting factors such as scale and form, degree of openness or enclosure, colours and textures, simplicity or diversity, and ephemeral or seasonal interest	Close-knit interrelationship of constituent features creates a juxtaposition of colours and textures (such as coniferous forests, reedbeds, intertidal mud flats and heathland, sand dunes and shingle beaches) that is further enhanced by seasonal changes. Strong aesthetic, spatial and emotional experiences - for example in the contrast between open and exposed areas on the coast, seaward or within estuaries with more traditional enclosed farmland areas.
		Memorable or unusual views and eye-catching features or landmarks	Large open vistas across heaths and along the coast, out to sea and from sea to the coastline. Landmarks include historic structures such as medieval churches, Martello towers and lighthouses, the House in the Clouds (Thorpeness) and Snape Maltings, the riverside at Woodbridge with iconic Tide Mill, along with more modern structures including Sizewell A and B and former military site at Orford Ness.
		Characteristic cognitive and sensory stimuli (e.g. sounds, quality of light, characteristic smells, characteristics of the weather)	Sensory stimuli enhanced by quality of light/space (the big 'Suffolk skies'), areas with dark skies and sound (e.g. bird calls, curlews on heath and geese on estuaries, the wind through reeds in estuaries, waves on shingle).

Relative wildness	A sense of remoteness	Relatively few roads or other transport routes	Absence of major coastal road or rail route, due to estuaries, and intermittent 'soft edged', often lightly trafficked access routes across the AONB to the coastline from main routes inland, has contributed to the relatively undeveloped character of the Suffolk coast.
		Distant from or perceived as distant from significant habitation	Pockets of relative wildness associated with coast, estuary and forests in this largely farmed and settled landscape.
	A relative lack of human influence	Extensive areas of semi-natural vegetation	Semi-natural habitats evident, notably on the Sandlings heaths, marshes, reedbeds, estuaries and along the coastline.
		Uninterrupted tracts of land with few built features and no overt industrial or urban influences	Largely undeveloped coastline and offshore areas and areas of semi-natural habitat including Sandlings heath, forests, reedbeds, estuaries and marshland. Landscape interspersed with isolated villages, and built heritage assets such as Martello towers, pill boxes, river walls that contribute to character. A small number of large scale and industrial elements on the coast of the AONB are long established, notably Sizewell A and B and the former military site at Orford Ness, whilst offshore wind turbines at Greater Gabbard, Galloper and the more distant London Array are visible from stretches of the coastline.
	A sense of openness and exposure	Open, exposed to the elements and expansive in character	Big 'Suffolk skies' and expansive views offshore emphasise sense of openness and exposure on open and exposed coastline and on the Sandlings heaths.
	A sense of enclosure and isolation	Sense of enclosure provided by (e.g.) woodland, landform that offers a feeling of isolation	Forestry plantations create sense of enclosure and isolation contrasting to open and more exposed areas along the coast and on the Sandlings heaths.
	A sense of the passing of time and a return to nature	Absence or apparent absence of active human intervention	Significant areas of semi natural landscape and seascape notably along the coastline, offshore and within undeveloped estuaries where there is little evidence of apparent human activity despite the sea walls and coastal marshes.
Relative tranquillity	Contributors to tranquillity	Presence and / or perceptions of natural landscape, birdsong, peace and quiet, natural –looking woodland, stars	Areas of semi natural habitat, where there is a general absence of development and apparent human activity, contribute to a sense of relative tranquillity. Further enhanced by sounds (bird calls, the wind through reeds in estuaries, waves on shingle) and relatively dark skies.

		at night, stream, sea, natural sounds and similar influences	
	Detractors from tranquillity	Presence and/or perceptions of traffic noise, large numbers of people, urban development, overhead light pollution, low flying aircraft, power lines and similar influences	Some local detractors from tranquillity include the seasonal influx of visitors to coastal towns, low flying aircraft noise and urban development on fringes of the AONB.
Natural heritage features	Geological and geo-morphological features	Visible expression of geology in distinctive sense of place and other aspects of scenic quality	Boundary of the AONB is broadly geological marking the border between the inland boulder clay and the coastal fringe. Visible and striking expressions of geology and sedimentation on faces of crumbling coastal cliffs. Use of flint, local crag and Aldeburgh brick for building are indicators of local geology.
		Presence of striking or memorable geo-morphological features	Low crumbling cliffs and steep banks of pebbles on shingle beaches contribute to a landscape of constant change. Striking and memorable geomorphological features include the vast cuspate foreland shingle spit of Orford Ness and river estuaries such as the estuary of the River Alde.
	Wildlife and habitats	Presence of wildlife and / or habitats that make a particular contribution to distinctive sense of place and other aspects of scenic quality	Varied, nationally and internationally protected sites such as SSSI, SPA and SAC, semi natural habitats designated for their nature conservation interest and range of species supported (including shingle beaches, intertidal and offshore areas, reedbeds, grazing marshes and Sandlings heaths). Intricate mosaic, highly dynamic and sensitive regimes (due to periodic flooding) along with rapid transitions add to biodiversity interest, distinctive landscape character and scenic quality.
		Presence of individual species that contribute to sense of place, relative wildness or tranquillity	Varied protected species across major habitat types, for example breeding and wading birds in estuaries and reedbeds; rare communities of salt tolerant plants on the coast; and birds and invertebrates on the Sandlings heaths.
Cultural heritage	Built environment, archaeology and designed landscapes	Presence of settlements, buildings or other structures that make a	Villages and small towns, particularly at 'end of the road' coastal and estuary locations, such as Pin Mill, Ramsolt and Walberswick and built heritage assets such as military structures (e.g. Martello towers, castle at Orford and pillboxes); Low Countries influence on

		particular contribution to distinctive sense of place and other aspects of scenic quality	architecture (as at Aldeburgh); and use of soft hued red brick and pink render with thatch or pantiles contribute to sense of place.
		Presence of visible archaeological remains, parkland or designed landscapes that provide striking features in the landscape	Archaeological and historic sites and features include prehistoric and later burial monuments (including the Anglo-Saxon burial ground at Sutton Hoo); early medieval churches (many of which pre-date the Domesday survey); historic field and settlement patterns; and evidence of land reclamation dating back to the 12th century. Distinctive vernacular use of flint, clunch and brick. Designed landscapes are important notably along southern estuaries and in the northern part of the AONB, including Thorpeness Model Village.
	Historic influence on the landscape	Visible presence of historic landscape types or specific landscape elements or features that provide evidence of time depth or historic influence on the landscape	Field patterns reflect process of land management and enclosure stretching back many centuries. Evidence of reclamation of former intertidal areas to form freshwater grazing marsh dating back to the 12th century. Prehistoric and later burial monuments (such as at Sutton Hoo), early medieval churches/religious houses and castles. There is also more recent military and infrastructure elements particularly on the coast (e.g. Martello towers, former military installations at Orford Ness), WWII airfields, radar installations and pillboxes that form part of the long history of *"Suffolk's Defended Shore"*. More latterly the Sizewell nuclear complex highlights evidence of time depth across the landscape. Both the nuclear complex and the nearby infrastructure associated with offshore energy generation are part of a developing story of the Suffolk's Energy Coast. There are often strong associations between these features and areas of more remote coastal landscape character. Some of the military structures by reason of their scale, design, and cultural importance have now become an accepted part of the landscape, such as the Martello towers or the pagodas. Whereas other infrastructure, such as electricity pylons and the power stations are still cited by some as visual detractors in the landscape, despite the test of time.
		Perceptions of a harmonious balance between natural and cultural elements in the landscape	Rural landscape and smaller settlements (notably using vernacular building materials) display a harmonious balance between natural and cultural elements in the landscape, some of which date back several hundreds of years. Association between reedbeds and thatched roofs and local crag and flint where used as building materials.

		that stretch back over time	History of river use with Thames barges indicating links to past maritime heritage, and contemporary recreational use of the estuaries and coast, with many boatyards and in-river moorings.
	Characteristic land management practices	Existence of characteristic land management practices, industries or crafts which contribute to natural beauty	Landscape character and diversity of habitat types dependent on wide range of land management practices, several of which date back many centuries. Examples include pasturing; grazing on coastal marshes; forestry; extensive grazing to maintain heathland; reed cutting; and ditch/marshland and hydrological management. Small scale fishing industry results in boats, nets, pots and storage buildings on some stretches of coastline.
	Associations with written descriptions	Availability of descriptions of the landscape in notable literature, topographical writings or guide books, or significant literature inspired by the landscape.	Associations with numerous writers including George Crabbe, (e.g. the poem 'The Borough', 1810), P.D. James and Arthur Ransome.
	Associations with artistic representations	Depiction of the landscape in art, other art forms such as photography or film, through language or folklore, or in inspiring related music	Landscape,towns, coastal areas and the sea captured in, or formed the inspiration for, the works of various artists and composers including J.M.W. Turner (e.g. 'Aldborough, Suffolk' c.1826) and Benjamin Britten (e.g. the opera 'Peter Grimes' c.1945). Annual arts and music festival established in 1948, by Benjamin Britten along with singer Peter Pears and writer Eric Crozier.
	Associations of the landscape with people, places or events	Evidence that the landscape has associations with notable people or events, cultural traditions or beliefs	Wide range of 'stories' describing historical events or activities relate to the landscape and features within the landscape, including stories related to smuggling; the creation of Minsmere; and the loss of Dunwich to the sea. More recent stories include the discovery of the Sutton Hoo ship burial in 1939, the 1953 flood, and experimental projects; Cobra Mist at Orford Ness and Radar at Bawdsey Manor.

3.0 Special Qualities Indicators

In addition to the Natural Beauty Indicators the following Special Qualities Indicators for the Suffolk Coast and Heaths AONB are considered relevant:

Factor	Example Sub-Factor	Example Indicator	Suffolk Coast and Heaths AONB Indicator
Health and Well-being	Access along defined routes for walking and cycling	Presence of network of local and strategic access routes	Extensive rights of way network (including promoted and long distance routes), offering access to key landscape types (such as coast, Sandlings heath, forest, wetlands and estuaries) and between centres of population and key tourist destinations.
	Open access to areas of semi natural landscape	Presence of designated areas for open access	Areas designated as open access land, including extensive nature reserves, notably on heathland, along the coast and within woodland/forest provide opportunities for health improvement.
	Opportunities for active and passive recreation	Presence of range of facilities and opportunities for diverse recreational pursuits	Opportunities for a range of active and passive recreational pursuits on the coast and offshore and inland including rambling, boating, bird-watching and fishing at sea and in the estuaries and rivers. In addition, many sporting events held in the landscape, such as the Heritage Coast Run and Suffolk Coast Cycle route.
Community	Relationship between people and place	Evidence that communities have a long established connection to the places in which they live and work	Strong sense of local and family heritage (including dialect), and evidence of long established connections to the landscape – such as fishermen and larger estates.
		Evidence that communities have a close relationship to their surroundings	Active commoners, farmers and artistic community demonstrate strong links between communities and their landscape. Increasing number of community-led initiatives, particularly on the coast and estuaries.
		Evidence of a local food culture	Opportunities to 'taste' the landscape with great significance placed on local food and drink (e.g. Adnams Brewery, local smokeries and oysterages and annual food and drink festival held in Aldeburgh).

Economy	Landscape, community and economy closely intertwined	Evidence that the landscape and community forms an important part of the local economy	The landscape is an important contributor to the local economy. The coast in particular is a major tourist destination. Other notable contributors to the local economy are recreational sailing (with associated boatyards and moorings), farming, energy generation at Sizewell and attractions/events in and close to the AONB such as Minsmere RSPB Reserve, Snape Maltings, Latitude Festival and Aldeburgh Festival.
		Evidence of Community conservation schemes through which funding for grass-roots community and conservation projects within the AONB is secured.	Local visitor payback scheme, currently called 'AONB Community and Conservation Fund', into which tourism businesses contribute 'visitor payback funds' which are then used to support grass roots conservation, access and education projects.
		Evidence of clearly defined 'brand' that is underpinned by the local landscape	Active promotion of the Suffolk Coast as a tourist destination founded on the special qualities of the area and more specifically as part of branding associated with local products (e.g. Adnams) and the 'energy coast'.
Ecosystem Goods and Services	Landscape delivers broad range of ecosystem goods and services	Evidence that the landscape performs a diverse range ecosystem services	One of the most significant ecosystems in lowland UK containing several broad habitat types which perform a wide range of ecosystem goods and services under the three broad categories of 'provisioning', 'cultural' and 'regulating'[ii] (e.g. regulating climate, carbon storage, water storage, flood defence, flood prevention and climate change adaptation through linked habitats).

4.0 References

[i] Natural England (2011) Guidance for Assessing Landscapes for Designation as National Park or Area of Outstanding Natural Beauty in England

[ii] UK National Ecosystem Assessment (2011) The UK National Ecosystem Assessment: Synthesis of the Key Findings. UNEP-WCMC, Cambridge.

Version: 1.8
Version Date: 21 November 2016

Note: Version agreed between EDF Energy, Suffolk Coast and Heaths AONB Partnership, Suffolk County Council, Suffolk Coastal District Council and Waveney District Council.

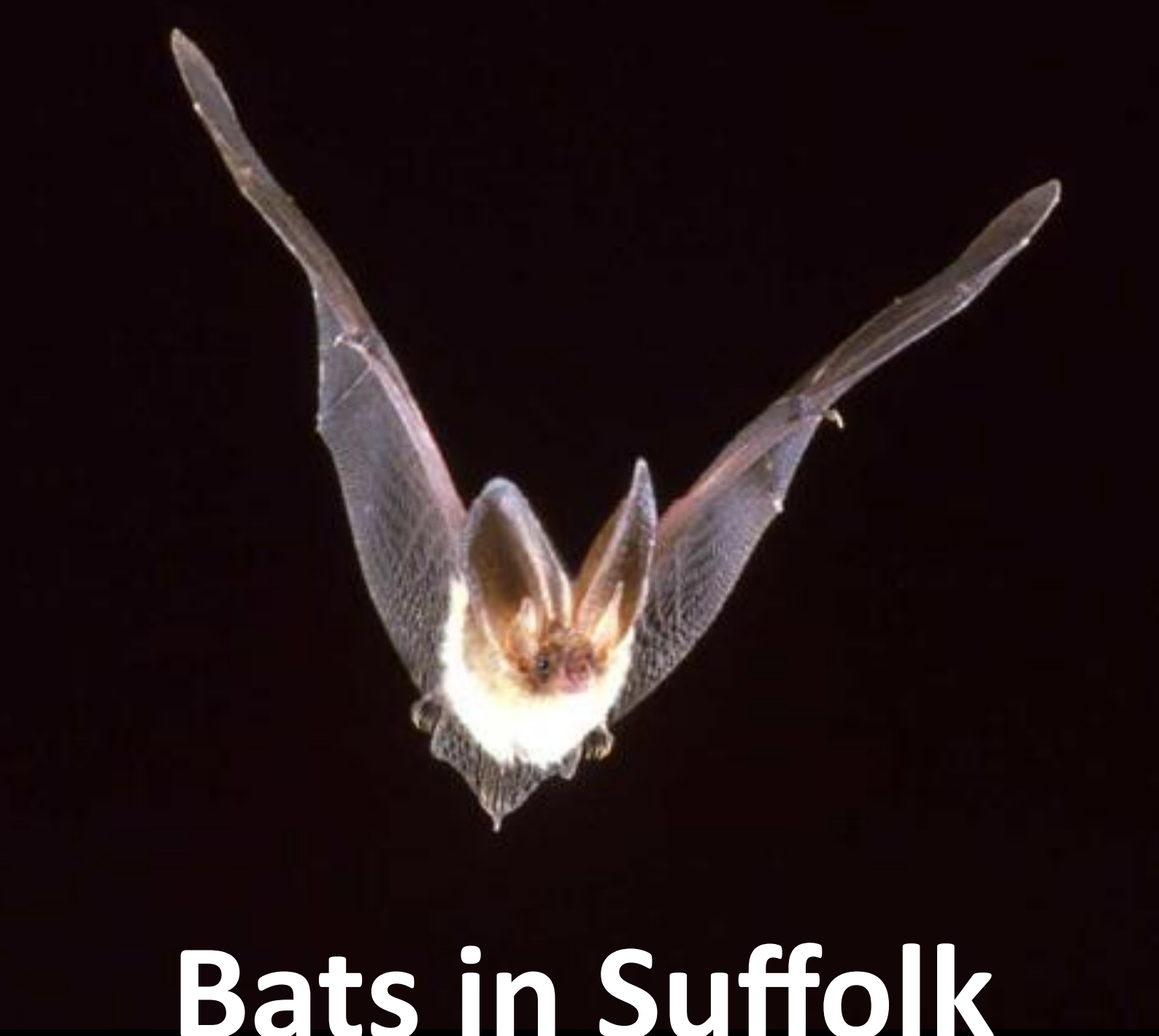
Suffolk County Council



North Falls

Local Impact Report Appendix I:

Bats in Suffolk Distribution Atlas 1983 - 2016



Bats in Suffolk

Distribution Atlas
1983-2016

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Editor: Sue Hooton

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Cover: Brown Long-eared Bat © Tony Tilford / Aurum Ecology

Introduction

The Suffolk Bat Group was formed in 1983 to record, research and conserve the county's bats.

The main source of records for the first fifteen years was from licenced members carrying out building surveys for English Nature (now Natural England). These early records are entirely random as they were all in response to requests from householders and developers asking for advice in various forms as a result of bats becoming fully protected under the 1981 Wildlife & Countryside Act.

By the late 1990s, bat detectors were becoming more frequently used by both group members and other interested naturalists. However records from this method were not considered to be sufficiently accurate to species level for submission to the Suffolk Biological Records Centre (now Suffolk Biodiversity Information Service).

By 2000, computer software had been developed by which the sounds on the detectors could be recorded digitally and then analysed using programmes such as Bat Sound and Batscan. The sounds are converted into spectrograms and the various species display varying images enabling a positive identification to be made for most bats.

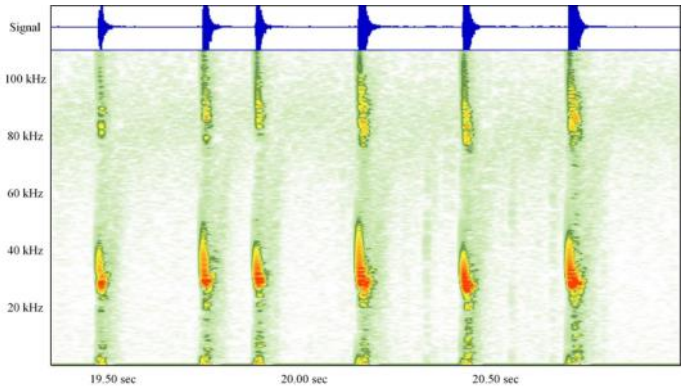
This transformed bat surveying and, although still not quite as instant as watching birds through binoculars for identification, an evening of recording can be quickly downloaded and the spectrograms viewed and compared with known images, enabling the species encountered to be positively recorded.

Since the last atlas in 2012, the lower prices and therefore the availability of static detectors has meant that they are no longer only available to consultants on expensive contracts. The group now owns two units and the British Trust for Ornithology (BTO) based Norfolk Bat Project has made units available on loan to a number of individuals in Suffolk. The static units are left at sites for several days and record all bat activity over the period, greatly increasing the number of records and therefore eliminating surveyor fatigue and periods of poor weather. The down side of this technology is the sheer volume of data that is gathered meaning several hours are spent using computer programmes such as Analook to analyse the data.

All this means that bats can be identified without having them in the hand which requires a licence and so opens bat surveying to many more people.



Above: Sue Hooton and Arthur Rivett recording bats © Arthur Rivett



Right: The spectrogram for a serotine bat at 27 Khz using Bat Scan

From 2000 Suffolk Bat Group has purposely selected various areas around the county to carry out organised bat detector surveys. The main driver has been to investigate the distribution of Barbastelle bats across Suffolk. Barbastelle bats are rare in a European context and, up until the mid-1990s, East Anglia was thought to be the UK's stronghold and so this was an obvious species to concentrate on.

Prior to using detectors combined with software, most records of this species were from known hibernation sites which are themselves limited in number. However, this species is relatively easy to identify from detector recordings and by choosing suitable habitat, the records of this species and many others have increased greatly.

The following maps have been split into pre- and post-2012 for comparison. It is probably fair to say that most records today are from detector surveys run either by Suffolk Bat Group, Bat Conservation Trust, BTO or consultants. In Suffolk, we now have more licensed bat workers than at any time in the group's history, but the number of visits requested by Natural England is much less than in former times.

Bats' protected status means they are routinely surveyed for planning developments, not just for houses and building conversions, but also for wind farms, power stations and other large infrastructure projects.



Volunteers undertaking a bat emergence survey at Elveden church
© Sue Hooton



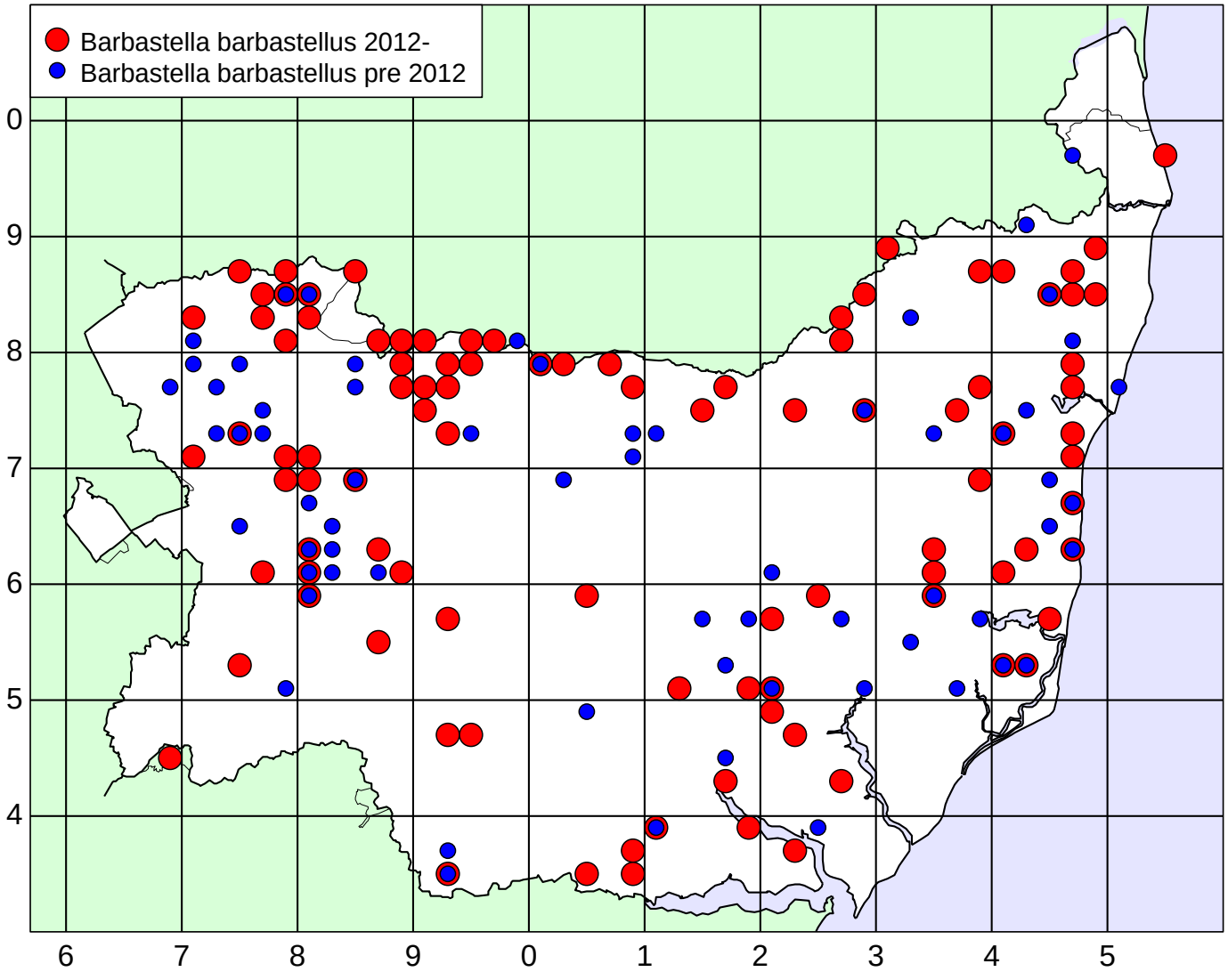
Dennis Kell, a volunteer, fitting a bat box
© Arthur Rivett

Barbastelle Bat *Barbastella barbastellus*

The Barbastelle is one of Britain's rarest bats and is currently listed as endangered or vulnerable in most European countries. The first known breeding colony was discovered in 1996 in Norfolk and in the last few years, only four other colonies have been discovered in Britain. The species has a restricted distribution, the majority of records being confined to England north to Yorkshire and Wales, with only a few animals discovered each year. It was one of the UK Biodiversity Action Plan species with its own Species Action plan aimed at improving its conservation status. The Barbastelle is listed in Annexes II of the EC Habitats & Species Directive and the Bonn and Bern Conventions. It is also included in s41 Natural Environment and Rural Communities Act 2006 list of Priority species.



Barbastelle bat hibernating © Arthur Rivett



Most of the Suffolk records prior to 2004 relate to single animals in hibernation except for six animals discovered in January 2002, hibernating in a purpose-built site.

The majority of the records in the west of the county pre-2004 relate to hibernating animals. Barbastelles are remarkably tolerant of cold weather and have been noted as usually entering hibernacula only when the temperatures drop well below freezing for long periods.

The advances in bat detectors, particularly when used in conjunction with computer sound analysis, has enabled Suffolk Bat Group to survey a large number of potential new sites with initial help from Norfolk Bat Group. Ancient woodland and parkland have been the initial target habitat and Barbastelles have been found on every occasion. Breeding colonies have been located through radio tracking for proposed development, but as a tree dwelling species that favours old trees with lifting bark, this habitat, and therefore the location of colonies, changes every year.



An old tree with peeling bark in Hintlesham Hall woods, suitable roosting habitat for Barbastelle bats © Arthur Rivett

Between 2000 and 2012, records increased from 15 locations to 64; a massive increase and, since 2012, a further 74 locations have been confirmed. However, this does not mean they are more common, it is just that we are better at finding them. The map does now suggest they are widespread across the county in suitable habitat, but in very small numbers.



Good Barbastelle bat habitat - broad-leaved woodland with lots of trees with crevices for roosts and dense areas for foraging © Arthur Rivett

Serotine Bat *Eptesicus serotinus*

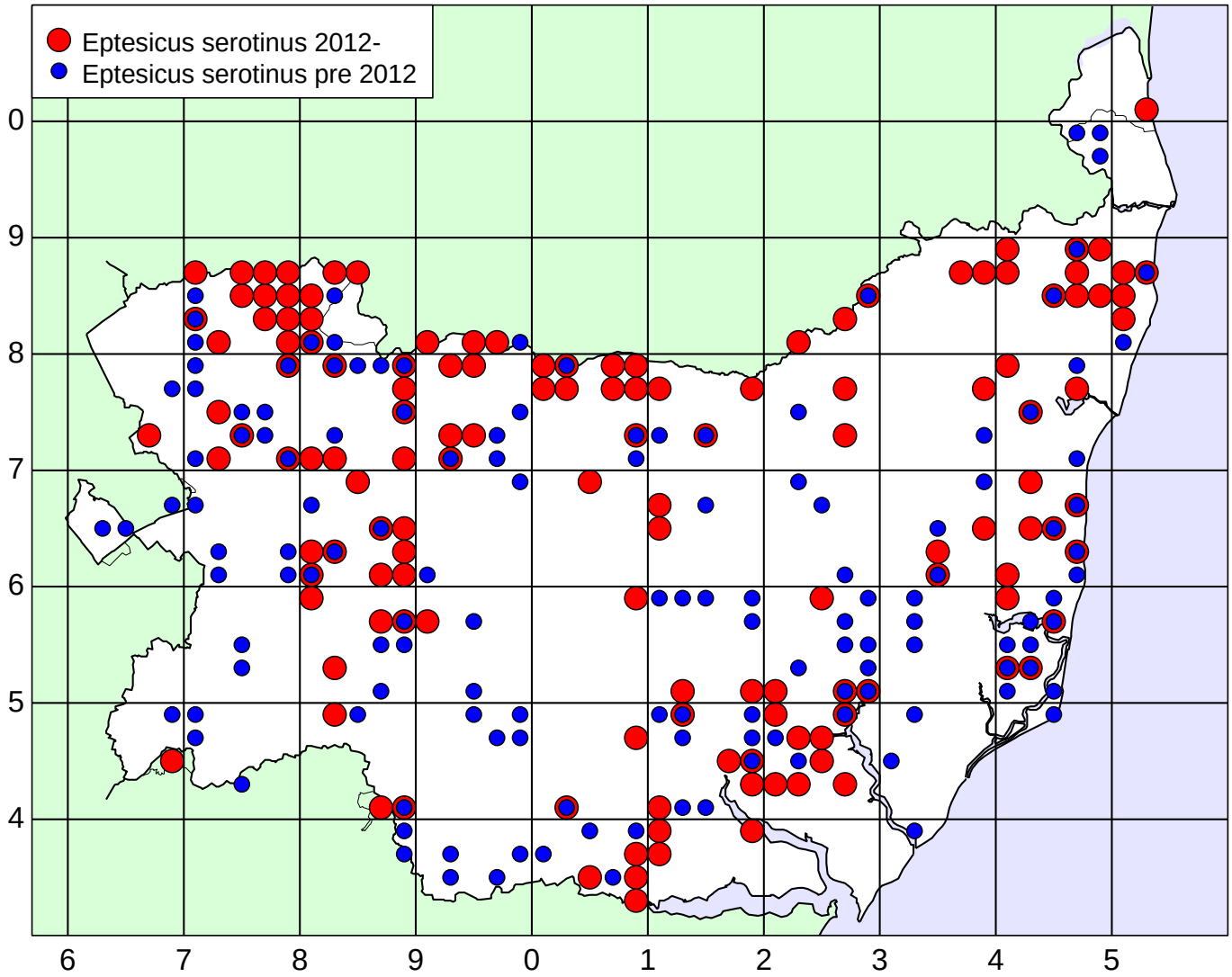
The UK range of this large bat, with a wingspan of approximately 30cm, is confined to the south and south-eastern counties, with few records north of a line between the Severn and the Wash. There are few Norfolk records, making Suffolk the northern breeding limit of this species.

The Serotine has a large, distinctive shaped dropping which has enabled the identification of many roosts as the animals, being crevice dwellers, tend to secrete themselves out of sight under tiles and roof timbers.

In 1985. only one colony of Serotines was known to exist in the county. Since then the species has been found to be widespread, albeit in small colonies. There are now some 45 known colonies, discovered by members of Suffolk Bat Group and by Robert Stebbings and Mark Robinson in their survey of Serotines on the Suffolk/Cambridgeshire border. By 2012 these bats were known from 136 locations and a further 99 locations added by the end of 2016.

All records relate to summer nursery colonies and detector records. Very few Serotines are recorded in hibernation and it is thought that most of them hibernate within buildings, in cavity walls or cracks in timber. Most nursery roosts are in either older houses with large roof voids or churches, often sharing the building with other species.

Because of the species' association with pasture, the current decline in livestock farming could have a significant influence on the survival of this bat in the eastern counties.





Serotine bat © Kevin Simmonds / Aurum Ecology



Grazed Breckland heath provides habitat for chafers and dung beetles, prey for Serotine bats © Arthur Rivett

Myotis Bat Species

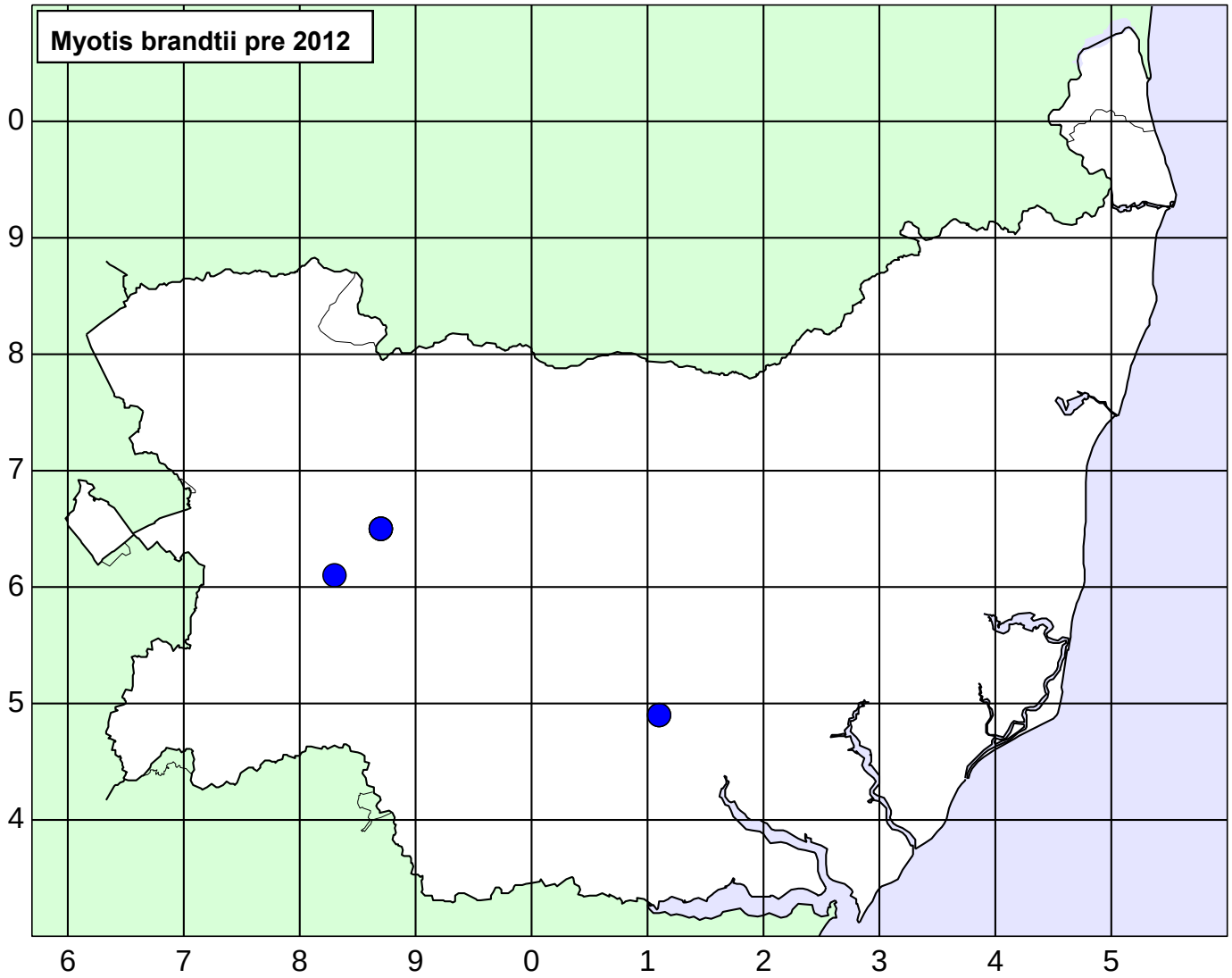
The Myotis group of bats consist of Natterer's, Daubenton's, Whiskered and Brandt's bats. While these species can be separated in the hand, their calls cannot currently be easily separated using detectors and software. Therefore, most detector records are recorded just as Myotis unless there are other field signs i.e. Daubenton's feeding over water or a good visual sighting in flight of Natterer's in suitable habitat.

Brandt's bat *Myotis brandtii*

The Brandt's bat was not distinguished from the Whiskered bat in Europe until 1971. It was recorded in Suffolk in the same year. The smallest of our *Myotis* species, Brandt's bats are scarce nationally with very few records for East Anglia. The only Suffolk records have been from animals in hibernation and none have been recorded since 2000.



Brandt's bat © Kevin Simmonds / Aurum Ecology



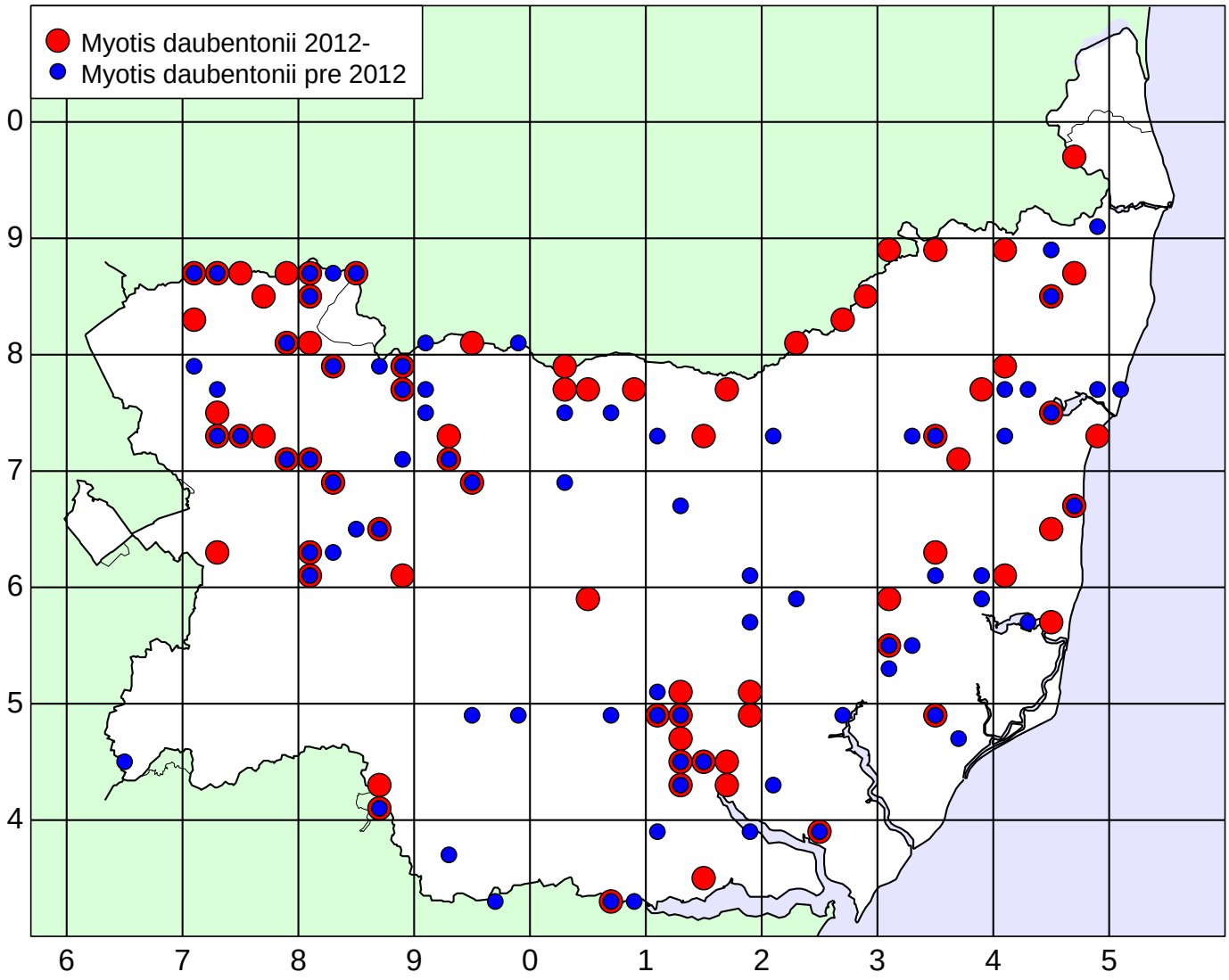
Daubenton's bat *Myotis daubentonii*

Nationally Daubenton's bat is regarded as widespread and records for Suffolk suggest it has a wide distribution, but is far from common in the county. Pre-2000 the vast majority of records relate to animals found in hibernation.

To date, only one regular nursery roost has been recorded in the county which at one time held over 400 animals, making it one of the largest breeding colonies in the UK. However, this is the most abundant species to be found in all the regular hibernacula with some sites holding several hundred animals. Counts at the larger sites over recent years indicate a relatively stable population. Since 2012 a total of 42 additional locations have yielded this species and its presence has been added to four more 10km squares.



Daubenton's bats hibernating © Arthur Rivett







Above: Daubenton's bat flying over water
© Kevin Durose / Bat Conservation Trust

Left: Daubenton's bat hibernating. Note the large feet used for trawling for insects when feeding over still water
© Sue Hooton



Good feeding habitat for Daubenton's bats - lakes and other waterways contain prey such as aquatic insects
© Arthur Rivett

Whiskered Bat *Myotis mystacinus*

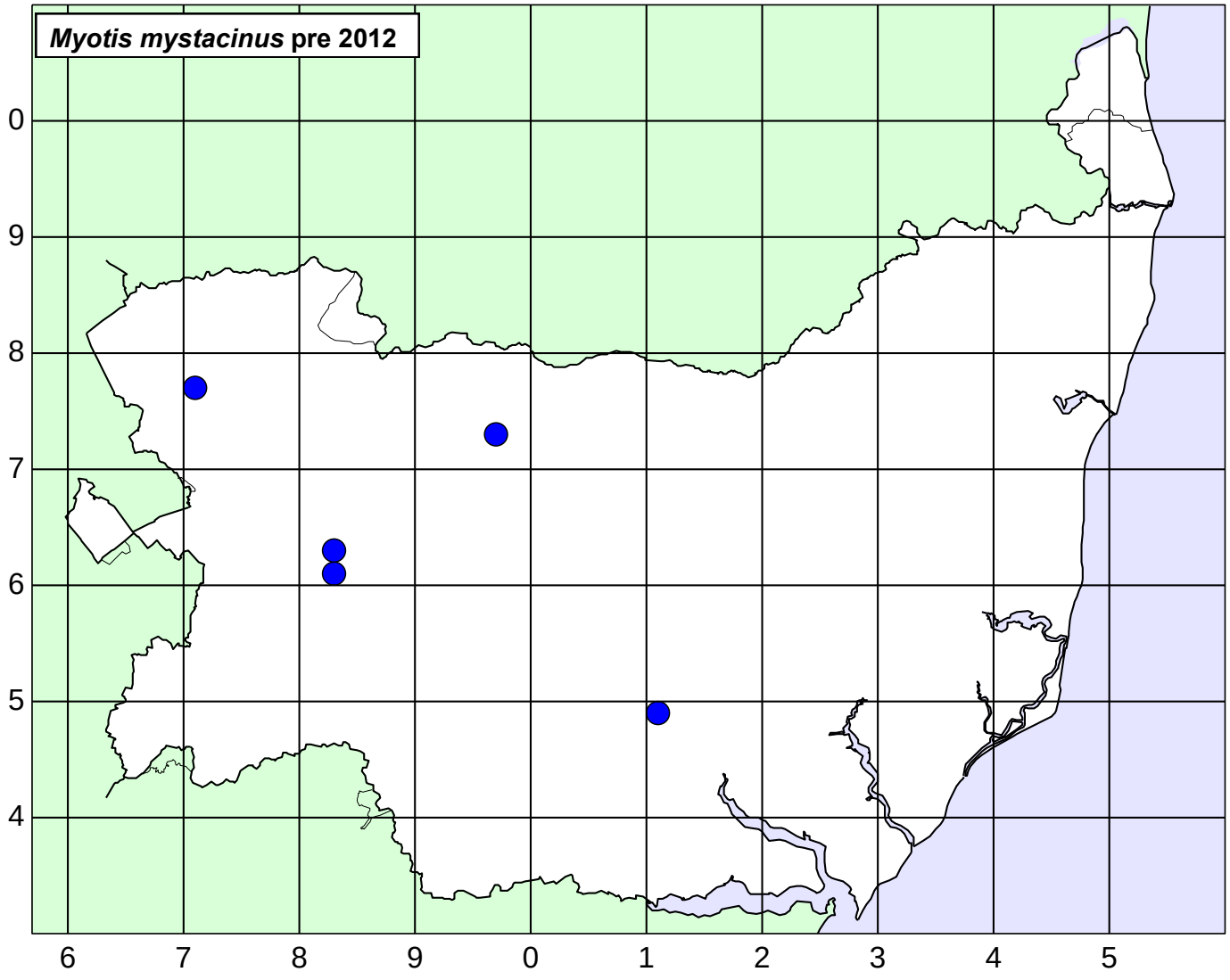
The smallest of our *Myotis* species, both Whiskered and Brandt's, are scarce nationally with very few records for East Anglia.

Records before 1971 referring to 'Whiskered' may relate to either species. All records, with one exception, relate to single animals discovered in hibernation sites. In January 2000, a Whiskered bat was found clinging to a wall of Stanton Primary School: after being taken into care it was released back into the area.

From the scattered locations of the records it would be reasonable to assume that a few small colonies are yet to be discovered. However, none have been added in the past five years.



Whiskered bat © Hugh Clark / Bat Conservation Trust



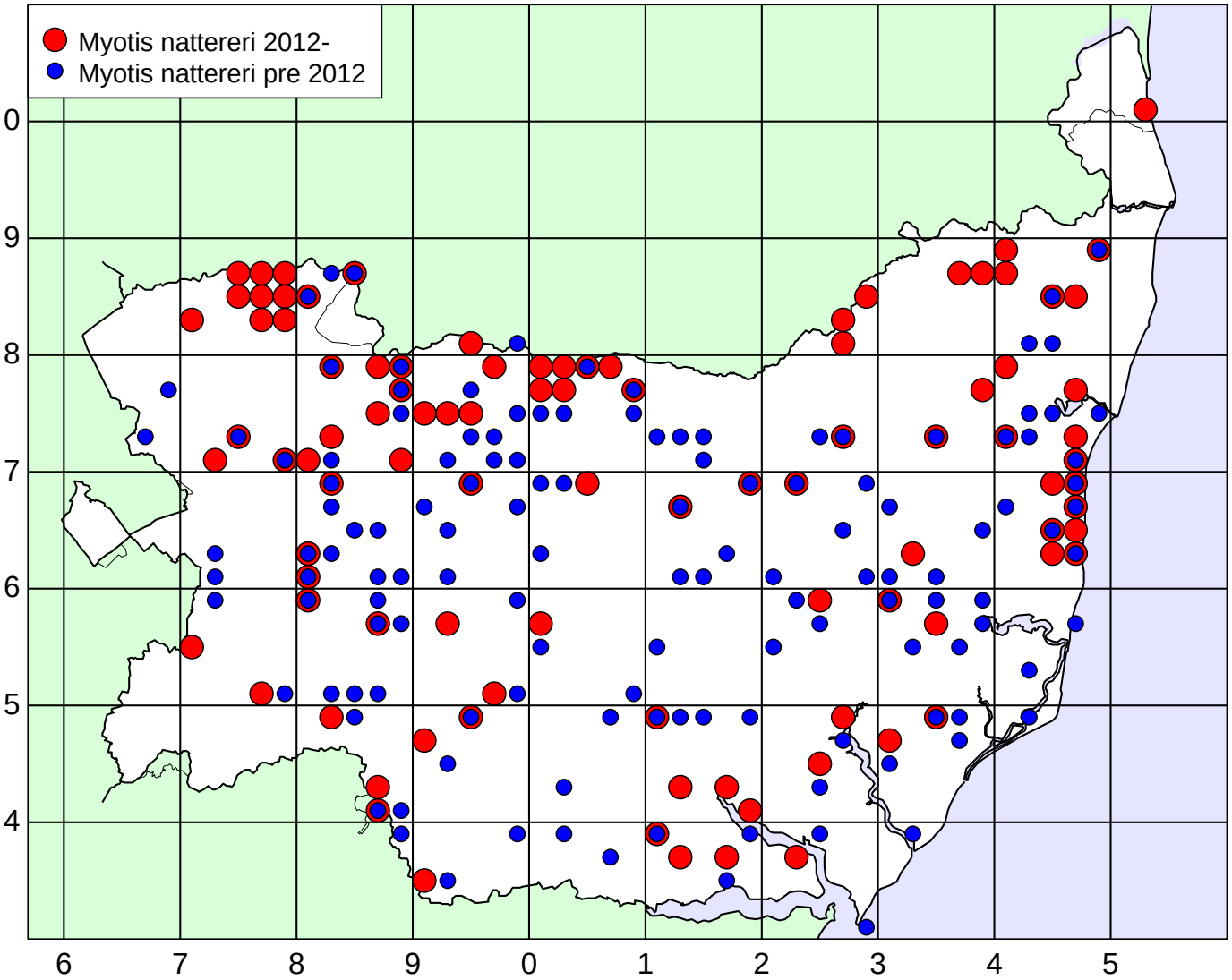
Natterer's Bat *Myotis nattereri*

This species has a widespread distribution throughout Great Britain and in Suffolk. Prior to the 1996 Suffolk Barn Survey, almost all records related to animals found in hibernation sites. The barn survey provided a three-fold increase in records of the species and located a number of nursery roosts. Barns that need surveying before planning applications for conversion still provide a number of new records, though these are now very much reduced as the number of available buildings diminishes.



Natterer's bat hibernating © Arthur Rivett

Natterer's use most of the known hibernation sites around the county with the highest numbers being found during cold spells of weather. They frequently share their hibernation sites with Daubenton's bat. Since 2012 a further 63 locations have now recorded this species indicating a very wide distribution across the county.





Natterer's bats at Tiger Hill Local Nature Reserve © Neil Catchpole



Natterer's and Brown Long-eared bat feed in woodland edges where they often take prey from foliage within the canopy. © Arthur Rivett



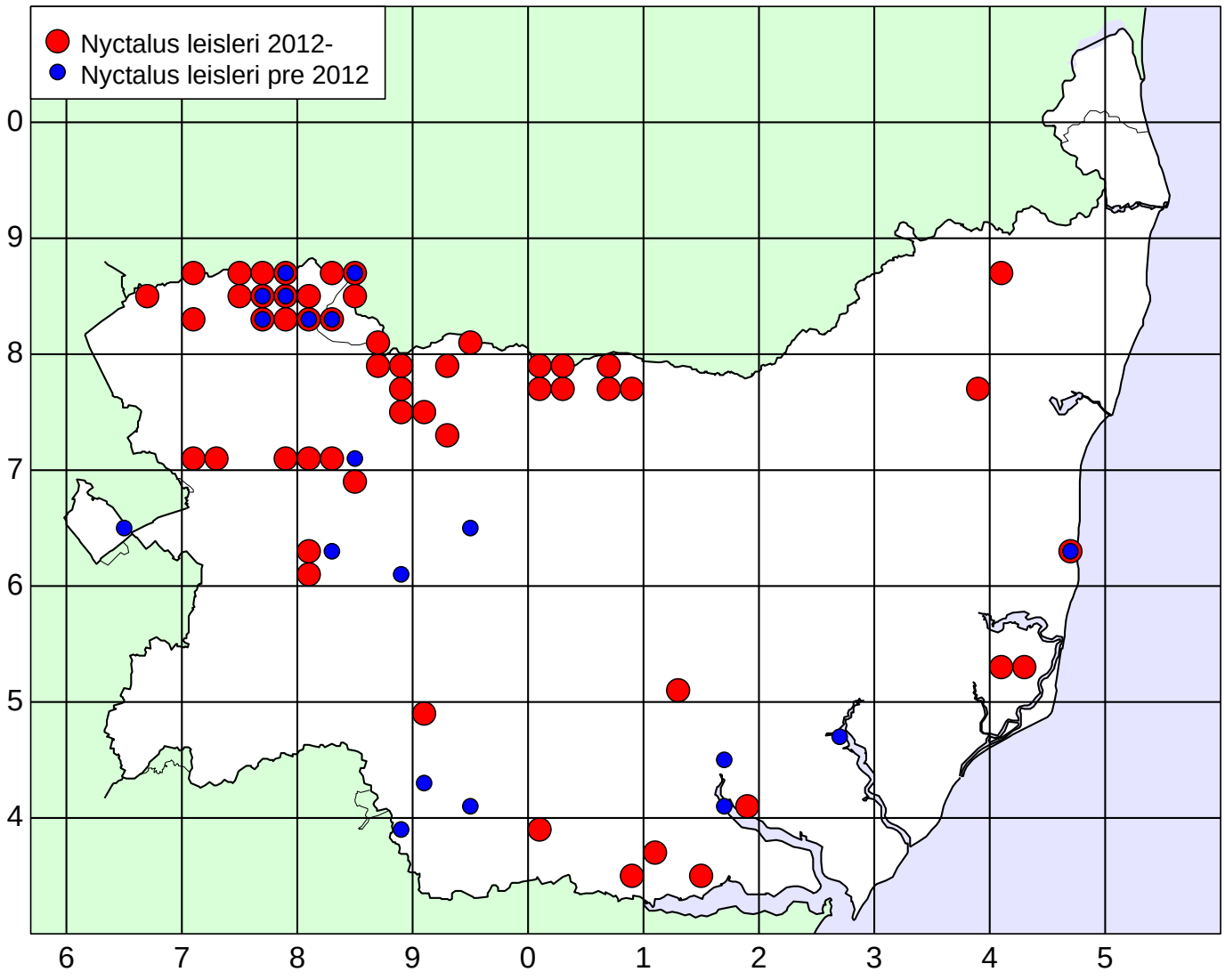
Natterer's bat tree roost, Ickworth Park © Arthur Rivett

Leisler's Bat *Nyctalus leisleri*

The Leisler's bat is common in Ireland, but is regarded as a rare species in Great Britain although records suggest it has a widespread distribution. The picture in Suffolk reflects the situation in the rest of the country, with only ten records outside Thetford Forest and only two of these relating to nursery colonies.

Prior to the start of the Thetford Forest Bat Box project in 1975, this species was unknown in the county. Over the years, Leisler's have been regular occupants of the boxes and in 1998 a breeding colony was discovered in a house in Brandon. It is possibly animals from this colony that occur in the Thetford bat boxes, but since 2012 records show that this animal is widespread in the north west of the county. The scattered records across the rest of the county require further follow up work to confirm the species status in the county.

No animals have been discovered in hibernation, but it is predominately a tree dwelling species and such sites are most likely to be used in winter, making them difficult to locate. Leisler's are known to fly quite long distances and so breeding and hibernation sites could be many miles apart.





Leisler's bat © Arthur Rivett



Good habitat for Leisler's bats. Grazed parkland and water provide a range of insect prey such as caddis flies and beetles © Sue Hooton

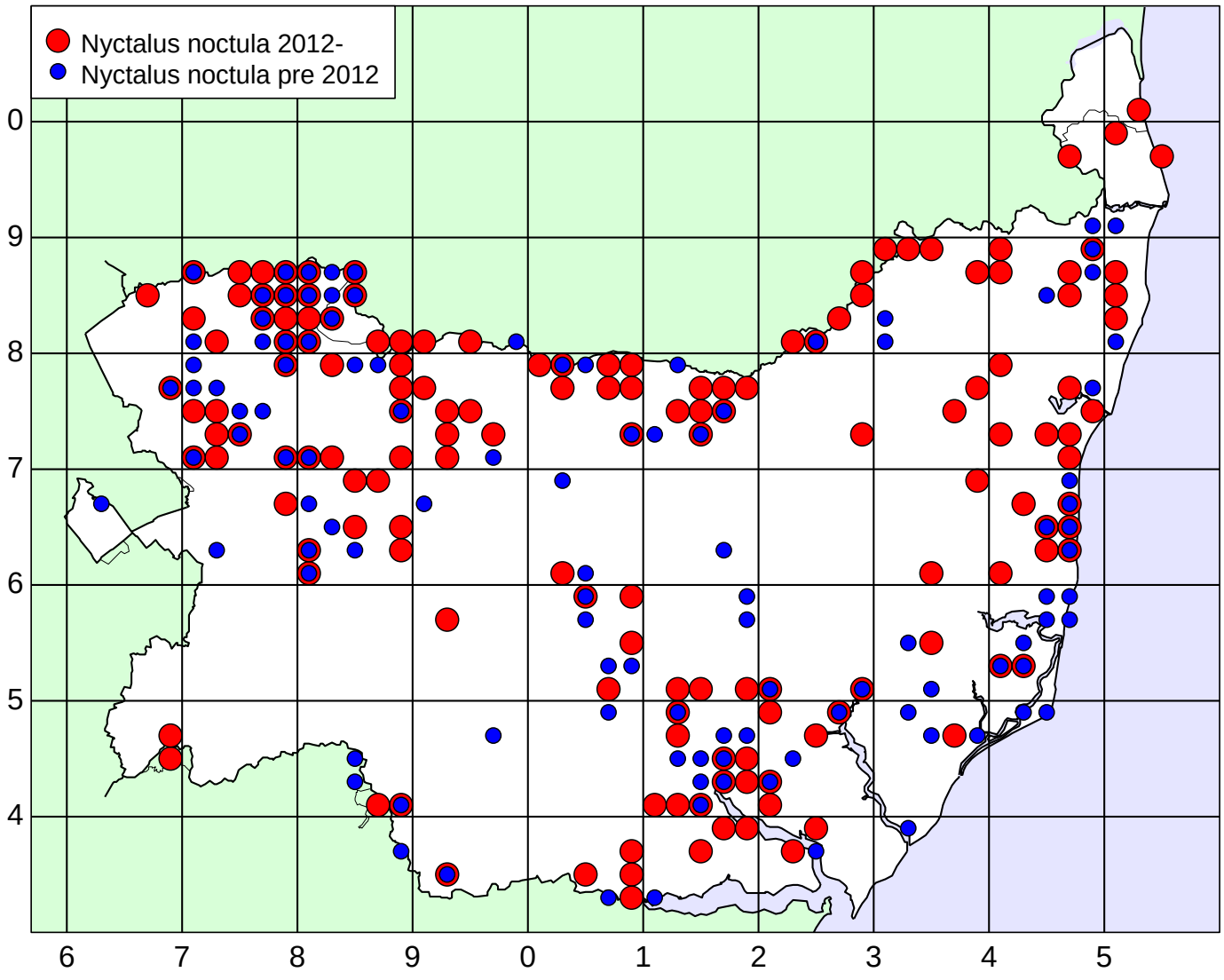
Noctule Bat *Nyctalus noctula*

The Noctule is Britain's largest bat, a tree dwelling species that tends to forage over wide distances above open habitats such as wetlands, pastures and widely-spaced woodlands. It has a widespread distribution in England and Wales, is rare in Scotland and is not found in Ireland where the Leisler's bat takes its place.

Records suggest that the Noctule is widespread throughout the county, but most records relate to either bat detector and sight records or animals discovered in bat boxes. The species has been known to breed in bat boxes in at least one of the county's project areas.

One of the largest known regular colonies of Noctule bats occurred in a white poplar on Purdis Heath golf course near Ipswich. Over 50 animals were seen emerging in August 2000 and no larger colonies have been discovered since that time. Almost all of the recent records are of individuals recorded on detectors but there are still six 10km squares that have never recorded this species and further six that have no recent records.

The Noctule is usually the first bat to appear in the evening, sometimes even before sunset. It can travel up to 10km from roost to feeding areas, flying well above tree level in the open.





Noctule bats being checked as part of long term monitoring of bat boxes in Thetford Forest © Luci Spencer



Noctule bat roost in woodpecker holes in Scots Pine tree © Arthur Rivett

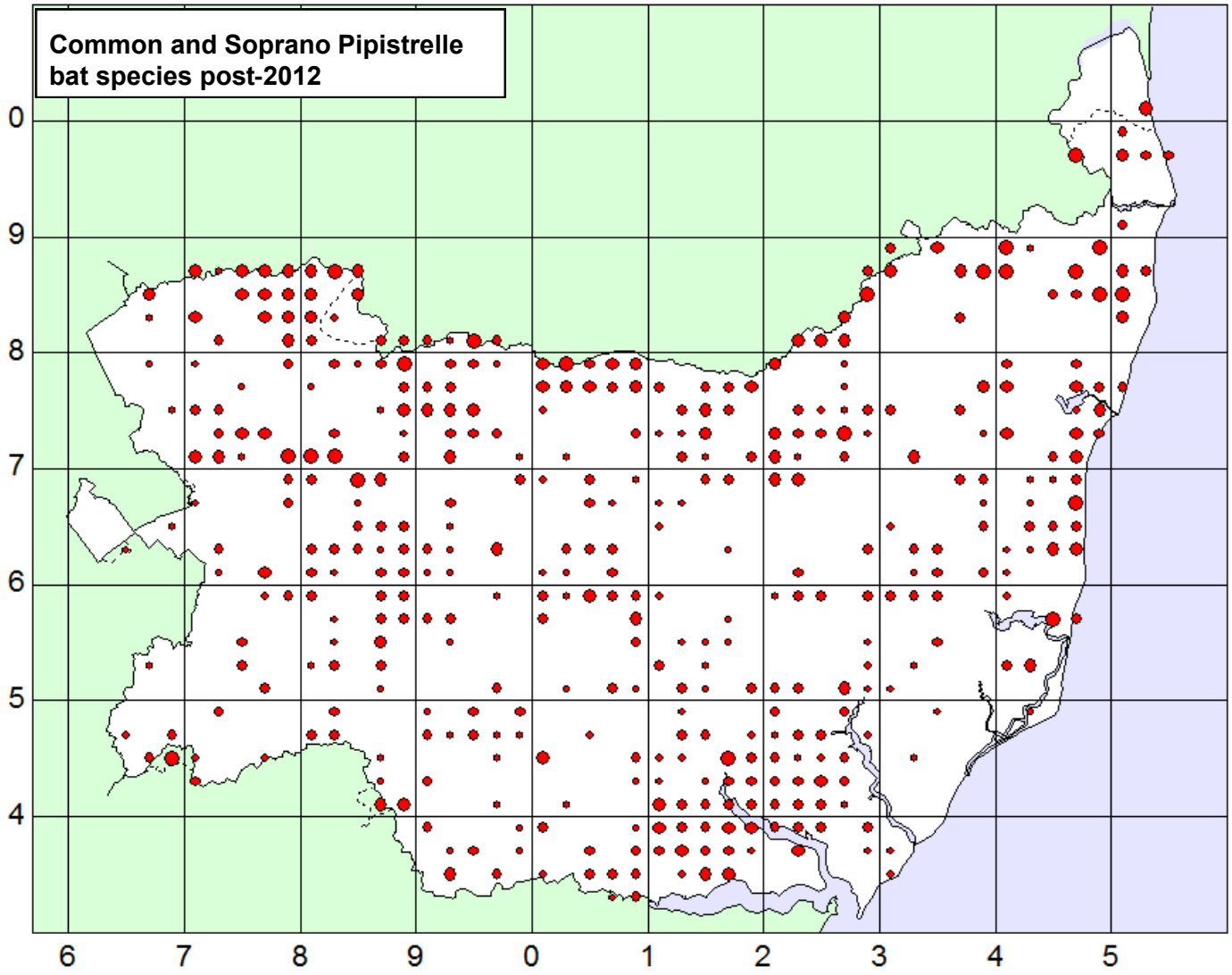
Pipistrelle Bat Species

The two commonest pipistrelle bat species are the most abundant bats in the UK and are, by far, the most frequently encountered bats in Suffolk.

In the 1990s developments in taxonomy resulted in this small bat being split into two species based on differences in the frequency of their echo-location calls. Both the 45kHz Common Pipistrelle and the 55kHz Soprano Pipistrelle occur in Suffolk, but only recently have attempts been made to differentiate species in the field and so all the older records relate to both species. The two species are extremely alike in appearance and there is no easy way of separating them in the hand although wing venation patterns are sometimes used.

Common and Soprano pipistrelles have very similar distributions, being found throughout the British Isles and, although widespread, there are still two 10km squares in the county that remain devoid of records.

However, there is now a third species - Nathusius' Pipistrelle - which is noticeably larger than the other two pipistrelles and the fur on its back is longer, sometimes giving it a shaggy appearance. The species echolocates below 40kHz and the roosts are often near water bodies. Most Nathusius' Pipistrelles are encountered in autumn, although some do remain all year and breed in the UK. Their distribution in Suffolk is only just being discovered.



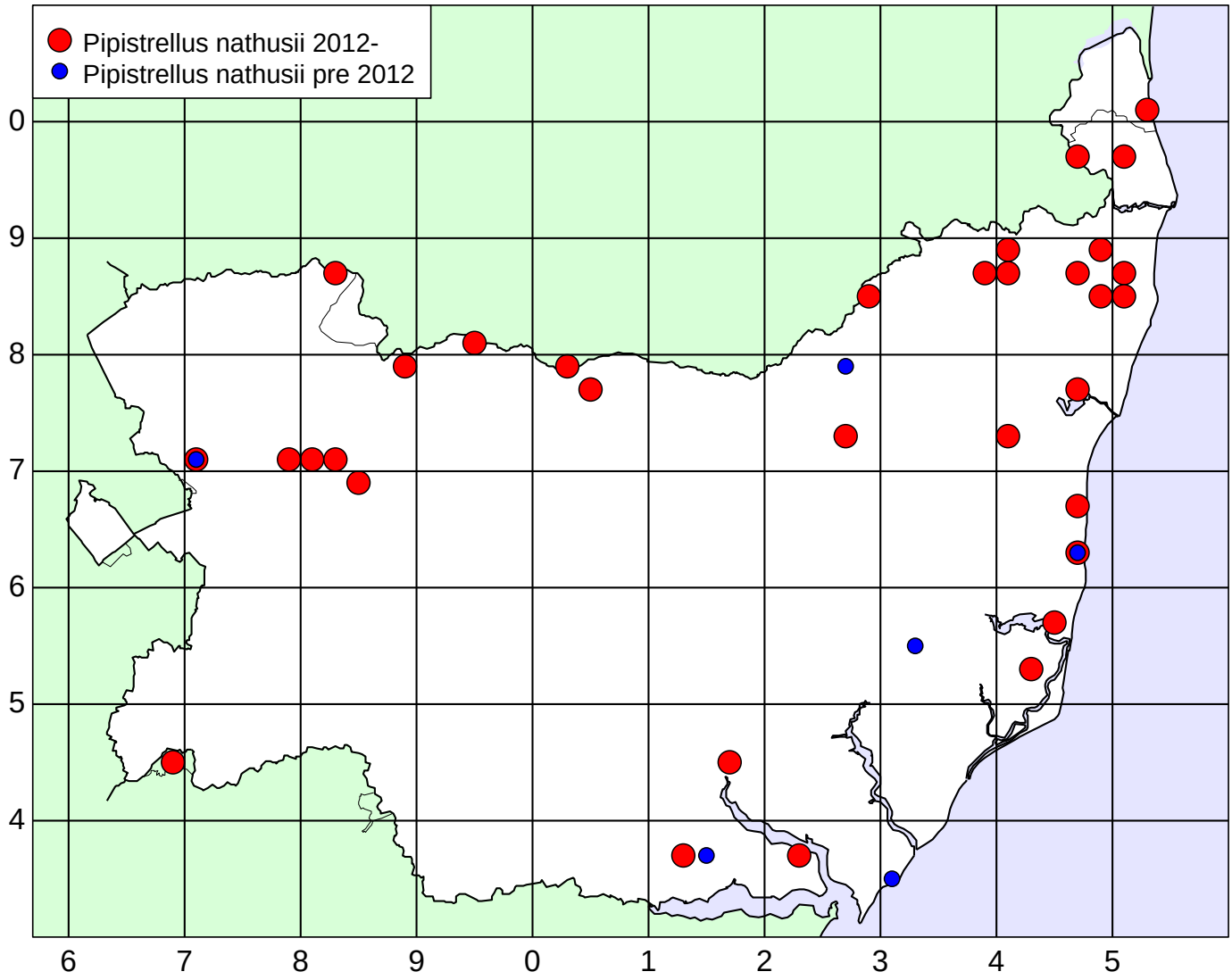
Nathusius' pipistrelle *Pipistrellus nathusii*

Nathusius' Pipistrelle is a migratory species on mainland Europe and occasional animals have been found in UK for many years, the assumption being that they were windblown migrants. However, in 1996 a small breeding colony was discovered in a Lincolnshire house roof and in 1997 a second breeding colony was found in Northern Ireland. In 1998 the first Norfolk record came from Filby Broad and there have been annual records from Paston Barn since 1999.

The species was only discovered in Suffolk in 2005 at two separate locations and may be more far more widespread than these records suggest. The consultants carrying out bat detector surveys near Great Blakenham reported abundant passes on two nights in June and September suggesting a breeding colony may be located close by.

Further field work since 2012 using detectors combined with computer software has increased the locations these bats have been recorded in from six to 31. The number of coastal locations may indicate migrating animals, although some of the records were mid season.

Suffolk Bat Group has now joined the National Nathusius' Pipistrelle Project with support from Essex Bat Group. This involves harp trapping with lures and ringing any Nathusius' Pipistrelles found, so hopefully more information on this species will be available for the next edition of the atlas.





Nathusius' Pipistrelle bat in the hand © Odette Robson



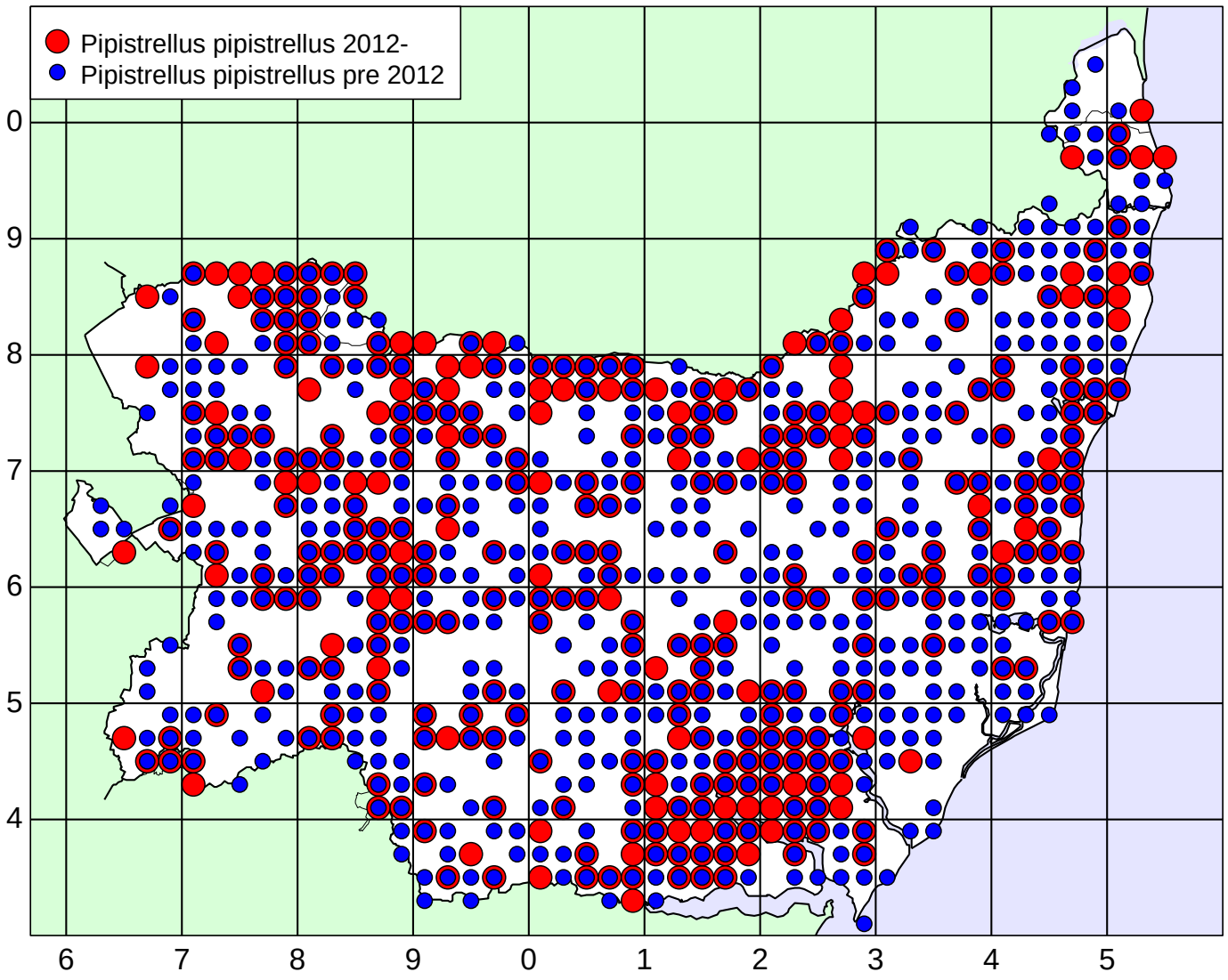
James Booty and Sue Hooton inspecting a harp trap for Nathusius' pipistrelles © Odette Robson

Common pipistrelle *Pipistrellus pipistrellus*

Both of the commoner species of pipistrelle bats are usually associated with buildings, particularly in the summer. Most roosts are found whilst following up Natural England enquiries where the animals are likely to be disturbed by building works or timber treatment. Over 350 roosts have been located in the county, the size of the colonies ranging from 50 - 400+ animals. These roosting sites include listed and historic buildings, modern houses, barns, churches, trees and bat boxes. Roosting sites in trees are notoriously difficult to locate and consequently are likely to be under-recorded, not just for pipistrelles, but for all other species.

There are very few records of pipistrelles in hibernation, usually they are discovered during building works and generally only single animals.

They are the only bat species to have been recorded in every 10km square in the county.





Holding three Common Pipistrelle bats in the hand © Luci Spencer



Farm ponds are good Pipistrelle bat feeding habitat as they provide lots of small insect prey such as midges.
© Arthur Rivett

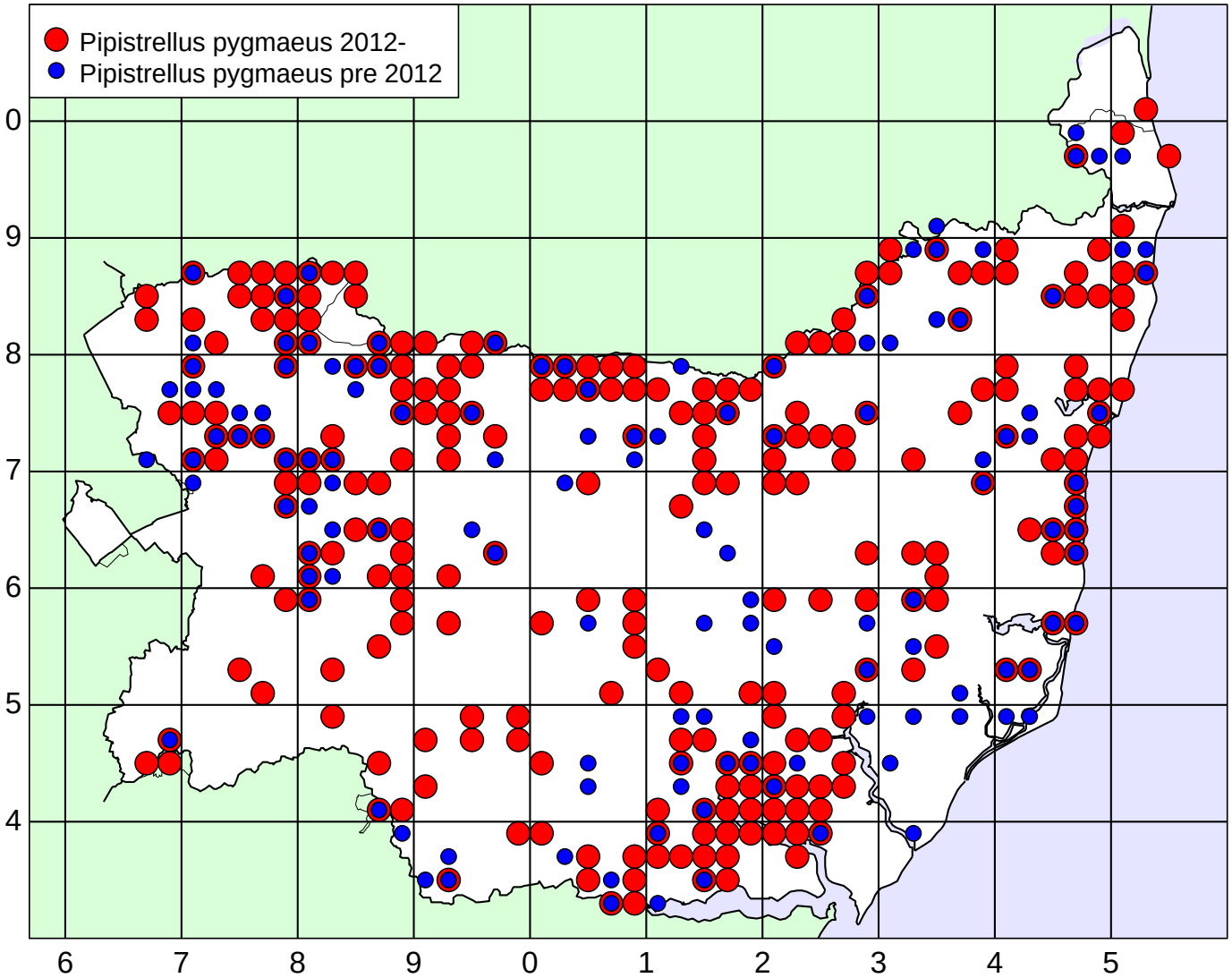
Soprano pipistrelle *Pipistrellus pygmaeus*

Both of the commoner pipistrelle bat species have a very similar distribution, being found throughout the British Isles. However, recent research has found that Soprano Pipistrelles appear to be quite different from Common Pipistrelles in certain aspects of their biology. They may be more reliant on aquatic habitats for foraging and many of their known roosts are associated with river valleys (Oakley and Jones, 1998). They also form larger maternity roosts than Common Pipistrelles. The very large summer roost of Soprano Pipistrelles known to exist at Flatford adjacent to the River Stour in South Suffolk, certainly bears out these findings.



Soprano Pipistrelles at a roost site
© Kevin Simmonds / Aurum Ecology

The huge increase in records over the past five years is down to the ease of splitting the two pipistrelle species using detector software and not that this species is increasing and spreading its range.



Brown long-eared bat *Plecotus auritus*

The Brown Long-eared bat is a common and widespread species second only to the pipistrelle in distribution, both nationally and in Suffolk.

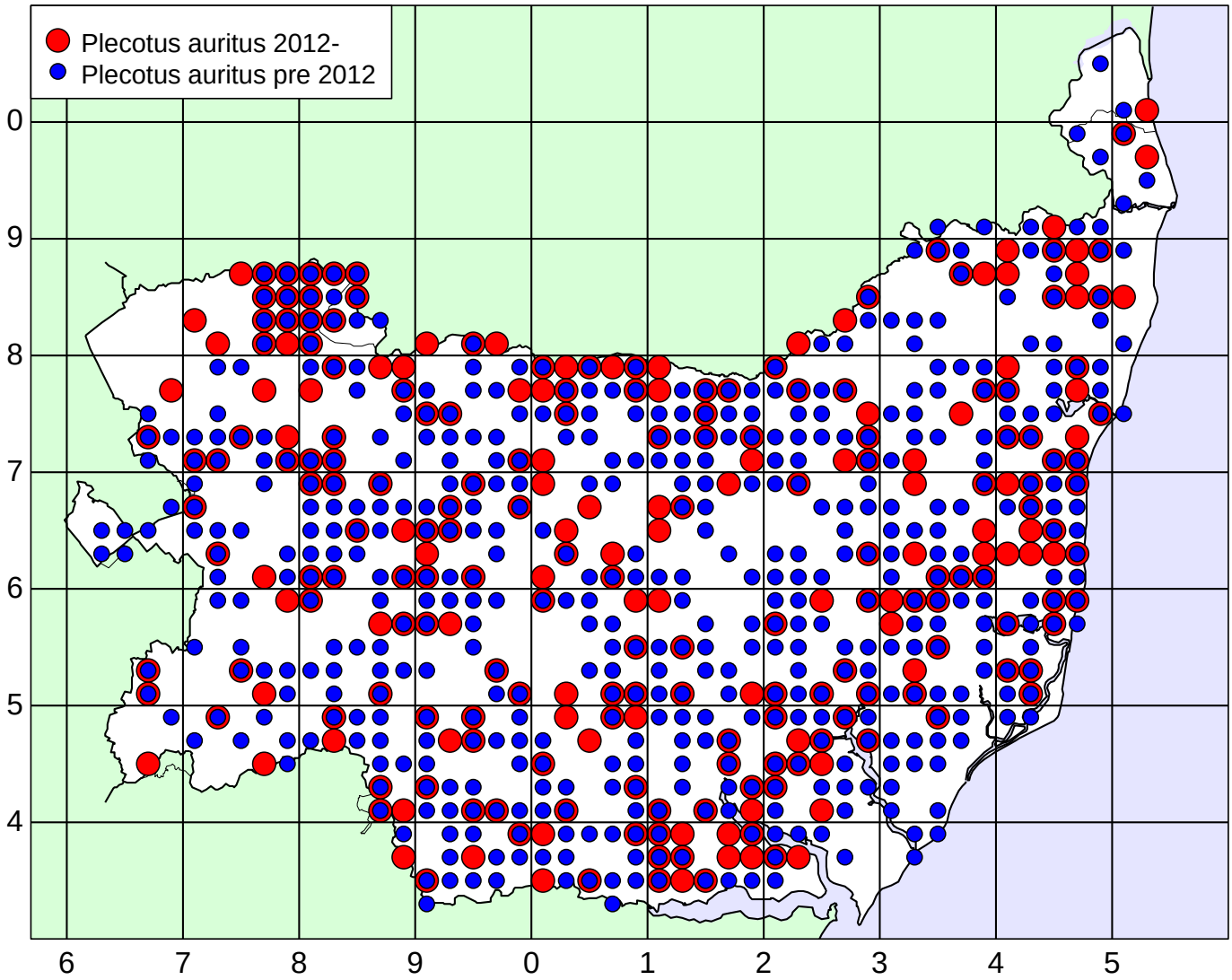
This species is found in a wide variety of sites from modern houses, churches to timber framed barns and including ice houses and chalk tunnels. It is the only species regularly found both in summer and winter. They readily use bat boxes and some 65 animals were discovered in one Thetford box a few years ago! Nursery colonies are usually located within lofts where the bats cluster along the ridge board, giving rise to a characteristic line of droppings on the loft floor. This species is now regularly found in lofts during the winter and sometimes may not be hibernating.

They have a characteristic slow, fluttering flight with occasional hovering pauses and are more frequently seen than heard because of their very quiet echolocation sounds which are often not picked up by bat detectors.



Brown long-eared bat © Tony Spencer

A total of 88 new locations have been recorded since the last atlas and the species remains widespread across the county.



Lesser horseshoe bat *Rhinolophus hipposideros*

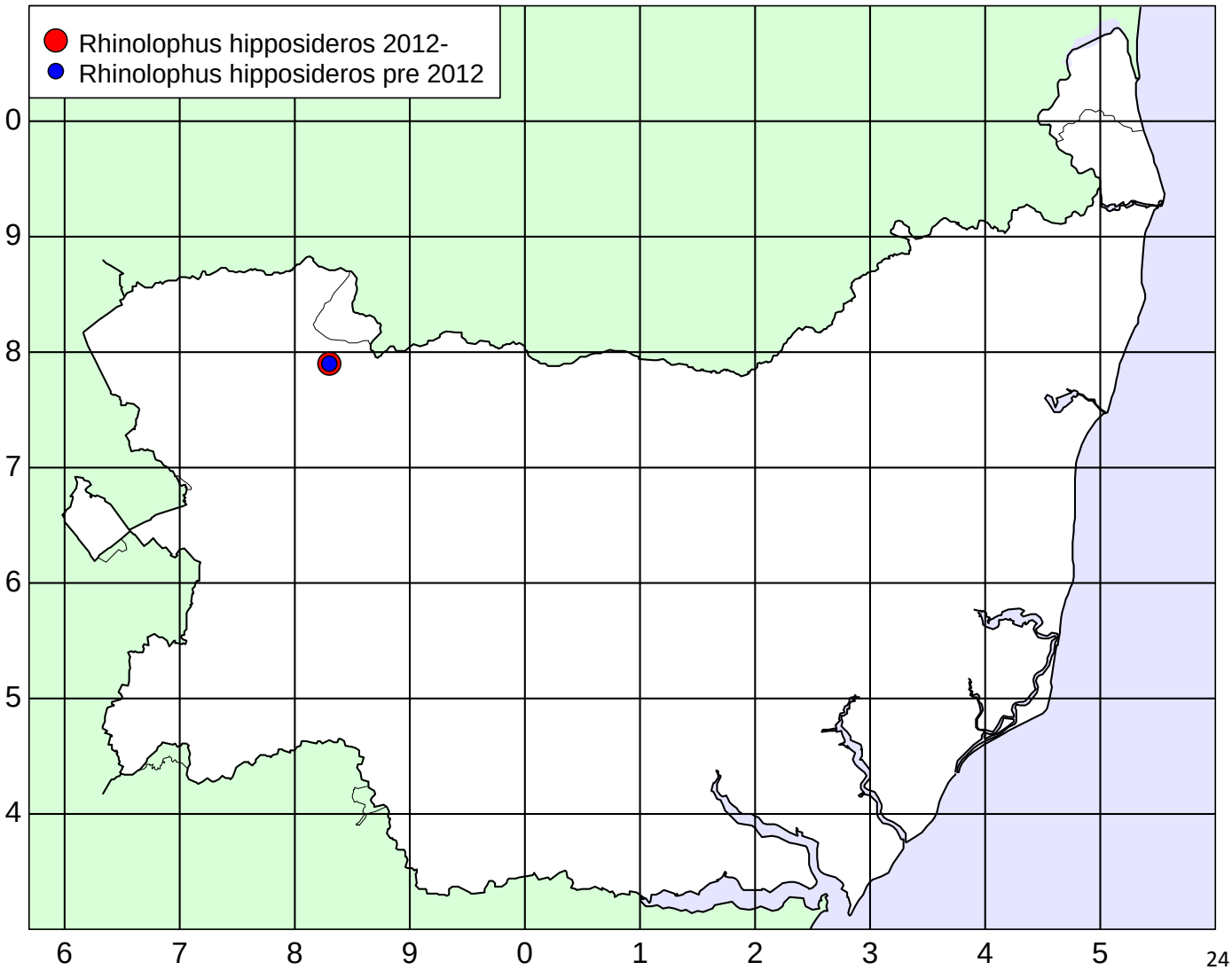
The discovery of a single individual Lesser Horseshoe bat hibernating in Suffolk in 1996 was probably the most exciting find in the history of the Suffolk Bat Group. This bat was found in the same site every winter until 2015 and Sue Hooton saw it move on 15 March 2016, so it was alive then. It has not been recorded since that time. Efforts were made during several summers to locate this bat in suitable habitat near to the hibernation site, but to no avail. Since this individual would now be more than 20 years old, the species may now become extinct in Suffolk. Prior to this, there had been only one other record of the species in the county in the past 100 years. The last occurrence was in December 1958, relating to a single animal which was ringed and remained until early 1959.

Lesser Horseshoes are now restricted to Wales and the south-west of England east-wards to Warwickshire, with the nearest known colony some 90 miles from the recent Suffolk site.



Lesser horseshoe bat
© Arthur Rivett

Studies have shown these bats rarely travel more than 15km between their roosts and so the appearance of one in Suffolk has always been intriguing. It is unknown whether it was a lost or displaced individual, or whether there is a small population existing somewhere in West Suffolk waiting to be discovered.



Summary

The maps show that bats occur right across the county. Only one square is yet to have bats recorded and so some pioneering work is required in the extreme north-east of Suffolk, maybe with neighbouring bat groups. However, there has been a very good spread of records amassed over the past 17 years. The squares that indicate several species occurring usually relate to areas where Suffolk Bat Group has carried out extensive surveys or an enthusiastic bat worker lives. There is still much to find out about the distribution of bats across the county and so having read this, we hope you will be inspired to go out and look for bats and submit your records to either Suffolk Biodiversity Information Service or the Suffolk Bat Group/County Recorder for Suffolk Naturalists Society (bats@sns.org.uk).

References

Oakley S. F., & Jones G. 1998. Habitat around maternity roosts of the 55 kHz phonic type of pipistrelle bats (*Pipistrellus pipistrellus*). J. Zool. 245:222–228.

Acknowledgements

Thank you to everyone in the Suffolk Bat Group who has contributed records over the past 33 years and to the Suffolk County Recorder for bats, Alan Miller. An incredible amount of work has been undertaken over this time and we now have a far more detailed picture of the county's bats. Thanks also to Gen Broad for her work in design and layout of this atlas.

How to submit records

To submit records in the future please send them to either:

Suffolk Biodiversity Information Service

c/o The Museum, High Street, Ipswich IP1 3QH

Email [redacted]@suffolk.gov.uk

www.suffolkbis.org.uk

Or

Suffolk Bat Group, c/o Suffolk Wildlife Trust, Brooke House, The Green, Ashbocking, Ipswich IP6 9JY

Email bats@sns.org.uk

For more information on Suffolk Bat Group and for verification of bat records, please visit our website

www.Suffolkwildlifetrust.org/suffolkbatgroup

Back page:

Top: An old bridge provides an ideal hibernation site for bats © Arthur Rivett
Below: A green lane provides connectivity across the landscape and shelter for many species of insect © Arthur Rivett





Suffolk Bat Group

SBIS

Suffolk Biodiversity Information Service

Suffolk Wildlife Trust

Suffolk County Council



North Falls

Local Impact Report Appendix J:

Seascape Sensitivity to Offshore Wind Farms, White Consultants 2020

Suffolk

Seascape sensitivity to offshore wind farms

Final Report

for

Suffolk County Council
Suffolk Coast and Heaths AONB Partnership

October 2020



white CONSULTANTS

with Northumbria University

Suffolk

Seascape sensitivity to offshore wind farms

Final Report

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October 2020

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white CONSULTANTS

with Northumbria University

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PART 1: Overview, method and summary of findings

1. Introduction

1.1. White Consultants were appointed in June 2020 to carry out a seascape sensitivity study for offshore wind farms located in the inshore and offshore waters off the Suffolk coast. The study was commissioned and funded by Suffolk County Council and Suffolk Coast and Heaths AONB Partnership in consultation with East Suffolk Council and Natural England. Northumbria University provided GIS and mapping support.

1.2. The brief states that the intention is that the Seascape Sensitivity Study will contribute to the baseline evidence for Seascape, Landscape and Visual Impact Assessments (SLVIAs) and development of the proposals for a series of proposed developments in Suffolk's waters and coast consisting of two offshore wind farm extensions (Gabbard and Galloper), East Anglia 1N and 2 and East Anglia 3 (consented, but currently subject to amendments). Beyond that it will contribute to the development of proposals arising from the Crown Estate Round 4 seabed allocation.

1.3. The brief further indicates that the scope of the sensitivity study should focus on identifying how the sensitivity of seascape interacts with the sensitivity of adjacent coastal landscapes and designations in *Suffolk* including both Suffolk Coast and Heaths Area of Outstanding Natural Beauty (AONB) and areas outside it.

1.4. The study area is defined by the area of the existing local seascape character study within the UK Marine plan area.

1.5. This report is the final report combining the Stage 1 desk study report with the findings of the site visit to the coast. Part 1 of this report sets out policy considerations, the method used to define zones for assessment and the assessment of seascape and visual sensitivity and then summarises the findings with figures. Part 2 sets out the assessment of each defined seascape zone. The factors influencing the sensitivity of seascape zones are included in Appendix A. Appendix B considers visibility distances derived from local weather stations data. Appendix C sets out details of the site visit. The study is a technical exercise and the report uses a number of technical terms for precision and as a means for reaching conclusions. These terms are defined in the Glossary in Appendix D along with abbreviations used.

2. Consideration of Policy

2.1. The review of policy is derived from our previous reports on OESEA seascape visual buffers study (BEIS, 2020) and approach to seascape sensitivity (MMO, 2020) with an additional focus on the study area.

UK National Policy Statements

2.2. The UK Government produces National Policy Statements (NPSs) under the Planning Act (2008) which sets out Government policy for the development of Nationally Significant Infrastructure Projects (NSIPs). National policy statements EN-1 and EN-3 address national infrastructure planning in relation to renewable energy including offshore wind farms with an output above 100MW but are a material consideration for smaller projects.

2.3. **EN-1** states that virtually all nationally significant energy infrastructure projects will have effects on the landscape/seascape. Projects need to be designed carefully taking account of the potential impacts. The aim should be to minimise harm, providing reasonable mitigation where possible and appropriate (5.9.8). It reasserts that National Parks and AONBs have been confirmed as having the highest status of protection in relation to landscape and scenic beauty. Each of these designated areas has specific statutory purposes which help to ensure their continued protection and which the decision-maker should have regard to in its decisions. The conservation of the natural beauty of the landscape and countryside should be given substantial weight by the decision-maker in deciding on applications for development consent in these areas. The same test applies to projects outside the designation boundaries which may have impacts within them (5.9.12). Therefore, both offshore wind farms and associated land-based infrastructure need to take this into consideration. The aim should be to avoid compromising the purposes of designations. This policy is a key driver in defining how the assessment of sensitivity is carried out.

2.4. Outside nationally designated areas, landscapes may be highly valued locally and protected by local landscape designation. However, these factors in themselves should not be used to refuse consent. The decision maker should judge whether any adverse impact is so damaging that it is not offset by the benefits of the project.

2.5. **EN-3** considers the seascape and visual effects of offshore windfarms in more detail. It sets out three principal considerations on the likely effect of offshore windfarms on the coast:

- Limit of visual perception from the coast
- Individual characteristics of the coast which affect its capacity to absorb a development
- How people perceive and interact with the seascape (2.6.203).

2.6. In terms of mitigation, it states that neither the design or scale of individual wind turbines can be changed without significantly affecting the output of the development so, instead, the layout of the turbines should be designed appropriately to minimise harm (2.6.210).

2.7. For smaller projects (below 100 MW) the Marine and Coastal Access Act (2009) indicates that decisions are made by the Marine Plan Authority (MPA). When considering the impact of an activity it states that the MPA should take into account existing character and quality, how highly it is valued and its capacity to accommodate change (2.6.5.3).

AONBs

2.8. The 1949 National Parks and Access to the Countryside Act, formed the basis for designating National Parks and AONBs. The Environment Act 1995 revised the original legislation. The Countryside and Rights of Way Act 2000 (CRoW Act) subsequently acts as the legislative framework protecting AONBs, setting out natural beauty criteria, the designation process and the roles and responsibilities of different organisations.The Section 85 'duty of regard' requires all relevant authorities to have regard to the purpose of AONBs when exercising or performing any functions in relation to, or affecting, these areas.

2.9. The primary purpose of AONBs is to conserve and enhance natural beauty. In pursuing the primary purpose of the designation, account should be taken of the needs of agriculture, forestry and other rural industries and of the economic and social needs of local communities.

2.10. Natural Environment Planning Practice Guidance (PPG) states in relation to AONBs that:

'Land within the setting of these areas often makes an important contribution to maintaining their natural beauty, and where poorly located or designed development can do significant harm. This is especially the case where long views from or to the designated landscape are identified as important, or where the landscape character of land within and adjoining the designated area is complementary. Development within the settings of these areas will therefore need sensitive handling that takes these potential impacts into account.' (Paragraph: 042 Reference ID: 8-042-20190721 Revision date: 21 07 2019)

2.11. It is noted that the Glover review (Landscapes Review, 2019) has made recommendations that AONBs should be strengthened, with increased funding, governance reform, new shared purposes with National Parks, and a greater voice on development. At the time of writing, this is being considered by Government.

2.12. Suffolk Coast and Heaths AONB Partnership sets out landscape character and special qualities along with its vision, aims, objectives and action plan in its Management Plan 2018- 2023. The special qualities are further refined in the Natural Beauty and Special Qualities indicators report (LDA Design, 2016). The relevant indicators are used in the sensitivity assessment. Development in the setting of the AONB is discussed in a position statement, endorsed by the AONB Partnership in December 2015. This indicates that the partnership considers that development in the setting of the AONB that would have a significant adverse impact on the natural beauty and special qualities of the area should not be supported. This in line with Section 85 of the CRoW Act and Natural Environment PPG (paragraph 042).

Heritage Coasts

2.13. Heritage Coasts were established to conserve the best stretches of undeveloped coast in England. They are non-statutory landscape definitions agreed between Natural England and

the relevant maritime authorities. Their purpose is to conserve, protect and enhance the natural beauty of the coastline and related flora and fauna and heritage features. They often overlap with National Parks and AONBs, as in the case of Suffolk, reinforcing the importance of these coasts. The purpose of Heritage Coast definition is similar to that of an AONB. Suffolk Heritage Coast was one of the first three coasts defined by the Countryside Commission in 1973. The Heritage Coast Plan was adopted in 1978. Its policies were subsequently incorporated into the AONB Management Plan which now includes objectives, policies and action that are applied to the Heritage Coast.

2.14. Heritage Coasts also occur in their own right where the hinterland does not have national landscape status. In these cases the National Planning Policy Framework (NPPF) states that planning policies and decisions within areas should be consistent with the special character of the area and the importance of its conservation (173).

2.15. Whilst not a policy document, the OESEA, 2020 report noted that decisions related to offshore wind farms indicated that National Park/AONB and Heritage Coast combined was the most sensitive combination of designations. It indicated that offshore wind farm development along the coast from these combined designations may be acceptable at a distance in seascape terms but not where the development is viewed directly offshore (13.74).

Marine Planning

2.16. The **Marine and Coastal Access Act 2009** introduced eight key measures to help ensure *'clean, healthy, safe, productive and biologically diverse oceans and seas'*. The measures included the introduction of a marine planning system and the setting up of the Marine Management Organisation (MMO) delivering marine functions in English territorial waters and UK offshore waters for matters that are not devolved. The Act requires that all public authorities should undertake planning decisions should do so in accordance with the Marine Planning Statement.

2.17. The **UK Marine Policy Statement** (MPS) (2011) the national policy framework for preparing marine plans throughout the UK. The high level marine objectives (page 11, Box 1) include:

'*Ensuring a strong, healthy and just society:*

People appreciate the diversity of the marine environment, its ***seascapes****, its natural and cultural heritage and its resources and act responsibly*' (this report emphasis).

2.18. The MPS sets out how seascape should be considered in marine spatial planning. It states: '*When developing Marine Plans, marine plan authorities should consider at a strategic level visual, cultural, historical and archaeological impacts not just for those coastal areas that are particularly important for seascape, but for all coastal areas, liaising with terrestrial planning authorities as necessary. In addition, any wider social and economic impacts of a development or activity on coastal landscapes and seascapes should be considered.*' (Defra, 2011, 2.6.5.2)

2.19. It goes on to state: '*In considering the impact of an activity or development on seascape, the marine plan authority should take into account existing character and quality, how highly it is valued and its capacity to accommodate change specific to any development. Landscape Character Assessment methodology may be an aid to this process.*' (Defra, 2011, 2.6.5.3).

2.20. The **East Marine Plan** was the first marine plan to be completed in England, in April 2014. The inshore area extends out from the mean high water mark to the territorial limit. The offshore area extends from the territorial limit to the boundary of the Exclusive Economic Zone. Policy SOC3 (page 58) states that proposals should demonstrate, in order of preference:

a. that they will not adversely impact the terrestrial and marine character of an area

b. how, if there are adverse impacts, they will minimise them

c. how, if they cannot be minimised, they will be mitigated against

d. the case for proceeding with the proposal if it is not possible to minimise or mitigate the adverse impacts

2.21. Seascape character areas have been identified for the East inshore and offshore areas to support the East Marine Plan (URS/Scott Wilson for Natural England, 2012). These are at a national scale and were completed as part of a pilot study to inform seascape character

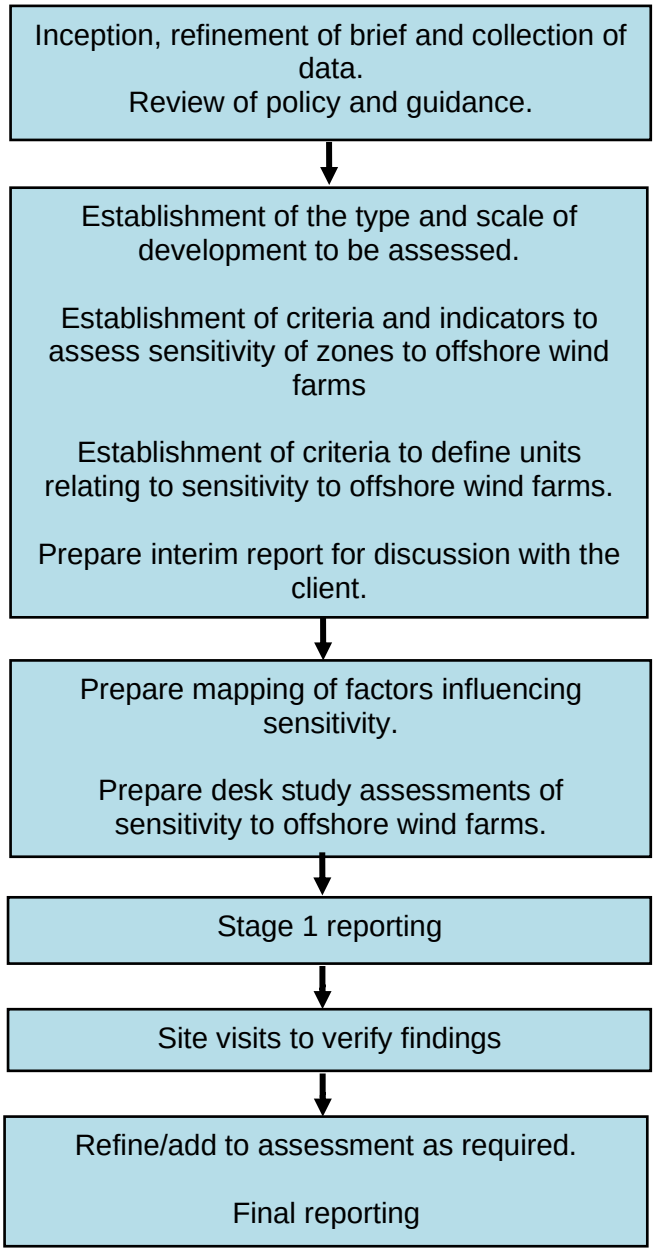
assessment (NECR106). They are the equivalent of the subsequent Marine Character Areas which were completed for the rest of English inshore and offshore waters.

2.22. Local seascape character areas have subsequently been defined and described at a more local level off the coast of Suffolk, South Norfolk and North Essex (LDA Design, 2018). This identified six seascape character types.

3. Study approach and process

Process

3.1. The study process is summarised below:



Focus and limitations of the report

3.2. The brief requires a sensitivity study to offshore wind farm developments including those potentially coming forward in the Crown Estate Round 4 process. The aim is to avoid significant adverse effects on high sensitivity seascape receptors. The premise that the study works on is that the most important effect of offshore windfarms is on the perception of seascape character from the coast ie the relationship between any proposed

development with coastal seascape character when seen in juxtaposition with each other. This means that the main drivers are distance from the coast and the character and value of the coastal seascape and its component sensitive receptors. Therefore, the areas or zones identified are focussed on this purpose alone and should not be used for other purposes or development types which may need full seascape characterisation taking intrinsic natural and cultural processes and other characteristics into account.

Relevant Guidance

3.3. The most relevant guidelines and reports taken into consideration in this study are as follows:

- An approach to seascape sensitivity assessment, MMO, 2020.
- Offshore Energy Strategic Environmental Assessment (OESEA): Review and update of Seascape and Visual Buffer study for Offshore Wind farms, BEIS/Hartley Anderson, 2020. (Referred to in the report as OESEA, 2020).
- Guidelines for Landscape and Visual Impact Assessment, Edition 3, (GLVIA 3) LI and IEMA, 2013.
- Guidance on the Assessment of the Impact of Offshore Windfarms: seascape and visual impact report, DTI, 2005.
- An approach to seascape character assessment, NECR 105 (Natural England)- broad brush guidance on seascape character assessment.
- Seascape and visual sensitivity to offshore wind farms in Wales: Strategic assessment and guidance. Stages 1-3. NRW Evidence Series. Report No: 315, NRW, Bangor, 2019
- Seascape character assessment: Suffolk, South Norfolk and North Essex, Suffolk County Council, 2018.
- East Inshore and East Offshore seascape character assessment, Natural England, 2012.
- Suffolk Coast and Heaths AONB Management Plan 2018-2023 and associated planning documents including the natural beauty indicators
- Suffolk Landscape Character Assessment 2008/updated 2019
- Relevant offshore wind farm SVIAs

3.4. The OESEA (2020) study sets out visual buffers for different types of coastal character and designations at an England and Wales level. It is worth noting (as noted in 4.43 of the report) that the buffers to designated areas are a strategic level tool to identify where effects are likely and do not necessarily suggest no-go areas for development. These areas would need to be subject to careful further assessment should development be proposed within them. This is the purpose of the study.

Definitions

3.5. The following definitions are derived from the MMO Approach (2020) (1.5):

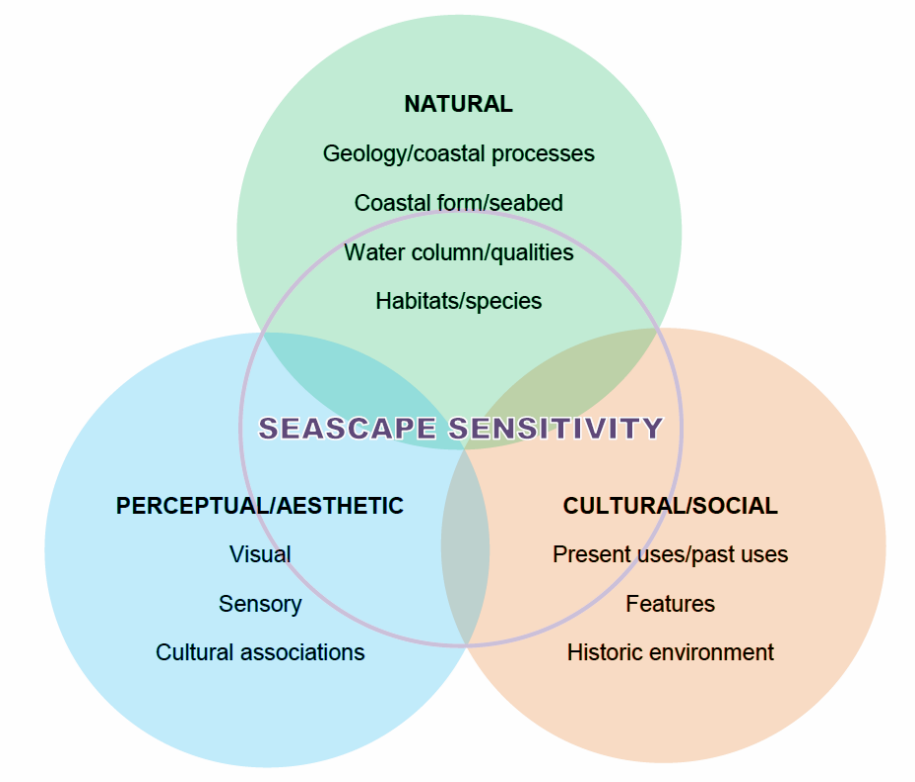
- Seascape character **susceptibility** is defined as the degree to which a defined seascape character area (SCA) and its associated visual qualities and attributes might respond to the specified types of development or change without undue negative effects on character and the visual resource.
- Seascape character **value** is defined as the relative value or importance attached to an SCA, which may express national or local consensus, because of its quality, its special qualities including perceptual aspects such as scenic beauty, tranquillity and wildness, natural or historic attributes or features, cultural associations, or its relationship with designated or valued landscapes and coasts.
- Seascape character **sensitivity** is a term applied to marine character and seascape and the associated visual resource, combining judgements of their susceptibility to a

specific type of development / development scenario or other change being considered and the value(s) related to that seascape, marine character and visual resource.

3.6. The potential for **cumulative effects** is explored in the area due to existing windfarms and other proposals. The strategic cumulative assessment is of the *combined* effect of all existing and consented developments, bearing in mind the proposed extensions and freestanding windfarms as well as the Round 4 bidding area.

Structure of proforma assessment

3.7. The structure of the proforma assessment relates to the relevant components of seascape character as shown in Figure 2 from the MMO Approach (2020).



3.8. The nature of offshore wind farm development means that there is a particular emphasis on the perceptual and aesthetic criteria and indicators.

Type and scale of development

3.9. The type and scale of offshore wind farm development is defined in the OESEA (2020) study and in the seascape and visual impact assessments (SVIAs) analysed. This study divides turbines into bands of heights each of which has different likely magnitudes of visual effects (see Figures 6 and 7). This report assumes that offshore wind farms are likely to be at a larger scale than has been seen previously. This tends to mean, based on the experience of Rounds 1 to 3, that the further offshore, the larger the development is likely to be in terms of turbine numbers, unless it is an extension of an existing development eg Greater Gabbard. This study assumes that the scale of development is between 20 and 300 turbines in the following turbine height to blade tip bands:

- 107-145m
- 146-175m
- 176-224m
- 225-300m
- 301-350m
- 351-400m

3.10. It is acknowledged that this covers a wide range of scales but reflects the types of development that have come forward or are likely to be considered in Round 4 or beyond.

3.11. Other characteristics of turbines include:

- Monopile or jacket foundations on the sea bed in seas of maximum depth 60m;
- Floating foundations anchored to sea bed in deeper waters;
- Generally pale grey painted towers and blades (eg RAL 7035) with Trinity House yellow on lower towers and bases;
- Red aircraft warning lights of medium intensity on nacelles (upto 2000 candela);
- Navigational warning lights on turbines and surrounding buoys;
- Constantly in operation with moving turbine blades unless in calm conditions or very high wind conditions;
- Offshore substations and operations bases on platforms in larger developments;
- Cable on sea bed;
- Long term installation and operation (but not permanent);
- Associated maintenance and supply craft during operation.

3.12. It is assumed that there will be associated offshore and coastal ancillary development to enable transmission of electricity to shore but the implications of transmission inland has not been taken into account as this is considered in a separate study. The main driver of effects is assumed to be the turbines themselves and their associated lighting although it is acknowledged that other infrastructure such as offshore substations contribute to effects.

Identifying criteria for seascape character and visual resource and indicators to explore sensitivity to development type

The seascape resource

3.13. The information used to inform the assessment includes:

- Bathymetry and elevation;
- Existing seascape character assessments (Figure 1);
- Landscape designations (Figures 3 and 4);
- National Park and AONB management plans and related planning policies- with a particular emphasis on natural beauty/ special qualities indicators;
- Suffolk Landscape Character Assessment 2008/updated 2019 (Figure 2)
- Cultural heritage designations and features eg scheduled monuments, Conservation Areas (Figures 3 and 4);
- Biodiversity designations eg SPAs, SACs, MCZs;
- Coastal access eg Suffolk Coast Path (Figures 3 and 4);
- Existing intervisibility analysis – defining land with sea views and sea visibility from land (part of the national seascape assessment);
- Crown Estate existing round zones and Round 4 bidding area;
- Existing marine uses and structures- existing windfarms etc (Figure 5);
- Patterns of maritime use- shipping lanes and mineral extraction;
- OESEA 2020 background report – identifying visual buffers for offshore windfarms related to National Parks and AONBs and elsewhere taking into consideration marine visibility modifiers;
- Principles defined in Wales seascape sensitivity to offshore windfarms study Stage 2 report (2019).

Defining seascape units/zones

3.14. NECR 105 sets out in broad brush terms how to carry out a seascape character assessment. This states characterisation concentrates on making clear what makes one area different or distinctive from another. It also states that it is based on the integration of natural and cultural information combined with aesthetic and perceptual experiential aspects. This has already been carried out in East inshore/offshore seascape character assessment, identifying four areas in the study area. This has been refined in the local seascape character assessment for Suffolk and adjacent coastal areas into six seascape character types.

3.15. The type of development proposed and the main national planning policies that drive decision-making, ie NPS EN1 and NPS EN3, mean that these units are not appropriate in themselves as a spatial representation for assessing sensitivity to offshore wind farms. The units need to appropriately reflect the large scale of development and large spread of visual effects of very tall structures in an open seascape combined with the relationship with national landscape-related designations. This means that this is not a character assessment in terms of NECR 105. Instead it is focussed on the factors which are most important in defining the relative seascape and visual sensitivity of an area to offshore wind farms, also taking into account existing and consented development. As such, the areas are defined as seascape zones to avoid any implication that they are characterised as seascape character areas taking in the full range of factors which define such areas eg bathymetry and seabed geology. The grain of the assessment may group together some existing areas and divide up others.

3.16. The definitive factors contributing to defining zones (Figures 9 and 10) are:

- The extent of visual buffers relating to the designated and other landscapes- these inform the distances of the zones away from the coast. These are primarily defined by SVIA analysis in the OESEA (2020) study (Figures 6, 7 and 8) and a review of meteorological visibility modifiers relating to the study area (see **Appendix C** for a contextual review);
- The presence or otherwise of existing or consented windfarms, which affects seascape character (Figure 5);
- The existing defined local seascape character areas (Figure 1);
- National seascape character areas/marine character areas (Figure 1);
- The character of the coastline.

Criteria and Indicators

3.17. The sensitivity of a zone to offshore wind farms is based on a series of criteria with associated indicators which define what makes an area more or less susceptible to the development type or influences its value. These are set out in **Appendix A.**

3.18. For each zone we complete a proforma assessing different levels of susceptibility and value based on the indicators. It is important to note that whilst each factor will be scored, the overall sensitivity is not a simple adding up of the scores. Some criteria and indicators are more important than others and the summary of sensitivity explains the key factors underpinning the judgement.

3.19. The potential for cumulative effects are taken into consideration where possible development may result in adverse combined effects with existing and consented development. A series of criteria are set out in the proforma to assess the likelihood of this occurring and possible sensitivities deriving from this.

Thresholds of sensitivity

3.20. The thresholds for landscape and visual sensitivity are defined below in Table 1. The five point scale reflects the subtlety of different seascape's character.

Table 1 Thresholds for landscape and visual sensitivity

Level	Definition
Low	Seascape and/or visual characteristics of the zone are robust or degraded and/or its values are low and it can accommodate the relevant type of development without significant character change or adverse effects. Thresholds for significant change are very high.
Medium/low*	Seascape and/or visual characteristics of the zone are resilient to change and/or its values are medium/low or low and it can accommodate the relevant type of development in many situations without significant character change or adverse effects. Thresholds for significant change are high.
Medium*	Seascape and/or visual characteristics of the zone are susceptible to change and/or its values are medium/low through to high/medium and/or it *may* have some potential to accommodate the relevant type of development in some *defined* situations without significant character change or adverse effects. Thresholds for significant change are intermediate. Suitability for wind farm development will be determined by the distance offshore in relation to buffers set out in OESEA, 2020.
High/ medium*	Seascape and/or visual characteristics of the zone are vulnerable to change and/or its values are medium through to high (although this level of value is not essential where landscape or visual susceptibility are key issues). The seascape zone may be able accommodate the relevant type of development but only in limited situations without significant character change or adverse effects if defined in the relevant zone summary. Thresholds for significant change are low.
High*	Seascape and/or visual characteristics of the zone are very susceptible to change and/or its values are high or high/medium and it is unable to accommodate the relevant type of development without significant character change or adverse effects. Thresholds for significant change are very low.

*Suitability for wind farm development will also be determined by the distance offshore in relation to buffers set out in OESEA, 2020.

3.21. It is important to note as above that the levels of sensitivity must be read in conjunction with OESEA, 2020 buffer distances. This may mean that even in medium sensitivity seascapes that development is not appropriate if too close inshore. We define the extent, size and location of potentially suitable development in the recommendations and associated summary text. For high/medium sensitivity zones there may be sea which has high sensitivity with other parts which may have some very minor potential but this does not amount to a large scale allocation. Overall, this level of sensitivity is considered to be a constraint on large wind farms in terms of seascape and visual factors.

Stage 1 reporting

3.22. The Stage 1 draft report summarised the method, findings for the seascape zones with associated mapping, and backed up by the detailed assessments.

Site visits

3.23. A site visit to locations along the coast was carried out to verify boundaries and aesthetic and sensory qualities at representative key viewpoints (see **Appendix C**). This assisted in reviewing the natural beauty indicators and associated qualities, value and sensitivity. These findings fed into the final report.

4. Summary of findings

4.1. The seascape and visual sensitivity findings indicate the preferred zones for the location of offshore wind farms with a tabular summary of sensitivities for each seascape zone in Table 2 below. A detailed assessment for each zone is set out in Part 2 which sets out the recommendations for different heights of wind turbines. All these conclusions clearly only relate to seascape and visual matters and not other factors which have to be taken into consideration, particularly in relation to the intrinsic nature of the sea and sea bed.

4.2. The following conclusions summarised in Table 2 have been reached on the locations that development might proceed in terms of seascape and visual sensitivity factors. They are based entirely on the zone evaluations and if there is any perceived conflict or difference in emphasis between the two, the detailed evaluations should be taken as the definitive position. The zones and their sensitivities are set out in Figures 9 and 10.

Table 2 Suffolk seascape sensitivity

Ref no	Name	Sensitivity
SCZ 01	Suffolk Heritage Coast Inshore- South	High/medium
SCZ 02	Suffolk Heritage Coast Offshore- South	Medium
SCZ 03	Greater Gabbard Environs	Medium
SCZ 04	Suffolk Heritage Coast Inshore- North	High
SCZ 05	Suffolk Heritage Coast Offshore- North	Medium
SCZ 06	North Suffolk and Norfolk Inshore	Medium
SCZ 07	North Suffolk and Norfolk Offshore	Medium
SCZ 08	Outer Offshore	Medium/low

4.3. Overall, the seascape of Suffolk is sensitive to offshore wind farm development primarily due to its relationship with the combined Suffolk Coast and Heaths AONB and Suffolk Heritage Coast, contributing significantly to the AONB's setting and natural beauty. The distance offshore of each seascape zone is primarily determined by the OESEA (2020) report which sets out buffers for different levels of sensitivity of coast and heights of turbine to blade tip. Though a low lying and gently curving coast, the qualities of panoramic unspoilt views, tranquillity and remoteness, the relatively clear visibility offshore indicated by weather station data (**Appendix B**), and the easterly aspect where turbines are potentially most visible in the afternoon/early evening all contribute with other factors to enhance the value and sensitivity of the area.

4.4. The site visit revealed the degree of intervisibility of Sizewell A and B nuclear power stations and the masts at Orford Ness with some stretches of coast on either side. Clearly, users walking along the coast needed to be facing towards the structures for them to feature in views. However, their visibility in places emphasised their contrast with the special qualities and natural beauty of the AONB in the intervening rural coast and the open sea and the predominantly clear horizon offshore. This could be considered to make the AONB and Heritage Coast more vulnerable to intrusion from energy infrastructure offshore which could cumulatively adversely affect the natural beauty of coast and its setting. Sizewell C would be likely to exacerbate this situation.

4.5. The most sensitive seascape zones are SCZ 01 and SCZ 04 which lie adjacent to the AONB and Heritage Coast.

4.6. SCZ 01 lies within 34km of the shore which is the suggested buffer for all scales of wind farm development to avoid significant adverse effects on a combined AONB and Heritage Coast. This combined with the susceptibility and other values related to the zone suggest an area of constraint on windfarm development. There is distinct separation between Greater Gabbard/Galloper and the London Array wind farms which, combined with distance, is helpful in avoiding substantial combined cumulative effects on the designated coastline. A very limited extension of Greater Gabbard/ Galloper to the south west (as currently proposed) may cause limited effects if the turbines are the same/similar in height and spacing to the existing. An extension further towards the coast *within* the seascape zone would be considered to cause harm to the qualities and natural beauty of the AONB.

4.7. SCZ 02, just offshore from SCZ01, lies between 34km and 40km which potentially allows consideration of wind farms with turbines between 107m to 204m high but it contributes to the separation between Greater Gabbard/Galloper and the London Array wind farms. Further development, such as the wind farm extension proposed, needs to avoid a curtaining effect on the horizon and should be within the range of heights specified to avoid combined cumulative effects.

4.8. SCZ 03 is strongly associated with Greater Gabbard/Galloper offshore windfarms and it is considered that an extension within the area may be appropriate provided the turbines are the same or very similar height and spacing to the existing.

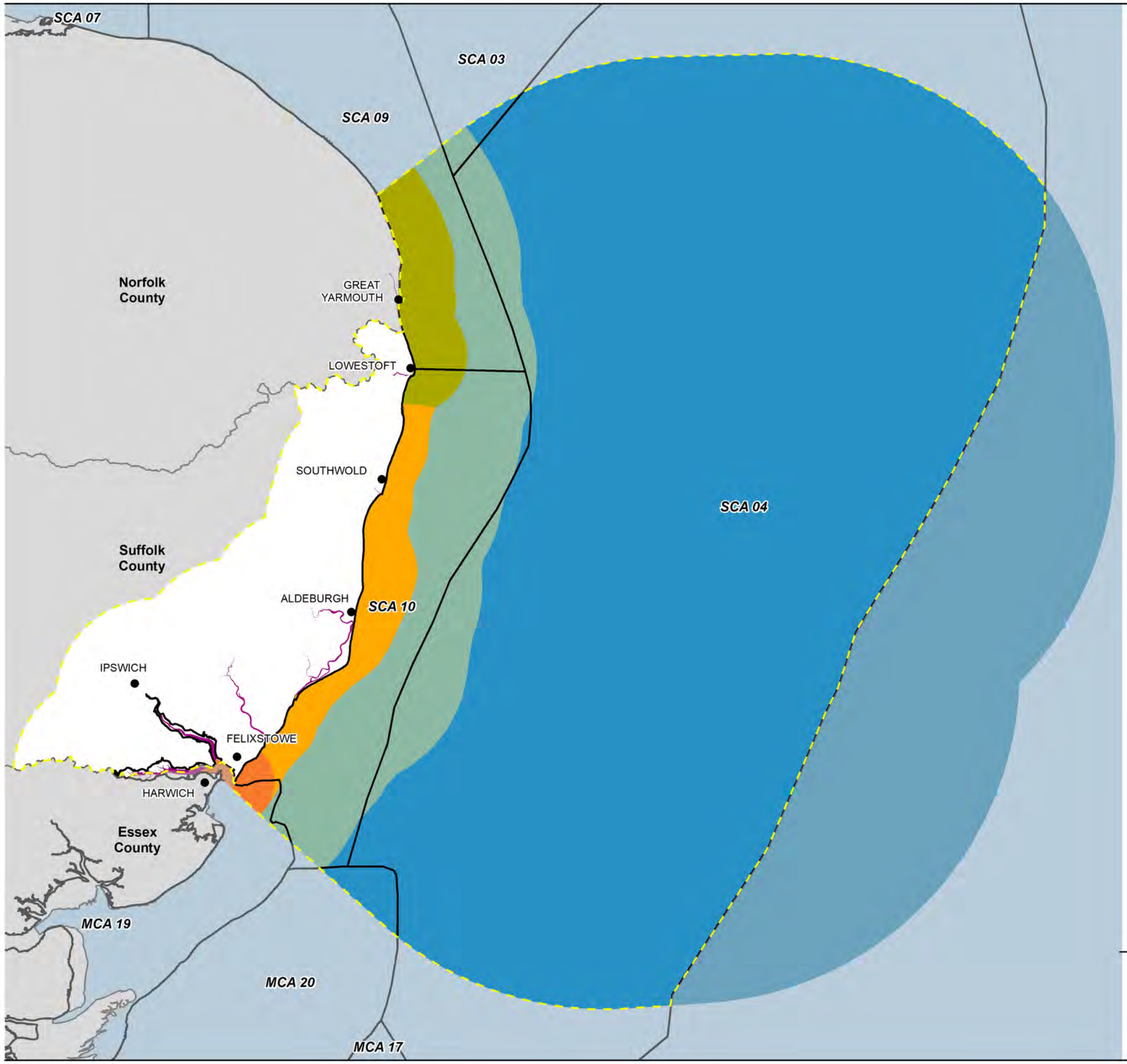
4.9. SCZ 04 lies within 34km of the shore which is the suggested buffer for all scales of wind farm development to avoid significant adverse effects on a combined AONB and Heritage Coast. This, combined with the susceptibility and other values related to the zone, suggest an area of strong constraint on windfarm development. Turbines as proposed in East Anglia TWO *within the zone* would be considered to cause significant harm to the qualities and natural beauty of the AONB. A limited extension of Greater Gabbard/ Galloper to the south of the zone (as currently proposed) may cause limited effects but the turbines should be similar in height and spacing to the existing. An extension of Greater Gabbard/ Galloper further towards the coast *within* the seascape zone would be considered to cause harm to the qualities and natural beauty of the AONB.

4.10. SCZ 05, just offshore from SCZ 04, lies between 34km and 40km which potentially allows consideration of wind farms with turbines between 107-224m high but is a constraint buffer for turbines from 225-400m high to avoid significant adverse effects on a combined AONB and Heritage Coast. Arrays should avoid a curtaining effect when viewed from the AONB and Heritage Coast coastline. This could be achieved with gaps between arrays of at least 12km, preferably more, and arrays not exceeding 15km width as perceived from shore. A limited extension of Greater Gabbard/ Galloper to the south of the zone (as currently proposed) may cause limited effects but the turbines should be similar in height and spacing to the existing.

4.11. SCZ 06 lies within 14km of the shore which is the suggested buffer for all scales of wind farm development to avoid significant adverse effects on largely undesignated coast with urban areas. This combined with the susceptibility and other values related to the zone suggest an area of constraint on windfarm development. Scroby Sands is an early development with small 2MW turbines located very close to shore. An extension of this would be problematic in seascape terms due to current commercially available turbine sizes and the potential for cumulative effects.

4.12. SCZ 07, just offshore of SCZ 06, lies between 14km and 30km which potentially allows consideration of appropriately designed wind farms with turbines between 107-350m high at graded distances offshore but is a suggested constraint buffer for turbines over 351m high to avoid significant adverse effects on the largely undesignated coast with urban areas. There may be some cumulative effects in conjunction with Scroby Sands and this would need to be carefully considered.

4.13. SCZ 08 is an area of more limited seascape/visual constraints, especially to the east. An extension of Greater Gabbard/ Galloper to the east and south east within the area may cause limited effects but the turbines should be similar in height and spacing to the existing. Turbines as proposed in East Anglia TWO and ONE North *within the zone* would not be considered to cause significant harm to the qualities and natural beauty of the AONB.Further proposals within the zone should be located as far offshore as possible, and if located towards the western boundary maintain large gaps (say 12km+) between arrays (say a similar size to East Anglia ONE North) so clear views of the horizon between arrays is possible from the designated coast.



KEY

Study Area

National Marine Character Areas

MCA 17 Thanet Shipping Waters
MCA 19 Essex and South Suffolk Estuaries and Coastal Waters
MCA 20 Thames Approaches
SCA 03 East Midlands Offshore Gas Fields
SCA 04 East Anglian Shipping Waters
SCA 07 East Midlands Coastal Waters
SCA 09 Norfolk Coastal Waters
SCA 10 Suffolk Coastal Waters

Suffolk Seascape Character Types (February 2019)

SCT 01 Inland Navigable Waters
SCT 02 International Ports and Approaches
SCT 03 Nearshore Waters
SCT 04 Developed Nearshore Waters
SCT 05 Coastal Waters
SCT 06 Offshore Waters

N

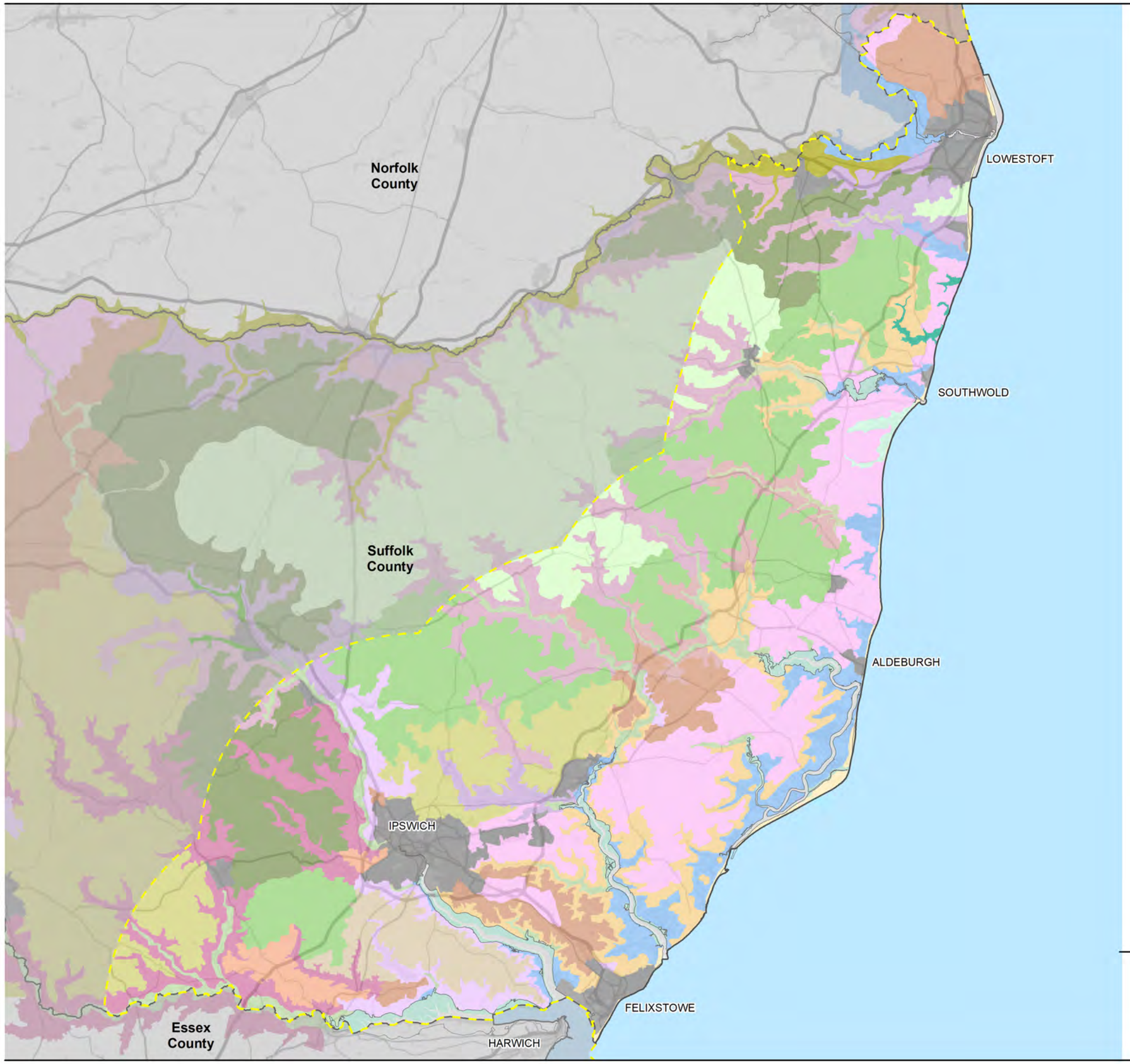
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Suffolk seascape sensitivity to offshore windfarms

Figure 1
National Marine Character Areas and local Seascape Character Types



KEY

Study Area

Suffolk Landscape Character Types (Feb 2019)

- Ancient Estate Claylands
- Ancient Estate Farmlands
- Ancient Plateau Claylands
- Ancient Rolling Farmlands
- Coastal Dunes and Shingle Ridges
- Coastal Levels
- Estate Sandlands
- Open Coastal Fens
- Planned Fenlands
- Plateau Claylands
- Plateau Estate Farmlands
- Plateau Farmlands
- Rolling Estate Chalklands
- Rolling Estate Claylands
- Rolling Estate Farmlands
- Rolling Estate Sandlands
- Rolling Valley Claylands
- Rolling Valley Farmlands
- Rolling Valley Farmlands and Furze
- Saltmarsh and Intertidal Flats
- Settled Chalklands
- Settled Fenlands
- Undulating Ancient Farmlands
- Undulating Estate Farmlands
- Urban
- Valley Meadowlands
- Valley Meadows and Fens
- Wooded Chalk Slopes
- Wooded Fens
- Wooded Valley Meadowlands
- Wooded Valley Meadowlands and Fens

N

0 2.5 5 10

Km

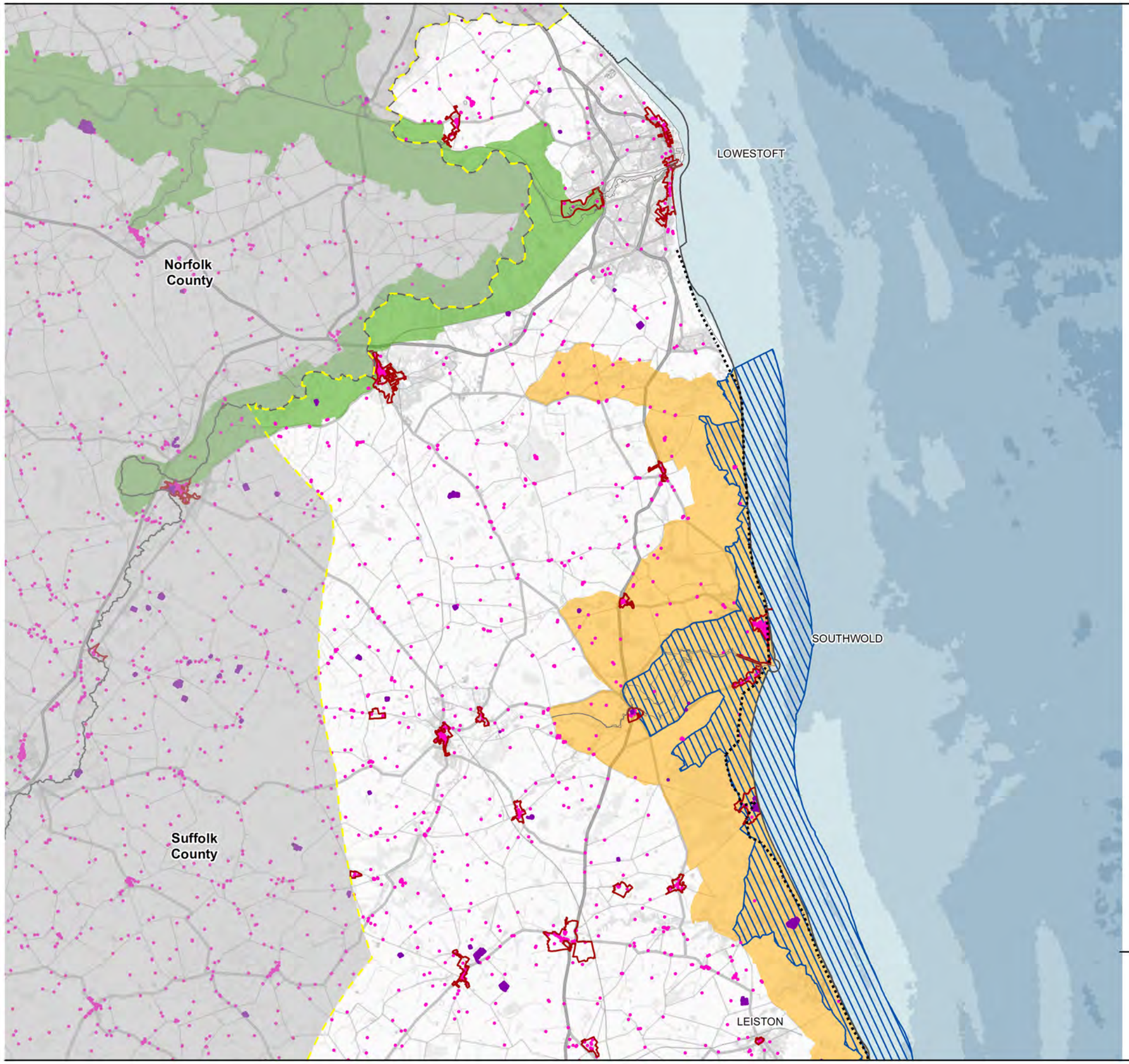
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Suffolk seascape sensitivity to offshore windfarms

Figure 2
County landscape character



KEY

- Study Area
- Suffolk Coast Path
- National Parks
- AONB
- Heritage Coasts
- Conservation Areas
- Scheduled ancient monuments
- Listed Buildings

Bathymetry (m)

- -10 - 0
- -20 - -10
- -30 - -20
- -40 - -30
- -50 - -40
- -60 - -50

N

0 1.25 2.5 5

Km

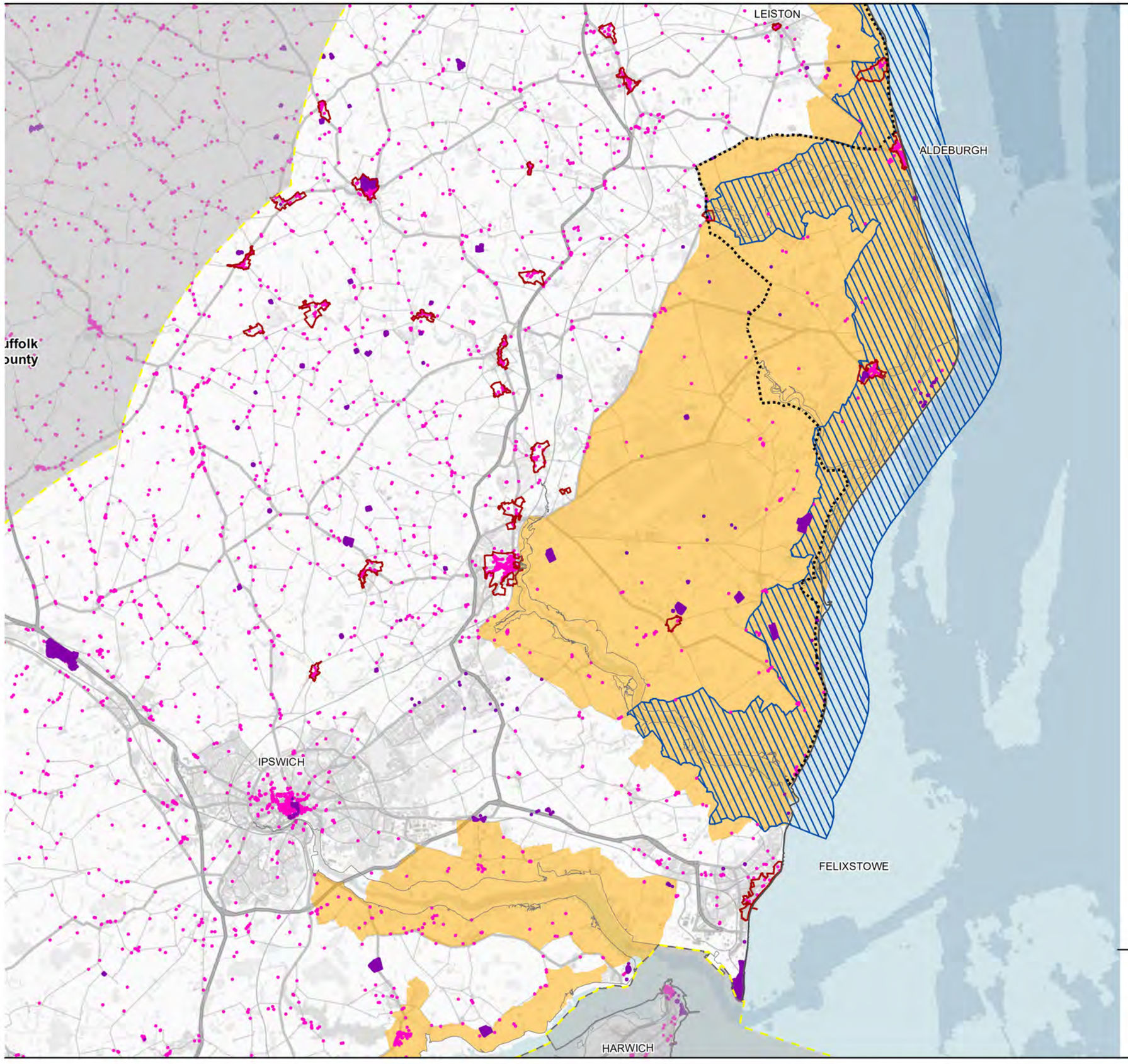
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Suffolk seascape sensitivity to offshore windfarms

Figure 3
Landscape and Heritage Designations, and Coast Path (North)



KEY

- Study Area
- Suffolk Coast Path
- National Parks
- AONB
- Heritage Coasts
- Conservation Areas
- Scheduled ancient monuments
- Listed Buildings

Bathymetry (m)

- -10 - 0
- -20 - -10
- -30 - -20
- -40 - -30
- -50 - -40
- -60 - -50

N

0 1.25 2.5 5

Km

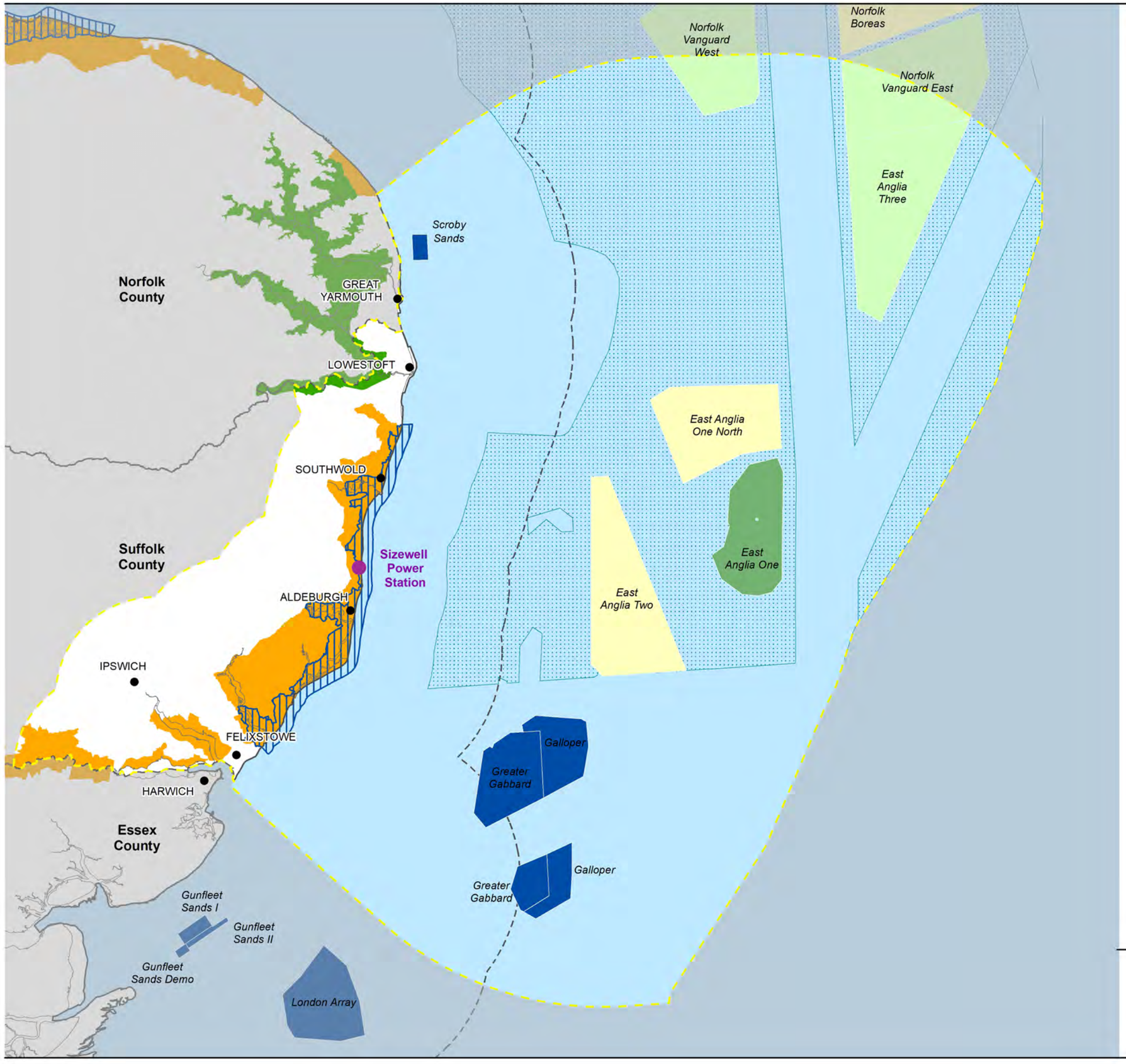
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Suffolk seascape sensitivity to offshore windfarms

Figure 4
Landscape and Heritage Designations, and Coast Path (South)



KEY

- Study Area
- National Parks
- AONB
- Heritage Coasts
- UK Territorial limit

Offshore wind farms

- Active/In Operation
- Under Construction
- Consented
- In Planning
- Pre-planning Application

Round 4 Bidding Area: Eastern Regions
Hard constraints removed

N

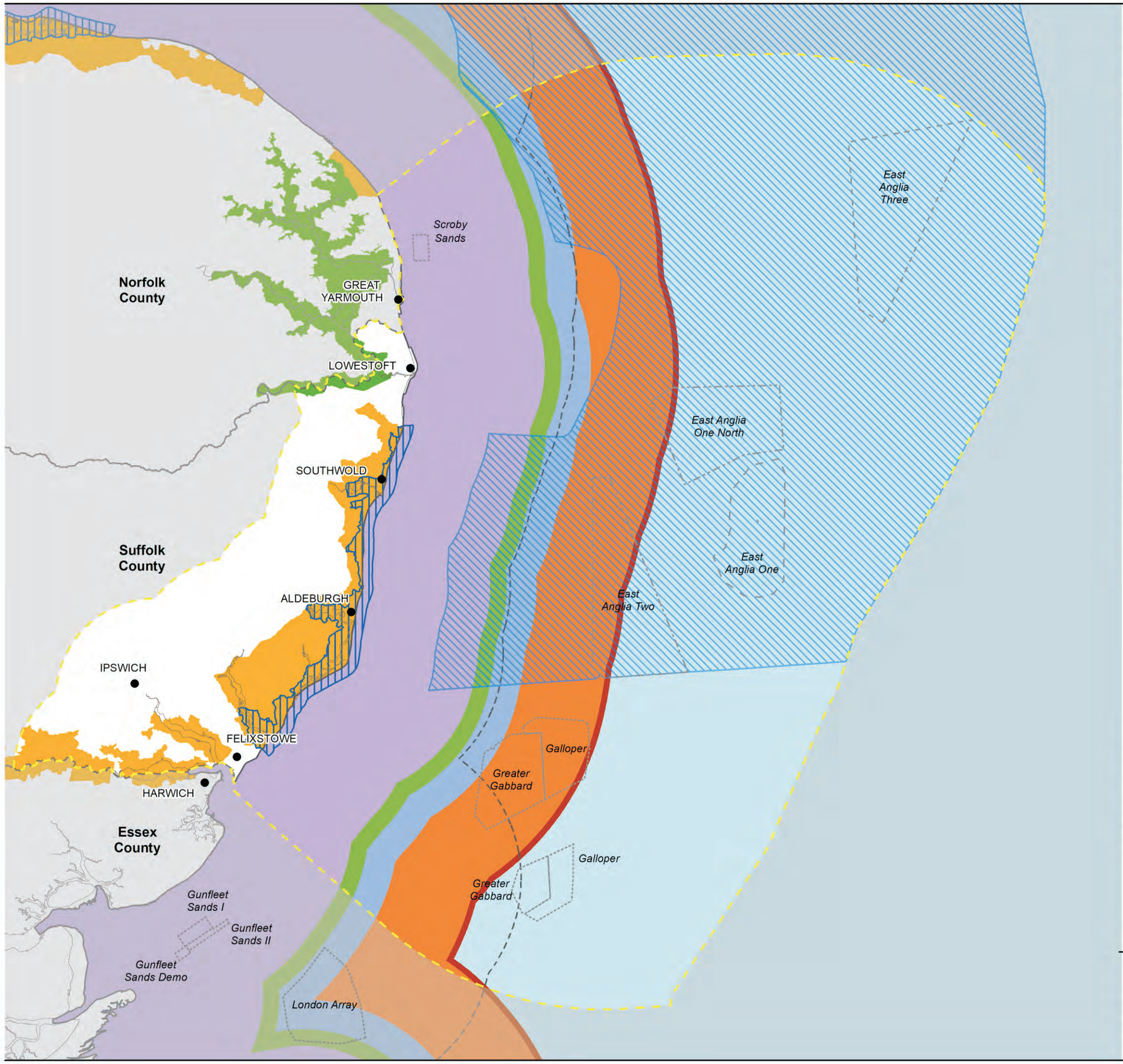
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Suffolk seascape sensitivity to offshore windfarms

Figure 5
Offshore windfarms and Round 4 bidding area



KEY

- Study Area
- Heritage Coasts
- AONB
- National Parks
- UK Territorial limit

Average low* magnitude of effect for wind turbines from coast (OESEA, 2020)

- 107-145m high turbines to blade tip = 19.2km
- 150-175m high turbines to blade tip = 21.7km
- 176-223m high turbines to blade tip = 26.2km
- 250-300m high turbines to blade tip = 38.6km
- 301-400m high turbines to blade tip = 39.5km

*The distances represent the zones where there is an average low/moderate or low visual magnitude of effect on coastal receptors. Turbines of the size noted should be placed beyond the distance noted eg 107-145m turbines should be placed at least 19.2km from the coast.

Offshore wind farms

- Active/In Operation
- Consented
- In Planning
- Under Construction
- Round Four Area: Eastern Regions

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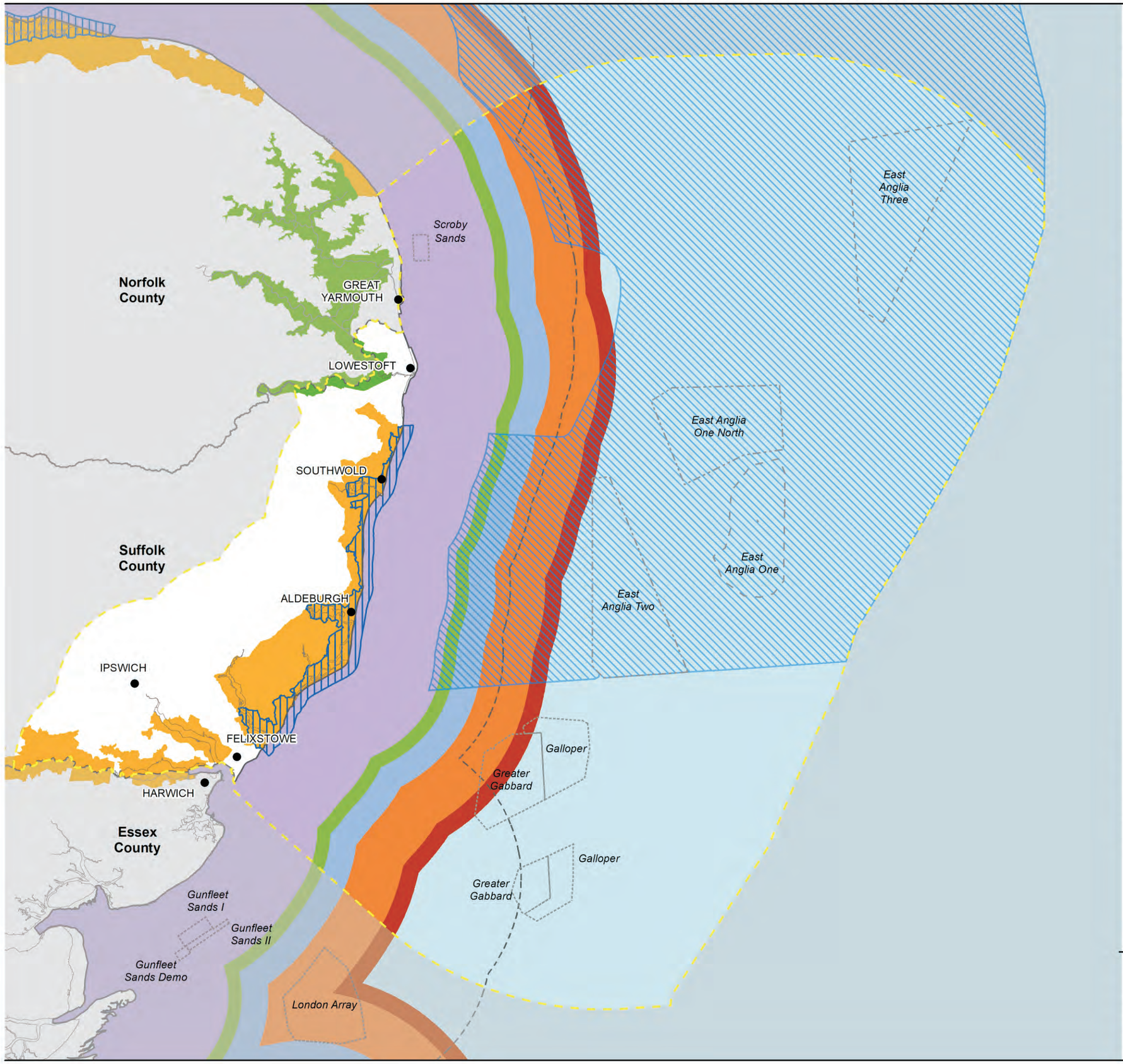
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Suffolk seascape sensitivity to offshore windfarms

Figure 6
Average low magnitude of visual effect for wind turbines from coast



KEY

- Study Area
- Heritage Coasts
- AONB
- National Parks
- UK Territorial limit

Average medium* magnitude of effect for wind turbines from coast (OESEA, 2020)

- 107-145m high turbines to blade tip = 14km
- 150-175m high turbines to blade tip = 16km
- 176-223m high turbines to blade tip = 20km
- 250-300m high turbines to blade tip = 27.5km
- 301-400m high turbines to blade tip = 30km

*The distances represent the zones where there is an average medium/moderate visual magnitude of effect on coastal receptors. Turbines of the size noted should be placed beyond the distance noted eg 107-145m turbines should be placed at least 14km from the coast.

Offshore wind farms

- Active/In Operation
- Consented
- In Planning
- Under Construction
- Round Four Area: Eastern Regions

N

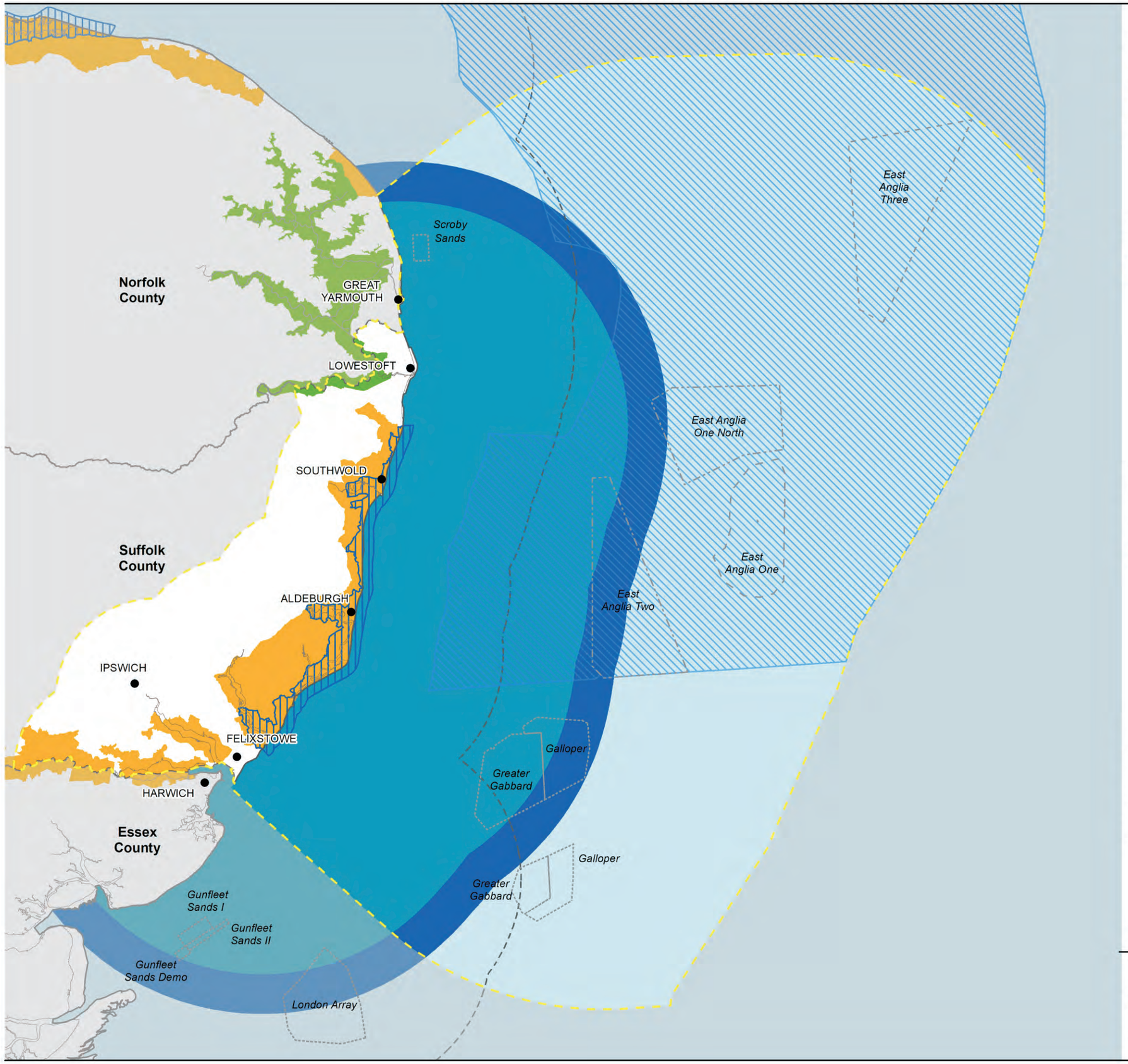
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Suffolk seascape sensitivity to offshore windfarms

Figure 7
Average medium magnitude of visual effect for wind turbines from coast



KEY

- Study Area
- Heritage Coasts
- AONB
- National Parks
- UK Territorial limit

Recommended buffers for AONB/Heritage Coast (OESEA, 2020)

- 107-225m high turbines to blade tip = 34km
- 226-400m high turbines to blade tip = 40km

Offshore wind farms

- Active/In Operation
- Consented
- In Planning
- Under Construction
- Round Four Area: Eastern Regions

N

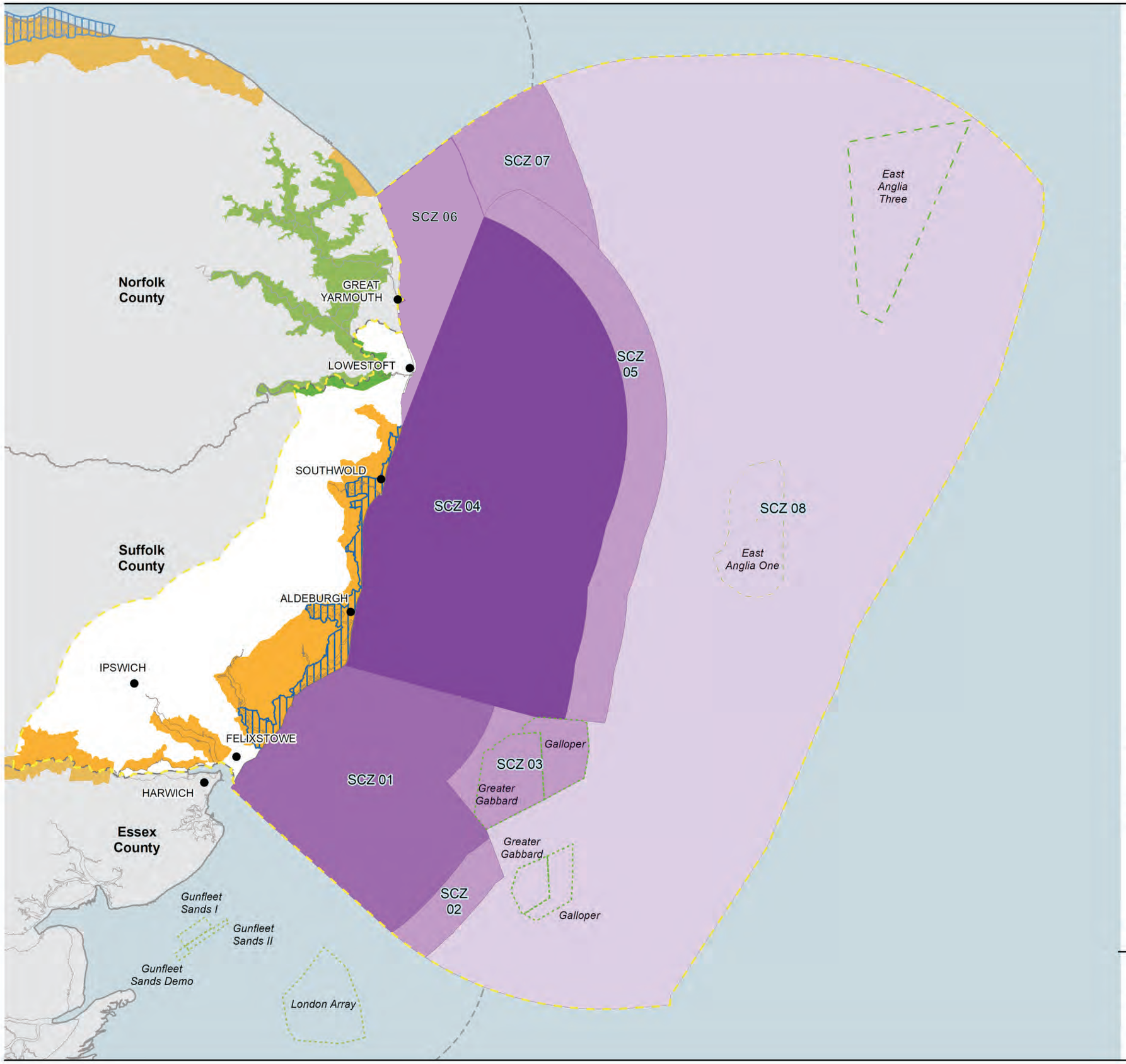
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Suffolk seascape sensitivity to offshore windfarms

Figure 8
Visual buffers for combined Suffolk Coast and Heaths AONB and Suffolk Heritage Coast



KEY

- Study Area
- National Parks
- AONB
- Heritage Coasts
- UK Territorial limit

Seascape and visual sensitivity zones (offshore wind farms) (High to Low)

- High
- High/medium
- Medium
- Medium/low

Offshore wind farms

- Active/In Operation
- Under Construction
- Consented

N

0 5 10 20

Km

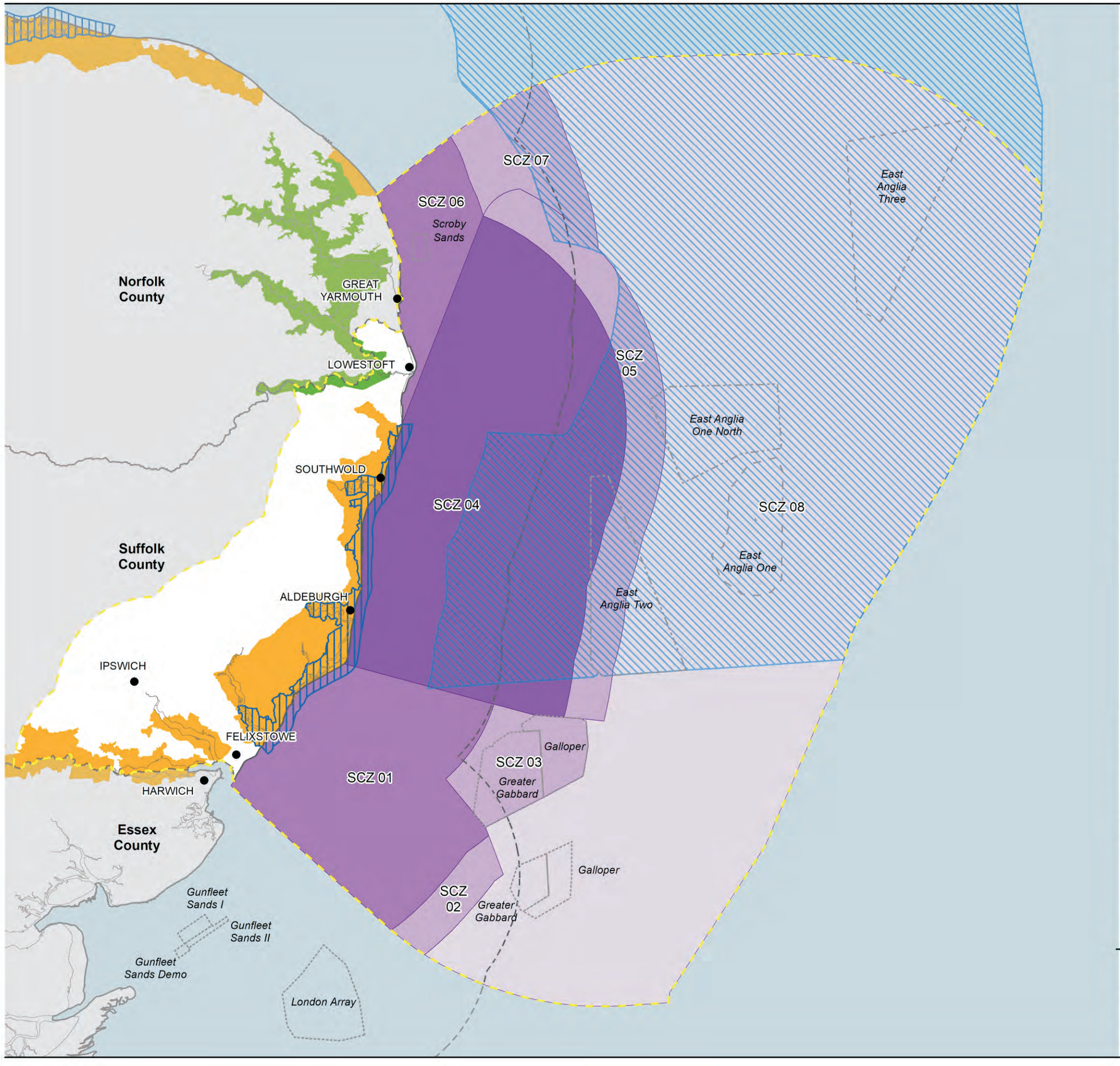
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Suffolk seascape sensitivity to offshore windfarms

Figure 9
Suffolk designated landscapes and their seascape and visual sensitivity to offshore wind farms



KEY

- Study Area
- Heritage Coasts
- AONB
- National Parks
- UK Territorial limit

Seascape and visual sensitivity zones (offshore wind farms) (High to Low)

- High
- High/medium
- Medium
- Medium/low

Offshore wind farms

- Active/In Operation
- Consented
- In Planning
- Under Construction
- Round Four Area: Eastern Regions

N

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Suffolk seascape sensitivity to offshore windfarms

Figure 10
Suffolk designated landscapes and their seascape and visual sensitivity to offshore wind farms - 2

PART 2: Detailed seascape zone assessments

Seascape zone No: 01	Name: Suffolk Heritage Coast Inshore- South
Location/Extent	
The seascape zone is defined by the southern boundary of the study area to the south, the change of direction of the coast at Orford Ness to the north, the boundary of average low/medium-low magnitude of effects of turbines of a similar scale to Greater Gabbard/Galloper to the east (21.7km) (derived from the OESEA study, 2020), and the suggested buffer distance for smaller turbines off combined AONBs and Heritage Coasts (34km) to the south east (also OESEA, 2020).	
OVERALL SENSITIVITY	
Sensitivity	High/medium
Summary	
70% of the generally low-lying coast of this seascape zone is covered by the combined Suffolk Coast and Heaths AONB and Suffolk Heritage Coast designation. The south western part between Felixstowe and Felixstowe Ferry is fronted by urban/suburban development, park or a golf course but includes a seafront Conservation Area and popular beaches. The approaches to Harwich Harbour/Felixstowe lie in the southern part of the inshore/offshore area and are used by a range of shipping including container vessels and ferries, as well as leisure craft from Shotley and the Deben estuary. Greater Gabbard/Galloper windfarms lie offshore from the zone. The zone's susceptibility lies in the panoramic views from the coast including the Suffolk Coast Path along this part of the coast and from the north, framed views from the Deben estuary, the sense of remoteness, tranquillity and openness at the distinctive spit at Orford Ness and around Shingle Street which the seascape contributes to, and which relate to the AONB's natural beauty criteria, and the relatively high frequency of visibility upto long distances offshore. The zone's value lies in its role as part of the setting of the combined Suffolk Coast and Heaths AONB and Suffolk Heritage Coast with 70% of the coast covered by the designation, the views from the scheduled monuments overlooking the area including the listed Orford Castle and numerous Martello towers and from listed Bawdsey Manor and associated gardens, views from Aldeburgh Conservation Area to the north and SPA/SACs. The factors which slightly reduce sensitivity are the presence of shipping and associated infrastructure to the south and World War II and subsequent military infrastructure on the coast including the masts at Orford Ness, and the presence of Greater Gabbard/Galloper wind farms offshore, but the latter raise the potential for cumulative effects.	
RECOMMENDATIONS FOR OFFSHORE WIND FARMS IN TERMS OF SEASCAPE AND VISUAL FACTORS	
Summary	
The seascape zone lies within 34km of the shore which is the suggested buffer for all scales of wind farm development to avoid significant adverse effects on a combined AONB and Heritage Coast. This combined with the susceptibility and other values related to the zone suggest an area of constraint on windfarm development. There is distinct separation between Greater Gabbard/Galloper and the London Array wind farms which, combined with distance, is helpful in avoiding substantial combined cumulative effects on the designated coastline. A very limited extension of Greater Gabbard/ Galloper to the south west (as currently proposed) may cause limited effects if the turbines are the same/similar in height and spacing to the existing. An extension further towards the coast *within* the seascape zone would be considered to cause harm to the qualities and natural beauty of the AONB and Heritage Coast.	
SEASCAPE CHARACTER CONTEXT	
National Marine Character Areas	MCA 19 Essex and South Suffolk Estuaries and Coastal Waters (part) MCA 20 Thames Approaches (part) SCA 04 East Anglian Shipping Waters (part)

	SCA 10 Suffolk Coastal Waters (part)
Local seascape character areas	SCT 2 International Ports and Approaches (all) SCT 03 Nearshore Waters (part) SCT 05 Coastal Waters (part) SCT 06 Offshore Waters (part)
VISUAL BUFFERS	
Distance offshore- range	Shore to 34km except where between Greater Gabbard wind farm and the shore- 21.7km.
*Size of turbines potentially having low or medium/low magnitude of effect**	• Turbines below 145m would be likely to exceed low magnitude of effect less than 19.2km from shore. • Turbines 145-175m would be likely to exceed low magnitude of effect less than 21.7 km from shore. • Turbines above 176-225m would be likely to exceed low magnitude of effect less than 26.2 km from shore. • Turbines above 226-300m would be likely to exceed low magnitude of effect.
*Size of turbines potentially having medium magnitude of effect**	• Turbines below 145m would be likely to exceed medium magnitude of effect less than 14km from shore. • Turbines 145-175m would be likely to exceed medium magnitude of effect less than 15.8km from shore. • Turbines 176-225m would be likely to exceed medium magnitude of effect less than 20.2km from shore. • Turbines 226-300m would be likely to exceed medium magnitude of effect less than 27.5km from shore. • Turbines 301-350m would be likely to exceed medium magnitude of effect less than 30km from shore. • Turbines 351-400m would be likely to exceed medium magnitude of effect less than 30km+ from shore.

SUSCEPTIBILITY							
Main criteria	**Sub-criteria**	**H**	**H / M**	**M**	**M /L**	**L**	**Comments**
Natural							
Hinterland	Form/ topography/ character				■		The landform is generally low lying with some coastal plateau and some low slopes of the estate sandlands behind coastal levels.
Coastal edge	Cliffs, rocky coasts, upper beach, dunes etc			■			Mix of very gently curving bays with minor headlands and small estuaries and a very gently convex coast, occasional low cliffs, extensive shingle beaches in places including the very long spit at Orfordness and at Shingle Street.
Coastal edge	Intertidal				■		Mix of simple shingle beaches and banks with estuarial deposits, with groynes and rock armour at Felixstowe and in places elsewhere.

							Some small lagoons behind shingle banks.
Main criteria	**Sub-criteria**	**H**	**H / M**	**M**	**M /L**	**L**	**Comments**
Key habitats, features and species	Marine, intertidal, coastal edge (if relevant).						Estuary SPAs, Orford Shingle Street SAC, Outer Thames Estuary SPA (wintering red-throated diver and common tern and little tern during the breeding season), Margate and Long Sands SAC
Cultural/ Social							
Use of the sea *(see under seascape pattern and foci for assessment)*	Navigation, fishing, leisure, energy production, mineral extraction etc.						To the south- use by shipping accessing the ports of Felixstowe and Harwich (Harwich Haven) with associated beacons, buoys and anchorages, some aggregate production areas offshore, Greater Gabbard and London Array outside the area offshore, some fishing, leisure sailing eg from Shotley and Felixstowe Ferry, use of beaches at Felixstowe. Intensity of use reduces to the north.
Use of the coast/ hinterland	Settlement, industry, energy, marine related development such as ports, power stations, leisure/tourism, agriculture, conservation etc.						Felixstowe- port with related infrastructure and residential and leisure uses to the south, former military and atomic research station on Orfordness to north, otherwise rural coast/hinterland Suffolk Coast Path, golf course, limited settlements and Bawdsey Manor- PGL centre.
Historic features at sea, on seabed or buried below	eg wrecks, paleolandscapes						Recession of coastline over many years, numerous wrecks, some related to harbours.
Historic features on coast	eg coastal forts, castles, lighthouses						Napoleonic Wars fort (Landguard Fort) and numerous Martello towers, military related structures such as pagodas at Orford Ness, Bawdsey Manor historic park and garden, Orford Castle (and church) set back from the coast but overlooking it.
Cultural associations	eg former use of the sea or coast, boatmaking, former trade routes, associations with artists and writers, food traditions, spiritual connections, education and interpretation etc						Historic ports at Harwich and Felixstowe (associated with the Mayflower) with trade routes, defensive coast -Napoleonic forts and Martello towers, WWII infrastructure and former military use of Orfordness alongside the national nature reserve, Orford Castle, Bawdsey Manor- former manor, now outdoor education facility, painting of Orfordness lighthouse by Daniell.

Main criteria	Sub-criteria	H	H / M	M	M /L	L	Comments
Quality/ Condition							
Intactness	Degree of completeness or fragmentation of area character or elements, presence of detractors and extent.						Seascape busier to the south with shipping and beacons apparent, Greater Gabbard and London Array visible in very good visibility. Masts at Orfordness.
State of repair	Condition of coastal natural and built features/ elements, maintained or not maintained.						Generally well maintained and protected coast (with designations) but managed dereliction at Orford Ness which contributes to distinctiveness.
Aesthetic and Perceptual							
Scale	Of sea in relation to coastal form or offshore.						The sea feels large scale with panoramic views
Openness and enclosure	Degree and nature of enclosure of sea by land, framing of views.						Openness is a key characteristic of the coast especially to the north with generally open views out to sea from beaches with some framing at the mouth of the Deben.
Exposure	Sheltered, calm, exposed.						Exposed, eroding and accreting coast with distinctive character to north with sheltered waters in estuaries and anchorages to the south.
Aspect	Relationship with sun.						South east facing with potential for highlighting of turbines in low sun in afternoon and near sunset especially in summer.
Seascape pattern and foci	Features and elements on/above the sea surface.						Presence of shipping/ferries with markers to the south but shipping less evident to the north. Windfarms at a distance offshore- 170m high turbines at Greater Gabbard/Galloper most apparent and London Array.
Seascape pattern and foci - coast and hinterland	eg Headlands, cliffs, high hills or landmarks such as towers or castles.						Very distinctive shingle spit at Orford Ness, some limited cliffs with small headlands, with Martello towers and Orford Castle inland increasing susceptibility. Small scale and low landmarks generally apart from 60m masts at Orfordness to the north.
Contribution to the setting of a coast or seascape							The zone is integral to the character of the coast all lying within the

character area							limits of visual perception
Weather-visibility modifiers	Based on 10 years local weather station data, the % of time that visibility is very good (20-40km) or excellent (40km+). (Two % in order to rt)						High levels of visibility Weybourne (34% and 20%) and Shoeburyness (36% and 9.5%).
Main criteria	**Sub-criteria**	**H**	**H / M**	**M**	**M /L**	**L**	**Comments**
Visual Characteristics							
Key views- **land to sea** **sea to land** **sea to sea**	Including nature of views and elevation, perhaps including iconic features. Views from within area and from outside.						Land to sea- views from Orford Castle, Felixstowe seafront, around Martello towers and from Suffolk Coast Path- Felixstowe Ferry/Deben estuary/edge of Bawdsey Manor, Bawdsey East Street, Shingle Street and mouth of the Alde/Ore estuary which is a distinctive location near the end of Orford Ness.
Intervisibility of the area with important visual receptors	Amount/length/extent /nature of intervisibility and distance away from unit/development. eg relationship in terms of angle of view, topographic influences						Most of the coast is accessible and directly facing the sea with a direct relationship with the seascape zone. The zone is also visible from the north eg Aldeburgh.
Typical receptors - type and number	eg coast walkers, visitors to coast/features, beach visitors, residents, leisure sailors, ferries, shipping, urban areas etc. In designated areas or outside designated areas						Users of coast within AONB and Heritage Coast (70% of coast). Suffolk Coast Path users, visitors to beach, promenade and pier at Felixstowe, and to Felixstowe Ferry. Visitors to Orford Ness. Leisure sailing from Deben Estuary and Shotley. Harwich ferry users.
OVERALL SUSCEPTIBILITY							

VALUE		
DESIGNATIONS		
Landscape designations	*AONB Designation*	Suffolk Coast and Heaths AONB
	Heritage Coast Designation	Suffolk Heritage Coast
Historic	*Key scheduled*	Orford Castle; Martello Towers- on golf course adjoining Woodbridge Haven, at Felixstowe ferry, Rose Cottage,

designations	*monuments*	Bawdsey Beach, SE of Buckanay Farm and Shingle Street; Landguard Fort- Felixstowe.
	Conservation Areas	Felixstowe, Orford (also Aldeburgh to north)
	Key listed buildings	Orford Castle- Grade I listed building tower, Bawdsey Manor and associated buildings and structures, various Martello towers and battery observation post.
	Historic parks and gardens	Bawdsey Manor Historic Park and Garden; Cliff Gardens (and Town Hall Garden), Felixstowe
Marine nature conservation designations	*SPA/SAC*	Outer Thames Estuary SPA, Margate and Long Sands SAC, Southern North Sea SAC
	Marine Conservation Zone	-

VALUE CRITERIA

Main criteria	Sub-criteria	H	H / M	M	M /L	L	Comments
Landscape designations- National, regional, local	eg National Parks, AONBs, Heritage Coast, local countryside designations, (distance, relationship, extent of role as setting).						75% of the coast Suffolk Coast and Heaths AONB and Suffolk Heritage Coast combined
Nature conservation designations	Main relevant marine designations eg MCZ, RAMSAR, SAC, SPA, etc						Outer Thames Estuary SPA, Margate and Long Sands SAC, Southern North Sea SAC
Heritage designations	Marine and coastal- eg scheduled monuments, Conservation Areas, listed buildings, historic parks and gardens, and their settings						Bawdsey Manor Historic Park and Garden including listed structures, Felixstowe Conservation Area, Martello towers dotted along the coast- all increase value.
Relevant special qualities /natural beauty indicators	If landscape/ coastal designation overlooks area. (List and define the degree to which the area contributes to these).						The AONB and Heritage Coast directly overlook the seascape zone.
	Scenic quality- sense of place						Strong sense of place especially associated with Orford Ness and shingle beaches and banks and estuaries, and Martello towers overlooking the sea.
	Scenic quality- panoramic views and vantage points						Panoramic views from Coast Path
	Relative wildness, sense of remoteness, lack of human						Sense of remoteness to the north east around Shingle Street and Orford Ness with extensive shingle

	influence						banks, estuary and nature reserves.
	Relative tranquillity- absence of development						Substantially tranquil north of Bawdsey and in parts of Orford Ness reducing to the south east with limited tranquillity at Felixstowe on coast. Shipping reduces tranquillity to an extent.
	Relative tranquillity- dark skies						Substantially dark to the north east around Orford Ness, although possibly with mast lights to the north, reducing to the south east with lit streets at Felixstowe. Shipping, beacons and wind farms' red aviation lights offshore.
	Cultural associations/artistic representations						Historic defence structures, link to the Mayflower- Harwich, painting of Orfordness lighthouse by Daniell, smuggling around Shingle Street.
Community values	Value associated with area or features by people- communities of interest/place, public attitudes.						Leisure sailing, fishing and visits to the nature reserve form communities of interest, the Coast Path is well used and Felixstowe still popular.
Recreational value	Use for leisure or sport on sea, intertidal, coast.						Leisure sailing fishing and walking.
OVERALL VALUE							

CUMULATIVE EFFECTS	Comments
Existing and consented offshore wind farms within zone	Greater Gabbard/ Galloper and London Array nearby. Further development potentially could cause cumulative effects if using larger turbines or extending the perceived width of development along the horizon.
Potential planned further development in zone	Greater Gabbard/ Galloper extension
Current relationship of wind farms and effect on seascape character and setting of AONB	At present there is a clear separation between Greater Gabbard/ Galloper and London Array (30km). They are apparent on the horizon and are located within the setting of the AONB. They are detractors and not a key characteristic of the AONB. Their effect is mitigated by the size of turbine, the distance offshore, the apparent width along the horizon and the influence of visibility modifiers/weather.
Potential cumulative combined effect of existing, consented and potential planned development on seascape character and setting of AONB	The Greater Gabbard/ Galloper extension would be likely to slightly increase adverse effects on the AONB but the level of effects would depend on the size of turbine proposed. If this was the same/very similar in height and spacing then the effects may be limited. If turbine size is increased, the level of effect would also increase. Views of East Anglia TWO may be possible from the northern part of the area- Orford Ness. This could create a curtain of turbines on the horizon in close juxtaposition with Greater Gabbard/Galloper (7km gap).

Compatibility of cumulative combined effects with AONB policies	A small extension using the same size turbines as existing for Greater Gabbard/ Galloper could be construed as minimising effects on the purposes of the AONB. East Anglia TWO would be likely to be incompatible.
CUMULATIVE EFFECTS	**Comments**
Recommendations for constraint or opportunities setting out the most suitable locations for development with appropriate design, scale and spacing in order to provide benefits and/or mitigate and minimise effects	A very limited extension of Greater Gabbard/ Galloper to the south west (as currently proposed) may cause limited effects but the turbines should be similar in height and spacing to the existing. An extension further towards the coast *within* the seascape zone would be considered to cause harm to the qualities and natural beauty of the AONB. No other wind farm developments are considered appropriate within the zone.

Seascape zone No: 02	Name: Suffolk Heritage Coast Offshore- South
Location	
The seascape zone is defined by the southern boundary of the study area to the south, a line between two Greater Gabbard arrays to the north east, the suggested buffer distance for smaller turbines off combined AONBs and Heritage Coasts (34km) (derived from the OESEA study, 2020) to the west and the suggested buffer distance for larger turbines to the east (40km).	
OVERALL SENSITIVITY	
Sensitivity	Medium
Summary	
The zone lies between 34km and 40km offshore from a generally low-lying coast which is 70% covered by the combined Suffolk Coast and Heaths AONB and Suffolk Heritage Coast designation. The south western part of the coast between Felixstowe and Felixstowe Ferry is fronted by urban/suburban development, park or a golf course but includes a seafront Conservation Area and popular beaches. The approaches to Harwich Harbour/Felixstowe run through the zone and are used by a range of shipping including container vessels and ferries. Greater Gabbard/Galloper windfarms lie to the north and east. The zone's susceptibility lies in the panoramic views from the coast including the Suffolk Coast Path along this part of the coast and from the north, framed views from the Deben estuary, the sense of remoteness, tranquillity and openness at the distinctive spit at Orford Ness and around Shingle Street which the seascape contributes to, and which relate to the AONB's natural beauty criteria. The zone's value lies in its role as part of the setting of the combined AONB and Heritage Coast, the views from the scheduled monuments overlooking the area including the listed Orford Castle and numerous Martello towers and from listed Bawdsey Manor and associated gardens, and MCZ/SPA/SAC. The factors which reduce sensitivity are the distance offshore, the presence of shipping and World War II and subsequent military infrastructure on the coast including the masts at Orford Ness, and the presence of Greater Gabbard/Galloper wind farms, but the latter raise the potential for cumulative effects.	
RECOMMENDATIONS FOR OFFSHORE WIND FARMS IN TERMS OF SEASCAPE AND VISUAL FACTORS	
Summary	
The seascape zone lies between 34km and 40km of the shore which potentially allows consideration of wind farms with turbines between 107-224m high but is a suggested constraint buffer for turbines from 225-400m high to avoid significant adverse effects on a combined AONB and Heritage Coast . This combined with the susceptibility and other values related to the zone suggest an area of constraint on windfarm development over 224m high. However, the zone contributes to the distinct separation between Greater Gabbard/Galloper and the London Array wind farms which, combined with distance, is helpful in avoiding substantial combined cumulative effects on the designated coastline. Extension of the Greater Gabbard/ Galloper arrays south or east into this area may cause adverse combined cumulative effects through either a curtaining effect on the horizon or if the turbines are higher than the existing.	
SEASCAPE CHARACTER CONTEXT	
National Marine Character Areas	SCA 04 East Anglian Shipping Waters
Local seascape character areas	SCT 06 Offshore Waters
VISUAL BUFFERS	
Distance offshore- range	34km-40km offshore
*Size of turbines potentially having low or medium/low magnitude of effect**	• Turbines 226-300m would be likely to exceed low magnitude of effect less than 38.6km from shore. • Turbines 301-350m would be likely to exceed low

	magnitude of effect less than 40km from shore. • Turbines 351-400m would be likely to exceed low magnitude of effect less than 40km+ from shore.
*Size of turbines potentially having medium magnitude of effect**	• Turbines 145-400m would not generally be likely to exceed medium magnitude of effect. (Note: East Anglia TWO assessed as medium effect from 36km in SVIA)

SUSCEPTIBILITY							
Main criteria	**Sub-criteria**	**H**	**H / M**	**M**	**M /L**	**L**	**Comments**
Natural							
Hinterland	Form/ topography/ character				■		The landform is generally low lying with some coastal plateau and some low slopes of the estate sandlands behind coastal levels.
Coastal edge	Cliffs, rocky coasts, upper beach, dunes etc			■			Mix of very gently curving bays with minor headlands and small estuaries and a very gently convex coast, occasional low cliffs, extensive shingle beaches in places including the very long spit at Orfordness and at Shingle Street.
Coastal edge	Intertidal				■		Mix of simple gravel beaches and banks with estuarial deposits, with groynes and rock armour at Felixstowe and in places elsewhere. Some small lagoons behind shingle banks.
Key habitats, features and species	Marine, intertidal, coastal edge (if relevant).			■			Kentish Knock MCZ, Outer Thames Estuary SPA (wintering red-throated diver and common tern and little tern during the breeding season), Margate and Long Sands SAC
Cultural/ Social							
Use of the sea *(see under seascape pattern and foci for assessment)*	Navigation, fishing, leisure, energy production, mineral extraction etc.			■	■		Use by shipping accessing the ports of Felixstowe and Harwich, Greater Gabbard/ Galloper and London Array and some aggregate production nearby, possible fishing but busy shipping waters.
Use of the coast/ hinterland	Settlement, industry, energy, marine related development such as ports, power stations, leisure/tourism, agriculture, conservation etc.			■	■		Felixstowe- port with related infrastructure and residential and leisure uses to the south, former military and atomic research station on Orfordness to north, otherwise rural coast/hinterland Suffolk Coast Path, golf course, limited settlements and Bawdsey Manor- PGL centre.
Historic features at sea, on seabed	eg wrecks, paleolandscapes			■			Paleolandscape, recession of coastline over many years, a few

or buried below							wrecks.
Historic features on coast	eg coastal forts, castles, lighthouses						Napoleonic Wars fort (Landguard Fort) and numerous Martello towers, military related structures such as pagodas at Orford Ness, Bawdsey Manor historic park and garden, Orford Castle (and church) set back from the coast but overlooking it.
Cultural associations	eg former use of the sea or coast, boatmaking, former trade routes, associations with artists and writers, food traditions, spiritual connections, education and interpretation etc						Associated with shipping across the North Sea linking UK ports with Europe and from English Channel, paleolandscape associations pre-sea level rise and the North Sea.
Main criteria	**Sub-criteria**	**H**	**H / M**	**M**	**M /L**	**L**	**Comments**
Quality/ Condition							
Intactness	Degree of completeness or fragmentation of area character or elements, presence of detractors and extent.						Seascape busy with shipping, Greater Gabbard/Galloper and London Array visible relatively nearby.
State of repair	Condition of coastal natural and built features/ elements, maintained or not maintained.						N/A
Aesthetic and Perceptual							
Scale	Of sea in relation to coastal form or offshore.						Large scale open sea
Openness and enclosure	Degree and nature of enclosure of sea by land, framing of views.						Very open away from the coast.
Exposure	Sheltered, calm, exposed.						Highly exposed open sea.
Aspect	Relationship with sun.						South east of the coast at a distance so potential for highlighting of turbines in low sun near sunset limited.
Seascape pattern and foci	Features and elements on/above the sea surface.						Presence of wind farms nearby and shipping/ferries.

Seascape pattern and foci - coast and hinterland	eg Headlands, cliffs, high hills or landmarks such as towers or castles.						Very distinctive shingle spit at Orford Ness, some limited cliffs with small headlands, with Martello towers and Orford Castle inland increasing susceptibility. Small scale and low landmarks generally apart from 60m masts at Orford Ness to the north.
Contribution to the setting of a coast or seascape character area							The zone is integral to the character of the coast all lying within the limits of visual perception
Weather-visibility modifiers	Based on 10 years local weather station data, the % of time that visibility is very good (20-40km) or excellent (40km+). (Two % in order to rt)						High levels of visibility Weybourne (34% and 20%) and Shoeburyness (36% and 9.5%).
Main criteria	**Sub-criteria**	**H**	**H / M**	**M**	**M /L**	**L**	**Comments**
Visual Characteristics							
Key views- **land to sea** **sea to land** **sea to sea**	Including nature of views and elevation, perhaps including iconic features. Views from within area and from outside.						Land to sea- views from Orford Castle, Felixstowe seafront, around Martello towers and from Suffolk Coast Path- Felixstowe Ferry/Deben estuary/edge of Bawdsey Manor, Bawdsey East Street, Shingle Street and mouth of the Alde/Ore estuary which is a distinctive location near the end of Orford Ness. Sea to sea- views from ferries and other passenger ships.
Intervisibility of the area with important visual receptors	Amount/length/extent /nature of intervisibility and distance away from unit/development. eg relationship in terms of angle of view, topographic influences						Most of the coast is accessible and directly facing the seascape zone at a distance.
Typical receptors - type and number	eg coast walkers, visitors to coast/features, beach visitors, residents, leisure sailors, ferries, shipping, urban areas etc. In designated areas or outside designated areas						Users of coast within AONB and Heritage Coast (75% of coast). Suffolk Coast Path users, visitors to beach, promenade and pier at Felixstowe, and to Felixstowe Ferry. Visitors to Orford Ness. Harwich ferry and other passenger ship users.

OVERALL SUSCEPTIBILITY							

VALUE							
DESIGNATIONS							
Landscape designations on coast	*AONB Designation*	Suffolk Coast and Heaths AONB					
	Heritage Coast Designation	Suffolk Heritage Coast					
Historic designations on coast	*Key scheduled monuments*	Orford Castle; Martello Towers- on golf course adjoining Woodbridge Haven, at Felixstowe ferry, Rose Cottage, Bawdsey Beach, SE of Buckanay Farm and Shingle Street; Landguard Fort- Felixstowe.					
	Conservation Areas	Felixstowe, Orford (also Aldeburgh to north)					
	Key listed buildings	Orford Castle- Grade I listed building tower, Bawdsey Manor and associated buildings and structures, various Martello towers and battery observation post.					
	Historic parks and gardens	Bawdsey Manor Historic Park and Garden; Cliff Gardens (and Town Hall Garden), Felixstowe					
Marine nature conservation designations	*SPA/SAC*	Outer Thames Estuary SPA, Margate and Long Sands SAC.					
	Marine Conservation Zone	Kentish Knock MCZ					
VALUE CRITERIA							
Main criteria	**Sub-criteria**	**H**	**H / M**	**M**	**M /L**	**L**	**Comments**
Landscape designations- National, regional, local	eg National Parks, AONBs, Heritage Coast, local countryside designations, (distance, relationship, extent of role as setting).						75% of the coast Suffolk Coast and Heaths AONB and Suffolk Heritage Coast combined
Nature conservation designations	Main relevant marine designations eg MCZ, RAMSAR, SAC, SPA, etc						Kentish Knock MCZ, Outer Thames Estuary SPA, Margate and Long Sands SAC
Heritage designations	Marine and coastal- eg scheduled monuments, Conservation Areas, listed buildings, historic parks and gardens, and their settings						Bawdsey Manor Historic Park and Garden including listed structures, Felixstowe Conservation Area, Martello towers dotted along the coast- all increase value.
Relevant special qualities	If landscape/ coastal designation overlooks area. (List and define						The AONB and Heritage Coast directly overlook the seascape zone but at a distance of 34-40km.

/natural beauty indicators	the degree to which the area contributes to these).						
	Scenic quality- sense of place						Contributes to open seascape setting to AONB and Heritage Coast .
Main criteria	**Sub-criteria**	**H**	**H / M**	**M**	**M /L**	**L**	**Comments**
	Scenic quality- panoramic views and vantage points						Panoramic views from Coast Path towards zone.
	Relative wildness, sense of remoteness, lack of human influence						Remote zone but used by shipping with wind farms nearby.
	Relative tranquillity- absence of development						Generally tranquil but use by shipping.
	Relative tranquillity- dark skies						Substantially dark with shipping and wind farms' red aviation lights to north, south and east.
	Cultural associations/artistic representations						Limited cultural associations other than maritime use.
Community values	Value associated with area or features by people- communities of interest/place, public attitudes.						Very limited community values
Recreational value	Use for leisure or sport on sea, intertidal, coast.						Very limited leisure sailing
OVERALL VALUE							

CUMULATIVE EFFECTS	Comments
Existing and consented offshore wind farms within zone	Greater Gabbard/ Galloper and London Array nearby. Further development potentially could cause cumulative effects if using larger turbines or extending the perceived width of development along the horizon.
Potential planned further development in zone	Greater Gabbard/ Galloper extension
Current relationship of wind farms and effect on seascape character and setting of AONB	At present there is a clear separation between Greater Gabbard/ Galloper and London Array (30km). They are apparent on the horizon and are located within the setting of the AONB. They are detractors and not a key characteristic of the AONB. Their effect is mitigated by the size of turbine, the distance offshore, the apparent width along the horizon and the influence of visibility modifiers/weather.
Potential cumulative combined effect of existing, consented and potential planned development on	There are no current plans for development in the seascape zone.

seascape character and setting of AONB	
CUMULATIVE EFFECTS	**Comments**
Compatibility of cumulative combined effects with AONB policies	There are no current plans for development in the seascape zone.
Recommendations for constraint or opportunities setting out the most suitable locations for development with appropriate design, scale and spacing in order to provide benefits and/or mitigate and minimise effects	Extensions of Greater Gabbard/ Galloper from the north or east within the seascape zone (if feasible) would be considered to cause harm to the qualities and natural beauty of the AONB and Heritage Coast as they would reduce the gap between the existing arrays.

Seascape zone No: 03	Name: Greater Gabbard Environs
Location/extent	
The seascape zone is defined by the extent of the northern arrays of the Greater Gabbard and Galloper wind farms extending east towards the coast to the boundary of average low/medium-low magnitude of effects of turbines of a similar scale to those in the existing arrays (21.7km).	
OVERALL SENSITIVITY	
Sensitivity	Medium
Summary	
The zone lies between 21.7km and 40km offshore. The majority of this is existing wind farm so the comments relate to the part of the zone to the west of the arrays, towards the coast. The area is offshore from a generally low-lying coast which is 70% covered by the combined Suffolk Coast and Heaths AONB and Suffolk Heritage Coast designation which also continues northwards for a substantial distance. The south western part of the coast between Felixstowe and Felixstowe Ferry is fronted by urban/suburban development, park or a golf course but includes a seafront Conservation Area and popular beaches. The zone's susceptibility lies in the panoramic views from the coast including the Suffolk Coast Path along this part of the coast and from the north, the sense of remoteness, tranquillity and openness at the distinctive spit at Orford Ness and around Shingle Street which the seascape contributes to, and which relate to the AONB's natural beauty criteria. The zone's value lies in its role as part of the setting of the combined AONB and Heritage Coast, the views from the scheduled monuments overlooking the area including the listed Orford Castle and numerous Martello towers, from Aldeburgh Conservation Area and from listed Bawdsey Manor and associated gardens, and SPA/SACs. The factors which reduce sensitivity are the distance offshore, World War II and subsequent military infrastructure on the coast including the masts at Orford Ness, and the presence of Greater Gabbard/Galloper wind farms, but the latter raise the potential for cumulative effects.	
RECOMMENDATIONS FOR OFFSHORE WIND FARMS IN TERMS OF SEASCAPE AND VISUAL FACTORS	
Summary	
The seascape zone lies over 21.7km from the shore which potentially allows consideration of wind farms with turbines upto 175m high but is a suggested constraint buffer for turbines above this to avoid significant adverse effects on a combined AONB and Heritage Coast . This combined with the susceptibility and other values related to the zone suggest an area of constraint on windfarm development over 175m high. Extension of the Greater Gabbard/ Galloper arrays east into this area may also cause adverse combined cumulative effects if the turbines are higher and with wider spacing than the existing.	
SEASCAPE CHARACTER CONTEXT	
National Marine Character Areas	SCA 04 East Anglian Shipping Waters
Local seascape character areas	SCT 06 Offshore Waters
VISUAL BUFFERS	
Distance offshore- range	21.7km- c.40km offshore
*Size of turbines potentially having low or medium/low magnitude of effect**	• Turbines above 176-225m would be likely to exceed low magnitude of effect less than 26.2 km from shore. • Turbines 226-300m would be likely to exceed low magnitude of effect less than 38.6km from shore. • Turbines 301-350m would be likely to exceed low magnitude of effect less than 40km from shore. • Turbines 351-400m would be likely to exceed low magnitude of effect less than 40km+ from shore.

*Size of turbines potentially having medium magnitude of effect**	• Turbines 226-300m would be likely to exceed medium magnitude of effect less than 27.5km from shore. • Turbines 301-350m would be likely to exceed medium magnitude of effect less than 30km from shore. • Turbines 351-400m would be likely to exceed medium magnitude of effect less than 30km+ from shore. (Note: East Anglia TWO assessed as medium effect from 36km in SVIA)

SUSCEPTIBILITY							
Main criteria	**Sub-criteria**	**H**	**H / M**	**M**	**M /L**	**L**	**Comments**
Natural							
Hinterland	Form/ topography/ character				■		The landform is generally low lying with some coastal plateau and some low slopes of the estate sandlands behind coastal levels.
Coastal edge	Cliffs, rocky coasts, upper beach, dunes etc			■			Mix of very gently curving bays with minor headlands and small estuaries and a very gently convex coast, occasional low cliffs, extensive shingle beaches in places including the very long spit at Orfordness and at Shingle Street.
Coastal edge	Intertidal				■		Mix of simple shingle beaches and banks with estuarial deposits, with groynes and rock armour at Felixstowe and in places elsewhere. Some small lagoons behind shingle banks.
Key habitats, features and species	Marine, intertidal, coastal edge (if relevant).				■		Southern North Sea SAC
Cultural/ Social							
Use of the sea *(see under seascape pattern and foci for assessment)*	Navigation, fishing, leisure, energy production, mineral extraction etc.					■	Greater Gabbard/ Galloper offshore windfarms and associated support vessels.
Use of the coast/ hinterland	Settlement, industry, energy, marine related development such as ports, power stations, leisure/tourism, agriculture, conservation etc.			■	■		Felixstowe- port with related infrastructure and residential and leisure uses to the south, former military and atomic research station on Orfordness to north, otherwise rural coast/hinterland Suffolk Coast Path, golf course, limited settlements and Bawdsey Manor- PGL centre.
Historic features at sea, on seabed or buried below	eg wrecks, paleolandscapes				■		Paleolandscape, potentially a few wrecks.

Historic features on coast	eg coastal forts, castles, lighthouses						Napoleonic Wars fort (Landguard Fort) and numerous Martello towers, military related structures such as pagodas at Orford Ness, Bawdsey Manor historic park and garden, Orford Castle (and church) set back from the coast but overlooking it.
Cultural associations	eg former use of the sea or coast, boatmaking, former trade routes, associations with artists and writers, food traditions, spiritual connections, education and interpretation etc						Paleolandscape associations pre-sea level rise and the North Sea.
Main criteria	**Sub-criteria**	**H**	**H / M**	**M**	**M /L**	**L**	**Comments**
Quality/ Condition							
Intactness	Degree of completeness or fragmentation of area character or elements, presence of detractors and extent.						Greater Gabbard/Galloper in area.
State of repair	Condition of coastal natural and built features/ elements, maintained or not maintained.						N/A
Aesthetic and Perceptual							
Scale	Of sea in relation to coastal form or offshore.						Large scale open sea with large turbine structures.
Openness and enclosure	Degree and nature of enclosure of sea by land, framing of views.						Very open away from the coast, some framing/enclosure by turbines.
Exposure	Sheltered, calm, exposed.						Highly exposed open sea.
Aspect	Relationship with sun.						East of the coast but with existing turbines to the east.
Seascape pattern and foci	Features and elements on/above the sea surface.						Presence of existing wind farms.
Seascape pattern and foci - coast and hinterland	eg Headlands, cliffs, high hills or landmarks such as towers or castles.						Very distinctive shingle spit at Orford Ness, some limited cliffs with small headlands, with Martello towers and Orford Castle inland

							increasing susceptibility. Small scale and low landmarks generally apart from 60m masts at Orford Ness to the north.
Contribution to the setting of a coast or seascape character area							The zone is visible from the coast within the limits of visual perception but the existing windfarm in the eastern part of the zone is a detractor and so does not contribute positively to the setting.
Weather-visibility modifiers	Based on 10 years local weather station data, the % of time that visibility is very good (20-40km) or excellent (40km+). (Two % in order).						High levels of visibility Weybourne (34% and 20%) and Shoeburyness (36% and 9.5%).
Main criteria	**Sub-criteria**	**H**	**H / M**	**M**	**M /L**	**L**	**Comments**
Visual Characteristics							
Key views- **land to sea** **sea to land** **sea to sea**	Including nature of views and elevation, perhaps including iconic features. Views from within area and from outside.						Land to sea- views from Orford Castle, Felixstowe seafront, around Martello towers and from Suffolk Coast Path- Felixstowe Ferry/Deben estuary/edge of Bawdsey Manor, Bawdsey East Street, Shingle Street and mouth of the Alde/Ore estuary which is a distinctive location near the end of Orford Ness, Aldeburgh seafront. Sea to sea- views from ferries and other passenger ships.
Intervisibility of the area with important visual receptors	Amount/length/extent /nature of intervisibility and distance away from unit/development. eg relationship in terms of angle of view, topographic influences						Most of the coast is accessible and directly facing the seascape zone at a distance. Views from Aldeburgh slightly oblique.
Typical receptors - type and number	eg coast walkers, visitors to coast/features, beach visitors, residents, leisure sailors, ferries, shipping, urban areas etc. In designated areas or outside designated areas						Users of coast within AONB and Heritage Coast (75% of coast). Suffolk Coast Path users, visitors to beach, promenade and pier at Felixstowe, to Felixstowe Ferry, Orford Ness and the seafront at Aldeburgh. Harwich ferry and other passenger ship users.
OVERALL SUSCEPTIBILITY							

VALUE							
DESIGNATIONS							
Landscape designations on coast	*AONB Designation*	Suffolk Coast and Heaths AONB					
	Heritage Coast Designation	Suffolk Heritage Coast					
Historic designations on coast	*Key scheduled monuments*	Orford Castle; Martello Towers- on golf course adjoining Woodbridge Haven, at Felixstowe ferry, Rose Cottage, Bawdsey Beach, SE of Buckanay Farm and Shingle Street; Landguard Fort- Felixstowe.					
	Conservation Areas	Felixstowe, Orford (also Aldeburgh to north)					
	Key listed buildings	Orford Castle- Grade I listed building tower, Bawdsey Manor and associated buildings and structures, various Martello towers and battery observation post.					
	Historic parks and gardens	Bawdsey Manor Historic Park and Garden; Cliff Gardens (and Town Hall Garden), Felixstowe					
Marine nature conservation designations	*SPA/SAC*	Outer Thames Estuary SPA, Margate and Long Sands SAC, Southern North Sea SAC					
	Marine Conservation Zone	-					
VALUE CRITERIA							
Main criteria	**Sub-criteria**	**H**	**H / M**	**M**	**M /L**	**L**	**Comments**
Landscape designations- National, regional, local	eg National Parks, AONBs, Heritage Coast, local countryside designations, (distance, relationship, extent of role as setting).						75% of the coast Suffolk Coast and Heaths AONB and Suffolk Heritage Coast combined
Nature conservation designations	Main relevant marine designations eg MCZ, RAMSAR, SAC, SPA, etc						Outer Thames Estuary SPA, Margate and Long Sands SAC
Heritage designations	Marine and coastal- eg scheduled monuments, Conservation Areas, listed buildings, historic parks and gardens, and their settings						Bawdsey Manor Historic Park and Garden including listed structures, Felixstowe Conservation Area, Martello towers dotted along the coast- all increase value.
Relevant special qualities /natural beauty indicators	If landscape/ coastal designation overlooks area. (List and define the degree to which the area contributes to these).						The AONB and Heritage Coast directly overlook the seascape zone but at a distance of 21.7- 40km.

	Scenic quality- sense of place						Eastern part contributes to open seascape setting to AONB and Heritage Coast but wind farm a detractor.
Main criteria	**Sub-criteria**	**H**	**H / M**	**M**	**M /L**	**L**	**Comments**
	Scenic quality- panoramic views and vantage points						Panoramic views from Coast Path towards zone but wind farm a detractor.
	Relative wildness, sense of remoteness, lack of human influence						Remote zone but used by shipping with wind farms nearby.
	Relative tranquillity- absence of development						Presence of existing wind farm
	Relative tranquillity- dark skies						Wind farms' red aviation lights to east of the zone.
	Cultural associations/artistic representations						Limited cultural associations other than maritime use.
Community values	Value associated with area or features by people- communities of interest/place, public attitudes.						Very limited community values
Recreational value	Use for leisure or sport on sea, intertidal, coast.						Very limited leisure sailing
OVERALL VALUE							

CUMULATIVE EFFECTS	Comments
Existing and consented offshore wind farms within zone	Greater Gabbard/ Galloper in part of the zone. Further development potentially could cause cumulative effects if using larger turbines at different spacing to existing.
Potential planned further development in zone	Greater Gabbard/ Galloper extension
Current relationship of wind farms and effect on seascape character and setting of AONB	At present there is a clear separation between Greater Gabbard/ Galloper and London Array (30km). They are apparent on the horizon and are located within the setting of the AONB. They are detractors and not a key characteristic of the AONB. Their effect is mitigated by the size of turbine, the distance offshore, the apparent width along the horizon and the influence of visibility modifiers/weather.
Potential cumulative combined effect of existing, consented and potential planned development on seascape character and setting of AONB	An extension to Greater Gabbard/ Galloper within the area is only likely to have adverse cumulative effects if using larger turbines at different spacing to existing. This would be due to a greater visual effect on coastal receptors through the use of larger turbines and a more confusing visual composition with different spacings necessitated by the turbine size.

Compatibility of cumulative combined effects with AONB policies	There are no current plans for development in the seascape zone.
CUMULATIVE EFFECTS	**Comments**
Recommendations for constraint or opportunities setting out the most suitable locations for development with appropriate design, scale and spacing in order to provide benefits and/or mitigate and minimise effects	An extension to Greater Gabbard/ Galloper within the zone would be considered to minimise harm on the qualities and natural beauty of the AONB if turbines are the same size and spacing and arrangement as existing.

Seascape zone No: 04	Name: Suffolk Heritage Coast Inshore- North
Location	
The seascape zone is off the northern part of the Suffolk Heritage Coast from Orfordness Lighthouse to Kessingland. It is defined by the change of direction of the coast at Orford Ness to the south, the northern point of the combined AONB and Heritage Coast to the north west, the line of view just off the coast beyond Lowestoft port from the AONB/HC out to 34km which is the suggested buffer distance for smaller turbines off combined AONBs and Heritage Coasts (34km) (derived from the OESEA study, 2019) to the north east and east.	
OVERALL SENSITIVITY	
Sensitivity	High
Summary	
All of the generally low-lying coast of this seascape zone is covered by the combined Suffolk Coast and Heaths AONB and Suffolk Heritage Coast designation. The coast is largely rural and sparsely settled interspersed with historic old ports/now popular seaside towns with beaches including Aldeburgh, Southwold and Dunwich with associated Conservation Areas and historic features. Sizewell A and B nuclear power stations lie roughly centrally. The area is used for fishing, both commercial and leisure, as evidenced by small craft on the shingle beaches and in estuary harbours, and for leisure sailing and other watersports. Greater Gabbard/Galloper windfarms lies offshore to the south, outside the zone. The zone's susceptibility lies in the panoramic views from the coast including the Suffolk Coast Path which continues to the north and south, such as around the Coastguard Cottages south of Dunwich, the strong sense of remoteness, tranquillity and openness at Orford Ness and between settlements which the seascape contributes to in association with the marshes inland, and which relate to the AONB's natural beauty criteria, the limited number of detractors and lighting both along the coast and offshore, and the relatively high frequency of offshore visibility over long distances. The zone's value lies in its role as a major part of the setting of the combined Suffolk Coast and Heaths AONB and Suffolk Heritage Coast, the views from Conservation Areas with associated listing buildings at Aldeburgh, Southwold, Dunwich and Thorpeness, and from the scheduled monuments overlooking the area including the listed Orford Castle and MCZ/SPAs/SAC. The factors which slightly reduce sensitivity are Sizewell A and B nuclear power stations and the masts at Orford Ness to the south, but these do not affect the views to the open waters offshore, and the presence of Greater Gabbard/Galloper wind farms offshore to the south. The latter raise the potential for cumulative effects.	
RECOMMENDATIONS FOR OFFSHORE WIND FARMS IN TERMS OF SEASCAPE AND VISUAL FACTORS	
Summary	
The seascape zone lies within 34km of the shore which is the suggested buffer for all scales of wind farm development to avoid significant adverse effects on a combined AONB and Heritage Coast . This combined with the susceptibility and other values related to the zone suggest an area of strong constraint on windfarm development. Turbines as proposed in East Anglia TWO *within the zone* would be considered to cause significant harm to the qualities and natural beauty of the AONB. A limited extension of Greater Gabbard/ Galloper to the south of the zone (as currently proposed) may cause limited effects but the turbines should be similar in height and spacing to the existing. An extension of Greater Gabbard/ Galloper further towards the coast *within* the seascape zone would be considered to cause harm to the qualities and natural beauty of the AONB. Development within the Round 4 bidding area *within the zone* would be considered to cause significant harm to the qualities and natural beauty of the AONB.	
SEASCAPE CHARACTER CONTEXT	
National Marine Character Areas	SCA 04 East Anglian Shipping Waters (part) SCA 09 Norfolk Coastal Waters (part)

	SCA 10 Suffolk Coastal Waters (part)
Local seascape character areas	SCT 03 Nearshore Waters (part) SCT 04 Developed Nearshore Waters (part) SCT 05 Coastal Waters (part) SCT 06 Offshore Waters (part)
VISUAL BUFFERS	
Distance offshore- range	Upto 34km from AONB and Heritage Coast (HC) coastal boundary.
*Size of turbines potentially having low magnitude of effect**	• Turbines below 145m would be likely to exceed low magnitude of effect less than 19.2km from AONB/HC. • Turbines 145-175m would be likely to exceed low magnitude of effect less than 21.7 km from AONB/HC. • Turbines above 176-225m would be likely to exceed low magnitude of effect less than 26.2 km from AONB/HC. • Turbines above 226-300m would be likely to exceed low magnitude of effect.
*Size of turbines potentially having medium magnitude of effect**	• Turbines below 145m would be likely to exceed medium magnitude of effect less than 14km from shore. • Turbines 145-175m would be likely to exceed medium magnitude of effect less than 15.8km from shore. • Turbines above 176-225m would be likely to exceed medium magnitude of effect less than 20.2km from shore. • Turbines 226-300m would be likely to exceed medium magnitude of effect less than 27.5km from shore. • Turbines 301-350m would be likely to exceed medium magnitude of effect less than 30km from shore. • Turbines 351-400m would be likely to exceed medium magnitude of effect less than 30km+ from shore.

SUSCEPTIBILITY							
Main criteria	**Sub-criteria**	**H**	**H / M**	**M**	**M /L**	**L**	**Comments**
Natural							
Hinterland	Form/ topography/ character				■		The landform is generally low lying coastal plateau with very gentle slopes of the estate sandlands either behind coastal levels and marshes or reaching the coast.
Coastal edge	Cliffs, rocky coasts, upper beach, dunes etc			■			Mix of straight or very gently curving bays with small estuaries, occasional low cliffs such as at Dunwich, Easton and Covehithe, and extensive shingle beaches in places including the very long spit at Orfordness.
Coastal edge	Intertidal				■		Mix of simple gravel beaches and banks with estuarial deposits, with groynes at Southwold. Some small

							lagoons behind coastal banks.
Key habitats, features and species	Marine, intertidal, coastal edge (if relevant).						Orford Inshore MCZ, Outer Thames Estuary SPA (wintering red-throated diver and common tern and little tern during the breeding season), Greater Wash SPA, Orford Shingle Street SAC
Main criteria	**Sub-criteria**	**H**	**H / M**	**M**	**M /L**	**L**	**Comments**
Cultural/ Social							
Use of the sea *(see under seascape pattern and foci for assessment)*	Navigation, fishing, leisure, energy production, mineral extraction etc.						Commercial fishing intense along the coast (eg fishing boat moorings at Southwold harbour and beached boats at Aldeburgh), use of beaches focussed on tourist towns, some leisure fishing, leisure sailing and watersports, some aggregate production areas offshore, Greater Gabbard and Galloper visible outside the area offshore.
Use of the coast/ hinterland	Settlement, industry, energy, marine related development such as ports, power stations, leisure/tourism, agriculture, conservation etc.						Popular seaside towns- Southwold, Aldeburgh, with other destinations including Thorpeness and Dunwich. Sizewell A and B Nuclear Power Stations are incongruous features in an area of sparsely settled coast. Orfordness radio masts lie to the south. Otherwise farmed rural coast/hinterland with significant areas of marsh/coastal levels and heath. Suffolk Coast Path and National Trust Coastguard Cottages at Dunwich heath.
Historic features at sea, on seabed or buried below	eg wrecks, paleolandscapes						Recession of coastline over many years, numerous wrecks, some related to harbours. Dunwich Bank Wreck- designated.
Historic features on coast	eg coastal forts, castles, lighthouses						Orford Castle tower set back from the coast to the south but overlooking it. Martello tower at Slaughden, Many conservation areas with associated listed buildings overlooking sea eg Southwold, Aldeburgh).
Cultural associations	eg former use of the sea or coast, boatmaking, former trade routes, associations with artists and writers, food traditions, spiritual connections, education and interpretation etc						Former historic ports at Southwold (with Georgian and Regency revival), Dunwich (now lost to the sea) and Aldeburgh with its former shipbuilding industry, Orford Castle and the defensive coast to the south- Slaughden Martello towers and former military use of Orford Ness; national nature reserves, Turner painting of Aldeburgh.

							Sizewell is associated with the nuclear age with associated ambivalent connotations.
Main criteria	**Sub-criteria**	**H**	**H / M**	**M**	**M /L**	**L**	**Comments**
Quality/ Condition							
Intactness	Degree of completeness or fragmentation of area character or elements, presence of detractors and extent.						Seascape intact with very few detractors- Sizewell is visible along part of the coast- mostly south of Southwold, and Greater Gabbard is visible in very good visibility to the south east. Orford Ness masts to the south.
State of repair	Condition of coastal natural and built features/ elements, maintained or not maintained.						Generally well maintained and protected coast (with designations).
Aesthetic and Perceptual							
Scale	Of sea in relation to coastal form or offshore.						The sea feels large scale with panoramic views
Openness and enclosure	Degree and nature of enclosure of sea by land, framing of views.						Openness is a key characteristic of the coast with generally open views out to sea from beaches with some framing within settlements.
Exposure	Sheltered, calm, exposed.						Exposed, eroding coast with sheltered waters in river estuaries and mouths.
Aspect	Relationship with sun.						East facing with potential for highlighting of turbines in low sun in afternoon and sunset and interfering with sunrise.
Seascape pattern and foci	Features and elements on/above the sea surface.						Limited foci- local fishing boats and leisure boats apparent in places. Some shipping visible to the north out of Lowestoft/anchored (including cruise liner off Southwold during site visit). Greater Gabbard/Galloper visible from southern part of the coast in good/very good visibility.
Seascape pattern and foci - coast and hinterland	eg Headlands, cliffs, high hills or landmarks such as towers or castles.						Generally simple coast with few foci- to the south- very distinctive shingle spit at Orford Ness with Martello tower and masts. To the north- some limited cliffs and historic settlements, Southwold Pier. Sizewell power stations have some visual influence centrally

							between Southwold and Aldeburgh but not along the whole coast.
Contribution to the setting of a coast or seascape character area							The zone is integral to the character of the coast all lying within the limits of visual perception
Weather-visibility modifiers	Based on 10 years local weather station data, the % of time that visibility is very good (20-40km) or excellent (40km+). (Two % in order to rt)						High levels of visibility Weybourne (34% and 20%) and Shoeburyness (36% and 9.5%).
Main criteria	**Sub-criteria**	**H**	**H / M**	**M**	**M /L**	**L**	**Comments**
Visual Characteristics							
Key views- **land to sea** **sea to land** **sea to sea**	Including nature of views and elevation, perhaps including iconic features. Views from within area and from outside.						Land to sea- views from Orford Castle, from Suffolk Coast Path (including likely new route along coast to the north), Aldeburgh and Southwold seafronts (and pier), Dunwich Coastguard Cottages.
Intervisibility of the area with important visual receptors	Amount/length/extent /nature of intervisibility and distance away from unit/development. eg relationship in terms of angle of view, topographic influences						Most of the coast is accessible and directly facing the sea with a direct relationship with the seascape zone. The zone is also visible from the southern part of the AONB/HC and just offshore from Lowestoft South Conservation Area.
Typical receptors - type and number	eg coast walkers, visitors to coast/features, beach visitors, residents, leisure sailors, ferries, shipping, urban areas etc. In designated areas or outside designated areas						Users of coast within AONB and Heritage Coast. Suffolk Coast Path users, visitors to beaches, promenades such as Southwold. Leisure sailing from Southwold Harbour and Lowestoft.
OVERALL SUSCEPTIBILITY							

VALUE		
DESIGNATIONS		
Landscape designations	*AONB Designation*	Suffolk Coast and Heaths AONB

	Heritage Coast Designation	Suffolk Heritage Coast
Historic designations	*Key scheduled monuments*	Orford Castle and Slaughden Martello Tower (south of Aldeburgh)- both with views over sea. Also Greyfriars, Dunwich- sheltered from view except at the south eastern coastal edge.
	Conservation Areas	Aldeburgh, Thorpeness, Dunwich, Southwold, Lowestoft (south).
	Key listed buildings	Orford Castle- Grade I listed building tower; Slaughden Martello Tower; Aldeburgh- eg Moot Hall, White Lion Hotel, Market Cross House, 8-14, Market Cross Place. Southwold- numerous eg Gun Hill Place, Centre Cliff, Cliff House and Shrimp Cottage, Bay View and East Cliff; Lowestoft- Wellington Esplanade.
	Historic parks and gardens	-
Marine nature conservation designations	*SPA/SAC*	Outer Thames Estuary SPA, Greater Wash SPA, Orford Shingle Street SAC
	Marine Conservation Zone	Orford Inshore MCZ

VALUE CRITERIA

Main criteria	Sub-criteria	H	H / M	M	M /L	L	Comments
Landscape designations- National, regional, local	eg National Parks, AONBs, Heritage Coast, local countryside designations, (distance, relationship, extent of role as setting).						All the coast is Suffolk Coast and Heaths AONB and Suffolk Heritage Coast combined
Nature conservation designations	Main relevant marine designations eg MCZ, RAMSAR, SAC, SPA, etc						Orford Inshore MCZ, Outer Thames Estuary SPA, Greater Wash SPA, Orford Shingle Street SAC.
Heritage designations	Marine and coastal- eg scheduled monuments, Conservation Areas, listed buildings, historic parks and gardens, and their settings						Conservation Areas at Aldeburgh, Thorpeness, Dunwich, Southwold, Lowestoft (south) and many related listed buildings; Slaughden Martello Tower (south of Aldeburgh) scheduled monuments- both with views over sea.
Relevant special qualities /natural beauty indicators	If landscape/ coastal designation overlooks area. (List and define the degree to which the area contributes to these).						The AONB and Heritage Coast directly overlook the seascape zone.
	Scenic quality- sense of place						Strong sense of place especially associated with old seaside towns with related marine character and views, views from coastal heaths, views from shingle ridges next to

							coastal levels/marshes, Orford Ness and the Slaughden Martello tower overlooking the sea.
	Scenic quality- panoramic views and vantage points						Panoramic views from Coast Path and locations such as Dunwich Coastguard Cottages, and beaches such as Aldeburgh and Southwold.
Main criteria	**Sub-criteria**	**H**	**H / M**	**M**	**M /L**	**L**	**Comments**
	Relative wildness, sense of remoteness, lack of human influence						Sense of remoteness at Orford Ness with estuary and nature reserves and between settlements to the north such as around Minsmere and Dingle Marshes.
	Relative tranquillity- absence of development						Substantially tranquil around Orford Ness with estuary and nature reserves and between settlement to the north such as around Minsmere and Dingle Marshes. Sizewell power stations are a presence that influences some views.
	Relative tranquillity- dark skies						Substantially dark to around Orford Ness, although possibly with mast lights, with only intermittent small settlements and Sizewell along a substantially dark coast. Wind farms' red aviation lights offshore to the south east.
	Cultural associations/artistic representations						Aldeburgh- festival and association with Britten; Dunwich, Southwold and Walberswick popular with artists, historic ports/harbours.
Community values	Value associated with area or features by people- communities of interest/place, public attitudes.						Leisure sailing between Aldeburgh and Lowestoft, fishing and visits to the nature reserves form communities of interest, the Coast Path is well used and all the coastal settlements and associated beaches are popular.
Recreational value	Use for leisure or sport on sea, intertidal, coast.						Leisure sailing, sea and beach angling and walking.
OVERALL VALUE							

CUMULATIVE EFFECTS	Comments
Existing and consented offshore wind farms within zone	Greater Gabbard/ Galloper nearby. Further development potentially could cause cumulative effects if using larger turbines or extending the perceived width of development along the horizon.

Potential planned further development in zone	East Anglia TWO at around 30km offshore at its closest point. Greater Gabbard/ Galloper extension to the south. The Round 4 bidding area significantly impinges on the zone reaching 13km offshore over a distance of 40km.
CUMULATIVE EFFECTS	**Comments**
Current relationship of wind farms and effect on seascape character and setting of AONB	At present Greater Gabbard/ Galloper wind farms appear as an isolated array 25km-37km offshore within a wider panorama and open horizon and is within the setting of the AONB. They are detractors and not a key characteristic of the AONB. Their effect is mitigated by the size of turbine, the distance offshore, the apparent width along the horizon and the influence of visibility modifiers/weather.
Potential cumulative combined effect of existing, consented and potential planned development on seascape character and setting of AONB	In clear visibility, East Anglia TWO could create a curtain of turbines 30km long on the horizon along almost the entire width of SCZ 04's coastline and separated from Greater Gabbard/ Galloper by only 7km. This would cause notable cumulative effects with the only substantial open horizon available in views to the north-east. The Greater Gabbard/ Galloper extension to the south would be likely to slightly increase adverse effects on the AONB but the level of effects would depend on the size of turbine proposed. If this was the same/very similar in height and spacing then the effects may be limited. If turbine size is increased, the level of effect would also increase. Development within the Round 4 bidding area would be likely to significantly exacerbate cumulative effects of the developments above and could fundamentally change the character of the seascape, potentially becoming one of the dominant characteristics. The effects would be greater the closer development is to the coast, and the greater the height of turbine and size of array.
Compatibility of cumulative combined effects with AONB policies	East Anglia TWO would be incompatible with AONB policies especially relating to the purpose of conservation and enhancement and its special qualities/natural beauty. A small extension of Greater Gabbard/ Galloper using the same size turbines as existing could be construed as minimising effects on the purposes of the AONB. It is unlikely that any additional development in the Round 4 bidding area would be compatible with AONB policies.
Recommendations for constraint or opportunities setting out the most suitable locations for development with appropriate design, scale and spacing in order to provide benefits and/or mitigate and minimise effects	No wind farm developments are considered appropriate within the zone. A limited extension of Greater Gabbard/ Galloper to the south of the zone (as currently proposed) may cause limited effects but the turbines should be similar in height and spacing to the existing. An extension further towards the coast *within* the seascape zone would be considered to cause harm to the qualities and natural beauty of the AONB.

Seascape zone No: 05	Suffolk Heritage Coast Offshore- North
Location/extent	
34km off the coast from Orfordness Lighthouse to Kessingland. The seascape zone is defined by the Galloper wind farm to the south, the suggested buffer distance for smaller turbines off the combined AONB and Heritage Coast (34km) (derived from the OESEA study, 2020) to the west, the suggested buffer distance for larger turbines (40km) to the east, both intersected with the line of view from the northern point of the AONB/HC to just off the coast beyond Lowestoft port. *(Note: only Suffolk and associated receptors are assessed- ie Norfolk Coast AONB is not taken into consideration).*	
OVERALL SENSITIVITY	
Sensitivity	Medium
Summary	
The zone lies between 34km and 40km offshore from a generally low-lying coast which is covered by the combined Suffolk Coast and Heaths AONB and Suffolk Heritage Coast designations. The coast is largely rural and sparsely settled, interspersed with historic old ports/now popular seaside towns with beaches including Aldeburgh, Southwold and Dunwich with associated Conservation Areas and historic features. Sizewell A and B nuclear power stations lie roughly centrally. The area is used for commercial fishing and some navigation. Greater Gabbard/Galloper windfarms lies to the south, outside the zone. The zone's susceptibility lies in the panoramic views from the coast including the Suffolk Coast Path which continues to the north and south, such as around the Coastguard Cottages south of Dunwich, the strong sense of remoteness, tranquillity and openness at Orford Ness and between settlements which the seascape contributes to in association with the marshes inland, and which relate to the AONB's natural beauty criteria, the limited number of detractors and lighting both along the coast and offshore, and the relatively high frequency of offshore visibility over long distances. The zone's value lies in its role as a part of the setting of the combined Suffolk Coast and Heaths AONB and Suffolk Heritage Coast, the views from Conservation Areas with associated listing buildings at Aldeburgh, Southwold, Dunwich and Thorpeness, and from the scheduled monuments overlooking the area including the listed Orford Castle and SPA/SACs. The factors which slightly reduce sensitivity are Sizewell A and B nuclear power stations and the masts at Orford Ness to the south, but these do not affect the views to the open waters offshore, and the presence of Greater Gabbard/Galloper wind farms offshore to the south, but the latter raise the potential for cumulative effects.	
RECOMMENDATIONS FOR OFFSHORE WIND FARMS IN TERMS OF SEASCAPE AND VISUAL FACTORS	
Summary	
The seascape zone lies between 34km and 40km of the shore which potentially allows consideration of wind farms with turbines between 107-224m high but is a suggested constraint buffer for turbines from 225-400m high to avoid significant adverse effects on a combined AONB and Heritage Coast . This combined with the susceptibility and other values related to the zone suggest an area of constraint on windfarm development over 225m high. Wind farm development using turbines less than 224m high is considered appropriate within the zone but arrays should avoid a curtaining effect when viewed from the AONB/HC coastline. This could be achieved with gaps between arrays of at least 12km, preferably more, and arrays not exceeding 15km width as perceived from shore. A limited extension of Greater Gabbard/ Galloper to the south of the zone (as currently proposed) may cause limited effects but the turbines should be similar in height and spacing to the existing. Development of turbines over 225m high within the Round 4 bidding area *within the zone* would be considered to cause significant harm to the qualities and natural beauty of the AONB.	
SEASCAPE CHARACTER CONTEXT	

National Marine Character Areas	SCA 04 East Anglian Shipping Waters
Local seascape character areas	SCT 05 Coastal Waters (small part to the north) SCT 06 Offshore Waters (majority)
VISUAL BUFFERS	
Distance offshore- range	34km-40km offshore
*Size of turbines potentially having low magnitude of effect**	• Turbines 226-300m would be likely to exceed low magnitude of effect less than 38.6km from shore. • Turbines 301-350m would be likely to exceed low magnitude of effect less than 40km from shore. • Turbines 351-400m would be likely to exceed low magnitude of effect less than 40km+ from shore.
*Size of turbines potentially having medium magnitude of effect**	• Turbines 145-400m would not generally be likely to exceed medium magnitude of effect. (Note: East Anglia TWO assessed as medium effect from 36km in SVIA)

SUSCEPTIBILITY							
Main criteria	**Sub-criteria**	**H**	**H / M**	**M**	**M /L**	**L**	**Comments**
Natural							
Hinterland	Form/ topography/ character				■		The landform is generally low lying coastal plateau with very gentle slopes of the estate sandlands either behind coastal levels and marshes or reaching the coast.
Coastal edge	Cliffs, rocky coasts, upper beach, dunes etc			■			Mix of straight or very gently curving bays with small estuaries, occasional low cliffs such as at Dunwich, Easton and Covehithe, and extensive shingle beaches in places including the very long spit at Orfordness.
Coastal edge	Intertidal				■		Mix of simple gravel beaches and banks with estuarial deposits, with groynes at Southwold. Some small lagoons behind coastal banks.
Key habitats, features and species	Marine, intertidal, coastal edge (if relevant).			■			Outer Thames Estuary SPA (wintering red-throated diver and common tern and little tern during the breeding season), Southern North Sea SAC, Haisborough, Hammond and Winterton SAC.
Cultural/ Social							
Use of the sea *(see under seascape pattern and foci for assessment)*	Navigation, fishing, leisure, energy production, mineral extraction etc.		■				Commercial fishing; some navigation from Great Yarmouth, Lowestoft and Felixstowe; Greater Gabbard/Galloper visible outside the area to the south.
Use of the coast/ hinterland	Settlement, industry, energy, marine related		■				Popular seaside towns- Southwold, Aldeburgh, with other destinations including Thorpeness and Dunwich.

	development such as ports, power stations, leisure/tourism, agriculture, conservation etc.		■				Sizewell A and B Nuclear Power Stations are incongruous features in an area of sparsely settled coast. Orfordness radio masts lie to the south. Otherwise farmed rural coast/hinterland with significant areas of marsh/coastal levels and heath. Suffolk Coast Path and National Trust Coastguard Cottages at Dunwich heath.
Historic features at sea, on seabed or buried below	eg wrecks, paleolandscapes			■			Paleolandscape, recession of coastline over many years, some wrecks.
Historic features on coast	eg coastal forts, castles, lighthouses		■	■			Orford Castle tower set back from the coast to the south but overlooking it. Martello tower at Slaughden, Many conservation areas with associated listed buildings overlooking sea eg Southwold, Aldeburgh).
Cultural associations	eg former use of the sea or coast, boatmaking, former trade routes, associations with artists and writers, food traditions, spiritual connections, education and interpretation etc				■		Associated with some navigation across the North Sea although away from main routes, paleolandscape associations pre-sea level rise and the North Sea.
Main criteria	**Sub-criteria**	**H**	**H / M**	**M**	**M /L**	**L**	**Comments**
Quality/ Condition							
Intactness	Degree of completeness or fragmentation of area character or elements, presence of detractors and extent.		■				Seascape intact with very few detractors- Greater Gabbard/Galloper is visible to the south.
State of repair	Condition of coastal natural and built features/ elements, maintained or not maintained.						N/A
Aesthetic and Perceptual							
Scale	Of sea in relation to coastal form or offshore.				■		Large scale open sea
Openness and enclosure	Degree and nature of enclosure of sea by land, framing of			■	■		Very open away from the coast.

	views.			■	■		
Exposure	Sheltered, calm, exposed.				■		Highly exposed open sea.
Aspect	Relationship with sun.		■				East of the coast at a distance so potential for highlighting of turbines in low sun in afternoon through to sunset.
Seascape pattern and foci	Features and elements on/above the sea surface.		■	■			Presence of wind farms at southern extent.
Seascape pattern and foci - coast and hinterland	eg Headlands, cliffs, high hills or landmarks such as towers or castles.			■			Generally simple coast with few foci- to the south- very distinctive shingle spit at Orford Ness with Martello tower and masts. To the north- some limited cliffs and historic settlements, Southwold Pier. Sizewell power stations have some visual influence centrally between Southwold and Aldeburgh but not along the whole coast. Windfarm at a distance offshore to the south east.
Contribution to the setting of a coast or seascape character area			■	■			The zone is integral to the character of the coast all lying within the limits of visual perception albeit at a distance.
Weather-visibility modifiers	Based on 10 years local weather station data, the % of time that visibility is very good (20-40km) or excellent (40km+). (Two % in order to rt)	■					High levels of visibility Weybourne (34% and 20%) and Shoeburyness (36% and 9.5%).
Main criteria	**Sub-criteria**	**H**	**H / M**	**M**	**M /L**	**L**	**Comments**
Visual Characteristics							
Key views- **land to sea** **sea to land** **sea to sea**	Including nature of views and elevation, perhaps including iconic features. Views from within area and from outside.		■				Land to sea- views from Orford Castle, from Suffolk Coast Path (including likely new route along coast to the north), Aldeburgh and Southwold seafronts (and pier), Dunwich Coastguard Cottages.
Intervisibility of the area with important visual receptors	Amount/length/extent/nature of intervisibility and distance away from unit/development. eg relationship in terms of angle of view, topographic		■	■			Most of the coast is accessible and directly facing the sea with a direct relationship with the seascape zone. The zone is also visible from the southern part of the AONB/HC and offshore from Lowestoft South Conservation Area.

	influences						
Typical receptors - type and number	eg coast walkers, visitors to coast/features, beach visitors, residents, leisure sailors, ferries, shipping, urban areas etc. In designated areas or outside designated areas						Users of coast within AONB and Heritage Coast. Suffolk Coast Path users, visitors to beaches, promenades such as Southwold. Leisure sailing from Southwold Harbour and Lowestoft.
OVERALL SUSCEPTIBILITY							

VALUE							
DESIGNATIONS							
Landscape designations	*AONB Designation*	Suffolk Coast and Heaths AONB					
	Heritage Coast Designation	Suffolk Heritage Coast					
Historic designations	*Key scheduled monuments*	Orford Castle and Slaughden Martello Tower (south of Aldeburgh)- both with views over sea. Also Greyfriars, Dunwich- sheltered from view except at the south eastern coastal edge.					
	Conservation Areas	Aldeburgh, Thorpeness, Dunwich, Southwold, Lowestoft (south).					
	Key listed buildings	Orford Castle- Grade I listed; Slaughden Martello Tower; Aldeburgh- eg Moot Hall, White Lion Hotel, Market Cross House, 8-14, Market Cross Place; Dunwich- Greyfriars Monastery; Southwold- numerous eg Gun Hill Place, Centre Cliff, Cliff House and Shrimp Cottage, Bay View and East Cliff; Lowestoft- Wellington Esplanade.					
	Historic parks and gardens	-					
Marine nature conservation designations	*SPA/SAC*	Outer Thames Estuary SPA, Southern North Sea SAC, Haisborough, Hammond and Winterton SAC.					
	Marine Conservation Zone	-					
VALUE CRITERIA							
Main criteria	**Sub-criteria**	**H**	**H / M**	**M**	**M /L**	**L**	**Comments**
Landscape designations- National, regional, local	eg National Parks, AONBs, Heritage Coast, local countryside designations, (distance, relationship, extent of role as setting).						All the coast is Suffolk Coast and Heaths AONB and Suffolk Heritage Coast combined

Nature conservation designations	Main relevant marine designations eg MCZ, RAMSAR, SAC, SPA, etc						Outer Thames Estuary SPA, Southern North Sea SAC, Haisborough, Hammond and Winterton SAC
Main criteria	**Sub-criteria**	**H**	**H / M**	**M**	**M /L**	**L**	**Comments**
Heritage designations	Marine and coastal- eg scheduled monuments, Conservation Areas, listed buildings, historic parks and gardens, and their settings						Conservation Areas at Aldeburgh, Thorpeness, Dunwich, Southwold, Lowestoft (south) and many related listed buildings; Slaughden Martello Tower (south of Aldeburgh) scheduled monuments- both with views over sea. all increase value.
Relevant special qualities /natural beauty indicators	If landscape/ coastal designation overlooks area. (List and define the degree to which the area contributes to these).						The AONB and Heritage Coast overlook the seascape zone but at a distance of 34-40km.
	Scenic quality- sense of place						Contributes to open seascape setting to AONB and Heritage Coast .
	Scenic quality- panoramic views and vantage points						Panoramic views from Coast Path towards zone.
	Relative wildness, sense of remoteness, lack of human influence						Remote zone but wind farm to the south.
	Relative tranquillity- absence of development						Generally tranquil but some navigational use.
	Relative tranquillity- dark skies						Substantially dark with some navigational use and wind farms' red aviation lights to south.
	Cultural associations/artistic representations						Limited cultural associations other than maritime use.
Community values	Value associated with area or features by people- communities of interest/place, public attitudes.						Very limited community values
Recreational value	Use for leisure or sport on sea, intertidal, coast.						Leisure sailing, sea and beach angling and walking.
OVERALL VALUE							

CUMULATIVE EFFECTS	Comments

Existing and consented offshore wind farms within zone	Greater Gabbard/Galloper at the southern extent and East Anglia ONE to the east further offshore.
Potential planned further development in zone	East Anglia TWO and East Anglia ONE North. Greater Gabbard/ Galloper extension to the south. The Round 4 bidding area covers a significant proportion of the zone.
Current relationship of wind farms and effect on seascape character and setting of AONB	At present Greater Gabbard/ Galloper wind farms to the south appear as an isolated array 25km-37km offshore within a wider panorama and open horizon and is within the setting of the AONB. They are detractors and not a key characteristic of the AONB. Their effect is mitigated by the size of turbine, the distance offshore, the apparent width along the horizon and the influence of visibility modifiers/weather. East Anglia ONE is not generally perceptible from the coast at 50km offshore at its closest point.
Potential cumulative combined effect of existing, consented and potential planned development on seascape character and setting of AONB	In clear visibility, East Anglia TWO could create a curtain of turbines 30km long on the horizon along almost the entire width of SCZ 04's coastline and separated from Greater Gabbard/ Galloper by only 7km. This would cause notable cumulative effects with the only substantial open horizon available in views to the north-east. The part of East Anglia ONE North within the zone would add to cumulative effects, and though separated from EA TWO by 10km overlaps visually and so could add to the curtaining effect to the north, albeit further offshore in part. The Greater Gabbard/ Galloper extension to the south would be likely to slightly increase adverse effects on the AONB but the level of effects would depend on the size of turbine proposed. If this was the same/very similar in height and spacing then the effects may be limited. If turbine size is increased, the level of effect would also increase. Further development in the Round 4 bidding Area within the zone would potentially contribute further to the cumulative curtaining effect to the north, extending the influence of wind farms where not already perceived.
Compatibility of cumulative combined effects with AONB policies	East Anglia TWO using the range of sizes of turbines proposed (250-300m high turbines) would be incompatible with AONB policies especially relating to the purpose of conservation and enhancement and its special qualities/natural beauty. A small extension using the same size turbines as existing for Greater Gabbard/ Galloper could be construed as minimising effects on the purposes of the AONB.
Recommendations for constraint or opportunities setting out the most suitable locations for development with appropriate design, scale and spacing in order to provide benefits and/or mitigate and minimise effects	Wind farm development using turbines less than 225m high is considered appropriate within the zone but arrays should avoid a curtaining effect when viewed from the AONB/HC coastline. This could be achieved with gaps between arrays of at least 12km, preferably more, and arrays not exceeding 15km width as perceived from shore. A limited extension of Greater Gabbard/ Galloper within the zone as currently proposed may cause limited effects but the turbines should be similar in height and spacing to the existing in order to minimise harm to the qualities and natural beauty of the AONB.

Seascape zone No: 06	Name: North Suffolk and Norfolk Inshore
Location	
The seascape zone is off the northern part of the Suffolk and south Norfolk coasts from Kessingland to Winterton-on-Sea. It is defined by the coast to the west, the northern boundary of the study area to the north, the line of view from the northern point of the AONB/HC just off the coast beyond Lowestoft port to the south and the boundary of average medium magnitude of effects of turbines up to 145m high (14km) (derived from the OESEA study, 2020) to the north east. *(Note: only Suffolk and associated receptors are assessed- ie Norfolk Coast AONB is not taken into consideration).*	
OVERALL SENSITIVITY	
Sensitivity	Medium
Summary	
The undesignated coast is generally low lying and gently curving with low cliffs. The main urban centre of Lowestoft has a small port which forms a minor headland, a seafront Conservation Area and popular beaches. Areas of rural countryside separate small seaside developments. The sea is used by commercial vessels accessing the port and Great Yarmouth to the north, for commercial fishing and for leisure craft. Scroby Sands wind farm lies within the zone. The zone's susceptibility lies in the panoramic views from the coast including the Suffolk Coast Path and England Coast Path to the north, the largely dark and open seascape, views from Lowestoft south seafront, Dunton Warren and Kessingland beach, and the relatively high frequency of visibility upto long distances offshore. The zone's value lies in its role as part of the setting of Lowestoft Conservation Area and SPAs/SAC. The factors which slightly reduce sensitivity are the presence of the urban area of Lowestoft with wind turbine, shipping, and the presence of Scroby Sands wind farm, but the latter raises the potential for cumulative effects.	
RECOMMENDATIONS FOR OFFSHORE WIND FARMS IN TERMS OF SEASCAPE AND VISUAL FACTORS	
Summary	
The seascape zone lies within 14km of the shore which is the suggested buffer for all scales of wind farm development to avoid significant adverse effects on largely undesignated coast with urban areas. This combined with the susceptibility and other values related to the zone suggest an area of constraint on windfarm development. Scroby Sands is an early development with small 2MW turbines located very close to shore. An extension of this would be problematic in seascape terms due to current commercially available turbine sizes and the potential for cumulative effects.	
SEASCAPE CHARACTER CONTEXT	
National Marine Character Areas	SCA 03 East Midlands Offshore Gas Fields (part) SCA 04 East Anglian Shipping Waters (part) SCA 09 Norfolk Coastal Waters (part) SCA 10 Suffolk Coastal Waters (part)
Local seascape character areas	SCT 03 Nearshore Waters (part) SCT 04 Developed Nearshore Waters (part) SCT 05 Coastal Waters (part)
VISUAL BUFFERS	
Distance offshore- range	Upto 14km from the coast.
*Size of turbines potentially having low magnitude of effect**	• Turbines below 145m would be likely to exceed low magnitude of effect less than 19.2km from AONB/HC. • Turbines 145m and above would be likely to exceed low

	magnitude of effect
*Size of turbines potentially having medium magnitude of effect**	• Turbines below 145m would be likely to exceed medium magnitude of effect less than 14km from shore. • Turbines 145m and above would be likely to exceed medium magnitude of effect

SUSCEPTIBILITY							
Main criteria	**Sub-criteria**	**H**	**H / M**	**M**	**M /L**	**L**	**Comments**
Natural							
Hinterland	Form/ topography/ character				■		The landform is generally low lying coastal plateau with very gentle slopes and valleys.
Coastal edge	Cliffs, rocky coasts, upper beach, dunes etc			■	■		Mix of straight or very gently curving bays with occasional low cliffs such as at Pakefield, Gunton and Corton, and a mix of sand and shingle beaches.
Coastal edge	Intertidal				■		Mix of simple gravel and sand beaches, with some with rock armour and groynes in places.
Key habitats, features and species	Marine, intertidal, coastal edge (if relevant).			■			Outer Thames Estuary SPA (wintering red-throated diver and common tern and little tern during the breeding season), Greater Wash SPA, Hammond and Winterton SAC.
Cultural/ Social							
Use of the sea *(see under seascape pattern and foci for assessment)*	Navigation, fishing, leisure, energy production, mineral extraction etc.			■			Lowestoft has a small port servicing offshore energy (Greater Gabbard/Galloper) and bulk cargoes, with a marina. There is an anchorage off Kessingland. Commercial fishing is found along the coast, use of beaches focussed on tourist towns, some leisure fishing, leisure sailing and watersports focussed on Lowestoft, aggregate production areas offshore from Lowestoft, and Scroby Sands offshore wind farm visible relatively close to shore.
Use of the coast/ hinterland	Settlement, industry, energy, marine related development such as ports, power stations, leisure/tourism, agriculture, conservation etc.			■	■		Lowestoft is a major town with some industry and a small port. Seaside destinations include holiday developments north and south of Lowestoft including caravan sites. Otherwise farmed rural coast/hinterland. Suffolk Coast Path and England Coast Path.
Historic features at sea, on seabed	eg wrecks, paleolandscapes			■			Recession of coastline over many years, numerous wrecks, some

or buried below							related to port approaches.
Historic features on coast	eg coastal forts, castles, lighthouses						Lowestoft South Conservation Area with associated listed buildings and gardens overlooking sea but focusses more to the east south east.
Cultural associations	eg former use of the sea or coast, boatmaking, former trade routes, associations with artists and writers, food traditions, spiritual connections, education and interpretation etc						Lowestoft associated with major fishing industry especially herring.
Main criteria	**Sub-criteria**	**H**	**H / M**	**M**	**M /L**	**L**	**Comments**
Quality/ Condition							
Intactness	Degree of completeness or fragmentation of area character or elements, presence of detractors and extent.						Seascape moderately intact but with some detractors- Scroby Sands wind farm and the turbine and industrial seafront at Lowestoft.
State of repair	Condition of coastal natural and built features/ elements, maintained or not maintained.						Generally well maintained with coastal protection but this is breaking up in places.
Aesthetic and Perceptual							
Scale	Of sea in relation to coastal form or offshore.						The sea feels large scale with panoramic views
Openness and enclosure	Degree and nature of enclosure of sea by land, framing of views.						Openness is a key characteristic of the coast with generally open views out to sea from beaches with some framing within Lowestoft Conservation Area.
Exposure	Sheltered, calm, exposed.						Exposed, eroding coast with sheltered waters in river/dock mouth.
Aspect	Relationship with sun.						East facing with potential for highlighting of turbines in low sun in afternoon and sunset.
Seascape pattern and foci	Features and elements on/above the sea surface.						Limited foci- Scroby Sands wind farm and some commercial and service vessels and leisure boats apparent in places.

Seascape pattern and foci - coast and hinterland	eg Headlands, cliffs, high hills or landmarks such as towers or castles.						There are a series of low cliffs but the main focus is Lowestoft with port protruding into the sea with wind turbine and commercial area, and the seafront of Conservation Area.
Contribution to the setting of a coast or seascape character area							The zone is integral to the character of the coast all lying within the limits of visual perception
Weather-visibility modifiers	Based on 10 years local weather station data, the % of time that visibility is very good (20-40km) or excellent (40km+). (Two % in order to rt)						High levels of visibility Weybourne (34% and 20%) and Shoeburyness (36% and 9.5%).
Main criteria	**Sub-criteria**	**H**	**H / M**	**M**	**M /L**	**L**	**Comments**
Visual Characteristics							
Key views- **land to sea** **sea to land** **sea to sea**	Including nature of views and elevation, perhaps including iconic features. Views from within area and from outside.						Land to sea- views from Lowestoft south seafront, Gunton Warren and beach and Kessingland beach.
Intervisibility of the area with important visual receptors	Amount/length/extent /nature of intervisibility and distance away from unit/development. eg relationship in terms of angle of view, topographic influences						Much of the coast is accessible and intervisible directly with the seascape zone.
Typical receptors - type and number	eg coast walkers, visitors to coast/features, beach visitors, residents, leisure sailors, ferries, shipping, urban areas etc. In designated areas or outside designated areas						The Suffolk Coast Path lies to the south and the England Coast Path to the north (but excluding Lowestoft ABP port and commercial area). Users of the trails and linking paths can view the sea along with visitors to beaches, promenade at Lowestoft. Leisure sailing from Lowestoft.
OVERALL SUSCEPTIBILITY							

VALUE							
DESIGNATIONS							
Landscape designations	*AONB Designation*	Suffolk Coast and Heaths AONB to the south					
	Heritage Coast Designation	Suffolk Heritage Coast to the south					
Historic designations	*Key scheduled monuments*	-					
	Conservation Areas	Lowestoft (south).					
	Key listed buildings	Lowestoft- Wellington Esplanade.					
	Historic parks and gardens	-					
Marine nature conservation designations	*SPA/SAC*	Greater Wash SPA, Outer Thames Estuary SPA, Haisborough, Hammond and Winterton SAC					
	Marine Conservation Zone	-					
VALUE CRITERIA							
Main criteria	**Sub-criteria**	**H**	**H/M**	**M**	**M/L**	**L**	**Comments**
Landscape designations- National, regional, local	eg National Parks, AONBs, Heritage Coast, local countryside designations, (distance, relationship, extent of role as setting).						Suffolk Coast and Heaths AONB and Suffolk Heritage Coast to the south but the area plays a very limited role in their setting.
Nature conservation designations	Main relevant marine designations eg MCZ, RAMSAR, SAC, SPA, etc						Greater Wash SPA, Outer Thames Estuary SPA, Haisborough, Hammond and Winterton SAC
Heritage designations	Marine and coastal- eg scheduled monuments, Conservation Areas, listed buildings, historic parks and gardens, and their settings						Lowestoft (south) with listed buildings and structures with views over the sea.
Relevant special qualities /natural beauty indicators	If landscape/ coastal designation overlooks area. (List and define the degree to which the area contributes to these).						The AONB and Heritage Coast do not overlook the seascape zone.
	Scenic quality- sense of place						Scenic quality in sea and coastal views with natural vegetated cliffs and hinterland at Gunton Warren and extensive beach at Kessingland.
	Scenic quality- panoramic views and vantage points						Panoramic views along the coast especially between settlements.

	Relative wildness, sense of remoteness, lack of human influence						The coast is relatively settled with limited green gaps.
	Relative tranquillity- absence of development						Tranquillity is limited to coastal edge/beach between settlements and offshore
	Relative tranquillity- dark skies						Substantially dark out to sea with some gaps between settlements. Scroby Sands wind farm's red aviation lights offshore.
	Cultural associations/artistic representations						Lowestoft- modern seafront art
Community values	Value associated with area or features by people- communities of interest/place, public attitudes.						Leisure sailing between Lowestoft and Aldeburgh, beach and sea fishing form communities of interest, the Coast Path is well used and the coastal settlements and associated beaches are popular.
Recreational value	Use for leisure or sport on sea, intertidal, coast.						Leisure sailing, sea and beach angling and walking. Suffolk Coast Path to the south and England Coast Path to the north.
OVERALL VALUE							

CUMULATIVE EFFECTS	Comments
Existing and consented offshore wind farms within zone	Scroby Sands offshore wind farm within zone but viewed end on and at an oblique angle north along the coast. Further development south or east potentially could cause cumulative effects if using larger turbines or extending the perceived width of development along the horizon.
Potential planned further development in zone	None known although the Round 4 bidding area lies around 27km offshore at its closest point.
Current relationship of wind farms and effect on seascape character and setting of AONB	Scroby Sands offshore wind farm does not affect Suffolk Coast and Heaths AONB or its setting.
Potential cumulative combined effect of existing, consented and potential planned development on seascape character and setting of AONB	No cumulative effects are expected.
Compatibility of cumulative combined effects with AONB policies	N/A
Recommendations for constraint or opportunities setting out the most suitable locations for development with appropriate design, scale and spacing in order to provide benefits and/or mitigate and minimise effects	N/A

Seascape zone No: 07	Name: North Suffolk and Norfolk Offshore
Location	
The seascape zone is off the northern part of the Suffolk and south Norfolk coasts from Kessingland to Winterton-on-Sea. It is defined by the northern boundary of the study area to the north, the boundary of average medium magnitude of effects of turbines up to 145m high (14km) (derived from the OESEA OESEA study, 2020) to the south west and medium magnitude of effects for larger turbines upto 400m high (30km) to the east, and a line between 34km and 40km from the northern edge of the AONB/HC to the south. *(Note: only Suffolk and associated receptors are assessed- ie Norfolk Coast AONB is not taken into consideration).*	
OVERALL SENSITIVITY	
Sensitivity	Medium
Summary	
The zone lies between 14km and 30km offshore from the undesignated coast which is generally low lying and gently curving with low cliffs. The main urban centre of Lowestoft has a small port which forms a minor headland, a seafront Conservation Area and popular beaches. Areas of rural countryside separate small seaside developments. The sea is used for commercial fishing and by commercial vessels. Scroby Sands wind farm lies inshore of the zone. The zone's susceptibility lies in the panoramic views from the coast including the Suffolk Coast Path and England Coast Path to the north, the largely dark and open seascape, oblique views from Lowestoft south seafront, views from Dunton Warren and Kessingland beach, and the relatively high frequency of visibility upto long distances offshore. The zone's value lies in its role as a limited part of the setting of Lowestoft Conservation Area and SPAs/SAC. The factors which slightly reduce sensitivity are the presence of the urban area of Lowestoft with wind turbine, shipping, and the presence of Scroby Sands wind farm inshore, but the latter raises the potential for cumulative effects.	
RECOMMENDATIONS FOR OFFSHORE WIND FARMS IN TERMS OF SEASCAPE AND VISUAL FACTORS	
Summary	
The seascape zone lies between 14km and 30km which potentially allows consideration of appropriately designed wind farms with turbines between 107-350m high at graded distances offshore (see below) but is a suggested constraint buffer for turbines over 351m high to avoid significant adverse effects on the largely undesignated coast with urban areas. Development within the Round 4 bidding area *within the zone* could be considered between 300m and 350m depending on distance offshore.There may be some cumulative effects in conjunction with Scroby Sands and this would need to be carefully considered.	
SEASCAPE CHARACTER CONTEXT	
National Marine Character Areas	SCA 03 East Midlands Offshore Gas Fields (part) SCA 04 East Anglian Shipping Waters (part)
Local seascape character areas	SCT 05 Coastal Waters (part) SCT 06 Offshore Waters (part)
VISUAL BUFFERS	
Distance offshore- range	14-30km from the coast.
*Size of turbines potentially having low magnitude of effect**	• Turbines below 145m would be likely to exceed low magnitude of effect less than 19.2km from shore. • Turbines 145-175m would be likely to exceed low magnitude of effect less than 21.7 km from shore.

	• Turbines above 176-225m would be likely to exceed low magnitude of effect less than 26.2 km from shore. • Turbines 226-400m would be likely to exceed low magnitude of effect less than 38.6 km from shore.
*Size of turbines potentially having medium magnitude of effect**	• Turbines 145-175m would be likely to exceed medium magnitude of effect less than 15.8km from shore. • Turbines above 176-225m would be likely to exceed medium magnitude of effect less than 20.2km from shore. • Turbines 226-300m would be likely to exceed medium magnitude of effect less than 27.5km from shore. • Turbines 301-350m would be likely to exceed medium magnitude of effect less than 30km from shore. • Turbines 351-400m would be likely to exceed medium magnitude of effect less than 30km+ from shore.

SUSCEPTIBILITY							
Main criteria	**Sub-criteria**	**H**	**H / M**	**M**	**M /L**	**L**	**Comments**
Natural							
Hinterland	Form/ topography/ character						The landform is generally low lying coastal plateau with very gentle slopes and valleys.
Coastal edge	Cliffs, rocky coasts, upper beach, dunes etc						Mix of straight or very gently curving bays with occasional low cliffs such as at Pakefield, Gunton and Corton, and a mix of sand and shingle beaches.
Coastal edge	Intertidal						Mix of simple gravel and sand beaches, with some with rock armour and groynes in places.
Key habitats, features and species	Marine, intertidal, coastal edge (if relevant).						Hammond and Winterton SAC.
Cultural/ Social							
Use of the sea *(see under seascape pattern and foci for assessment)*	Navigation, fishing, leisure, energy production, mineral extraction etc.						Used for commercial fishing and some navigation, on the edge of the oil/gas field.
Use of the coast/ hinterland	Settlement, industry, energy, marine related development such as ports, power stations, leisure/tourism, agriculture, conservation etc.						Lowestoft is a major town with some industry and a small port. Seaside destinations include holiday developments north and south of Lowestoft including caravan sites. Otherwise farmed rural coast/ hinterland. Suffolk Coast Path and England Coast Path.
Historic features at sea, on seabed	eg wrecks, paleolandscapes						Paleolandscape, some wrecks.

or buried below							
Historic features on coast	eg coastal forts, castles, lighthouses						Lowestoft South Conservation Area with associated listed buildings and gardens overlooking sea but focusses more to the east south east.
Cultural associations	eg former use of the sea or coast, boatmaking, former trade routes, associations with artists and writers, food traditions, spiritual connections, education and interpretation etc						Lowestoft associated with major fishing industry especially herring.
Main criteria	**Sub-criteria**	**H**	**H / M**	**M**	**M /L**	**L**	**Comments**
Quality/ Condition							
Intactness	Degree of completeness or fragmentation of area character or elements, presence of detractors and extent.						Seascape intact.
State of repair	Condition of coastal natural and built features/ elements, maintained or not maintained.						Generally well maintained with coastal protection but this is breaking up in places.
Aesthetic and Perceptual							
Scale	Of sea in relation to coastal form or offshore.						Large scale open sea
Openness and enclosure	Degree and nature of enclosure of sea by land, framing of views.						Very open away from the coast.
Exposure	Sheltered, calm, exposed.						Highly exposed open sea.
Aspect	Relationship with sun.						North east of Suffolk coast so away from sunset/sunrise locations.
Seascape pattern and foci	Features and elements on/above the sea surface.						Very limited foci – occasional vessels.
Seascape pattern and foci - coast and hinterland	eg Headlands, cliffs, high hills or landmarks such as towers or castles.						There are a series of low cliffs but the main focus is Lowestoft with port protruding into the sea with wind turbine and commercial area, and the seafront of Conservation

							Area.
Contribution to the setting of a coast or seascape character area							The zone lies within the limits of visual perception but is at an oblique angle to the coast.
Weather-visibility modifiers	Based on 10 years local weather station data, the % of time that visibility is very good (20-40km) or excellent (40km+). (Two % in order to rt)						High levels of visibility Weybourne (34% and 20%) and Shoeburyness (36% and 9.5%).
Main criteria	**Sub-criteria**	**H**	**H / M**	**M**	**M /L**	**L**	**Comments**
Visual Characteristics							
Key views- **land to sea** **sea to land** **sea to sea**	Including nature of views and elevation, perhaps including iconic features. Views from within area and from outside.						Land to sea- oblique views from Lowestoft south seafront, Gunton Warren and beach and Kessingland beach.
Intervisibility of the area with important visual receptors	Amount/length/extent /nature of intervisibility and distance away from unit/development. eg relationship in terms of angle of view, topographic influences						Much of the coast is accessible and intervisible obliquely with the seascape zone.
Typical receptors - type and number	eg coast walkers, visitors to coast/features, beach visitors, residents, leisure sailors, ferries, shipping, urban areas etc. In designated areas or outside designated areas						The Suffolk Coast Path lies to the south and the England Coast Path to the north (but excluding Lowestoft ABP port). Users of the trails and linking paths can view the sea along with visitors to beaches, promenade at Lowestoft.
OVERALL SUSCEPTIBILITY							

VALUE		
DESIGNATIONS		
Landscape designations	*AONB Designation*	Suffolk Coast and Heaths AONB at a distance to the south west

	Heritage Coast Designation	Suffolk Heritage Coast at a distance to the south west
Historic designations	*Key scheduled monuments*	-
	Conservation Areas	Lowestoft (south)- but oblique views.
	Key listed buildings	Lowestoft- Wellington Esplanade but oblique views.
	Historic parks and gardens	-
Marine nature conservation designations	*SPA/SAC*	Haisborough, Hammond and Winterton SAC
	Marine Conservation Zone	-

VALUE CRITERIA

Main criteria	Sub-criteria	H	H / M	M	M /L	L	Comments
Landscape designations- National, regional, local	eg National Parks, AONBs, Heritage Coast, local countryside designations, (distance, relationship, extent of role as setting).						Suffolk Coast and Heaths AONB and Suffolk Heritage Coast to the south west at a distance and the area plays a very limited role in their setting.
Nature conservation designations	Main relevant marine designations eg MCZ, RAMSAR, SAC, SPA, etc						Haisborough, Hammond and Winterton SAC
Heritage designations	Marine and coastal- eg scheduled monuments, Conservation Areas, listed buildings, historic parks and gardens, and their settings						Lowestoft (south) with listed buildings and structures with oblique views over the sea.
Relevant special qualities /natural beauty indicators	If landscape/ coastal designation overlooks area. (List and define the degree to which the area contributes to these).						The AONB and Heritage Coast do not overlook the seascape zone.
	Scenic quality- sense of place						Scenic quality in sea and coastal views with natural vegetated cliffs and hinterland at Gunton Warren and extensive beach at Kessingland.
	Scenic quality- panoramic views and vantage points						Panoramic views along the coast especially between settlements.
	Relative wildness, sense of remoteness, lack of human influence						Remote zone with limited apparent human influence
	Relative						Generally tranquil- development

	tranquillity- absence of development						absent
	Relative tranquillity- dark skies						Substantially dark

Main criteria	Sub-criteria	H	H / M	M	M /L	L	Comments
	Cultural associations/artistic representations						Limited cultural associations other than maritime use.
Community values	Value associated with area or features by people- communities of interest/place, public attitudes.						Very limited community values
Recreational value	Use for leisure or sport on sea, intertidal, coast.						Very limited leisure sailing
OVERALL VALUE							

CUMULATIVE EFFECTS	Comments
Existing and consented offshore wind farms within zone	No offshore wind farm within zone.
Potential planned further development in zone	Round 4 bidding area covers the eastern part of the area.
Current relationship of wind farms and effect on seascape character and setting of AONB	Scroby Sands offshore wind farm to the west does not affect Suffolk Coast and Heaths AONB or its setting.
Potential cumulative combined effect of existing, consented and potential planned development on seascape character and setting of AONB	Limited cumulative effects are expected in respect of Suffolk receptors.
Compatibility of cumulative combined effects with AONB policies	N/A
Recommendations for constraint or opportunities setting out the most suitable locations for development with appropriate design, scale and spacing in order to provide benefits and/or mitigate and minimise effects	N/A

Seascape zone No: 08	Name: East Anglia Outer Offshore
Location/Extent	
The seascape zone comprises the outer offshore waters running from the Thames estuary north off the coast of East Anglia. It is defined by the boundary of the study area to the north, south and east, and, to the west, the suggested buffer distance for larger turbines off combined AONBs and Heritage Coasts (40km) (derived from the OESEA study, 2020) except where adjacent to the northern arrays of the Greater Gabbard and Galloper wind farms and 30km off the undesignated coast to the north west.	
OVERALL SENSITIVITY	
Sensitivity	Medium/low
Summary	
The zone lies over 40km offshore from the low lying coast covered by the combined Suffolk Coast and Heaths AONB and Suffolk Heritage Coast designation. These open, exposed offshore waters of the North Sea include deep water routes for shipping with widespread commercial fishing, some aggregate production and oil/gas fields. The southern array of the Greater Gabbard/Galloper windfarms lie to the south and the East Anglia ONE wind farm has been recently constructed lying centrally. Further wind farms of East Anglia Three and Norfolk Vanguard have been consented to the north. The zone's susceptibility lies in the panoramic views from the coast including the Suffolk Coast Path, England Coast Path, and the sense of remoteness, tranquillity and openness of the coast which relate to the AONB's natural beauty criteria. The zone's value lies in its role as part of the setting of the combined AONB and Heritage Coast, the views from the scheduled monuments, Conservation Areas, listed buildings and associated gardens, and MCZ/SPA/SACs. However, the effects on these receptors are significantly modified and reduced by the minimum distance of the zone offshore which means that most developments would be perceived as small and would be visible/perceptible between 10-20% of the time.	
RECOMMENDATIONS FOR OFFSHORE WIND FARMS IN TERMS OF SEASCAPE AND VISUAL FACTORS	
Summary	
The seascape zone is an area of more limited seascape/visual constraints, especially to the east. An extension of Greater Gabbard/ Galloper to the east and south east within the area may cause limited effects but the turbines should be similar in height and spacing to the existing. Turbines as proposed in East Anglia TWO and ONE North *within the zone* would not be considered to cause significant harm to the qualities and natural beauty of the AONB. Further proposals within the zone, such as in the Round 4 bidding area, should be located as far offshore as possible, and if located towards the western boundary maintain large gaps (say 12km+) between arrays (say a similar size to East Anglia ONE North) so clear views of the horizon between arrays is possible from the designated coast.	
SEASCAPE CHARACTER CONTEXT	
National Marine Character Areas	SCA 04 East Anglian Shipping Waters (part)
Local seascape character areas	SCT 06 Offshore Waters (part)
VISUAL BUFFERS	
Distance offshore- range	East/south east of Greater Gabbard/Galloper wind farms, 40km offshore of Suffolk Coast and Heaths AONB and Heritage Coast and 30km offshore to the north.
*Size of turbines potentially having low magnitude of effect**	• Turbines below 225m would not be likely to exceed low magnitude of effect within the zone. • Turbines 226-300m would be likely to exceed low magnitude of effect less than 38.6 km from shore.

	• Turbines 301-350m would be likely to exceed low magnitude of effect less than 40 km from shore. • Turbines 351-400m would be likely to exceed low magnitude of effect less than 40km+ from shore.
*Size of turbines potentially having medium magnitude of effect**	• Turbines below 350m would not be likely to exceed medium magnitude of effect within the zone. • Turbines 351-400m would be likely to exceed medium magnitude of effect less than 30km+ from shore.

SUSCEPTIBILITY							
Main criteria	**Sub-criteria**	**H**	**H / M**	**M**	**M /L**	**L**	**Comments**
Natural							
Hinterland	Form/ topography/ character						The landform is generally low lying with low coastal plateau and slopes behind coastal levels.
Coastal edge	Cliffs, rocky coasts, upper beach, dunes etc						Mix of very gently curving bays with minor headlands and small estuaries and a very gently convex coast, occasional low cliffs, extensive shingle beaches in places including the very long spit at Orfordness.
Coastal edge	Intertidal						Mix of simple gravel beaches and banks with estuarial deposits, with groynes and rock armour in places.
Key habitats, features and species	Marine, intertidal, coastal edge (if relevant).						Offshore open water with sediments- Kentish Knock MCZ, Outer Thames Estuary SPA, Haisborough, Hammond and Winterton SAC
Cultural/ Social							
Use of the sea *(see under seascape pattern and foci for assessment)*	Navigation, fishing, leisure, energy production, mineral extraction etc.						Shipping- deep water routes to the north and traffic separation zones to the south and anchorages on the approaches to Felixstowe/Harwich. Several wind farms in area including Greater Gabbard/Galloper and East Anglia ONE with more consented. Widespread commercial fishing and some aggregate production and oil/gas fields.
Use of the coast/ hinterland	Settlement, industry, energy, marine related development such as ports, power stations, leisure/tourism, agriculture, conservation etc.						Urban settlements with ports of Felixstowe to the south and Lowestoft to the north, Sizewell nuclear power stations, and a scattering of coastal settlements which are visitor destinations within a largely rural coast/hinterland including nature reserves and levels linked by the Suffolk Coast Path and England Coast Path. Orford Ness is a

							major shingle spit centrally located.
Historic features at sea, on seabed or buried below	eg wrecks, paleolandscapes						Paleolandscape, wrecks are widely scattered across the area including HMS Amphion from the World War II.
Historic features on coast	eg coastal forts, castles, lighthouses						Numerous Conservation Areas and associated listed buildings, Napoleonic Wars features including Martello towers, Orfordness lighthouse, Bawdsey Manor historic park and garden, Orford Castle set back from the coast but overlooking it.
Cultural associations	eg former use of the sea or coast, boatmaking, former trade routes, associations with artists and writers, food traditions, spiritual connections, education and interpretation etc						Associated with shipping across the North Sea linking UK ports with Europe and from English Channel, paleolandscape associations pre-sea level rise and the North Sea.
Main criteria	**Sub-criteria**	**H**	**H / M**	**M**	**M /L**	**L**	**Comments**
Quality/ Condition							
Intactness	Degree of completeness or fragmentation of area character or elements, presence of detractors and extent.						Seascape largely open and intact with windfarms currently widely separated although busier with sea traffic where cross North Sea routes intersect with English Channel traffic.
State of repair	Condition of coastal natural and built features/ elements, maintained or not maintained.						N/A
Aesthetic and Perceptual							
Scale	Of sea in relation to coastal form or offshore.						Large scale open sea
Openness and enclosure	Degree and nature of enclosure of sea by land, framing of views.						Very open away from the coast.
Exposure	Sheltered, calm, exposed.						Highly exposed open sea.
Aspect	Relationship with sun.						East of the coast so potential for highlighting of turbines in low sun near sunset but at a distance.

Seascape pattern and foci	Features and elements on/above the sea surface.						Presence of wind farms and shipping/ferries.
Seascape pattern and foci - coast and hinterland	eg Headlands, cliffs, high hills or landmarks such as towers or castles.						Very distinctive shingle spit at Orford Ness, some limited cliffs with small headlands, with occasional historic seaside towns, Martello towers and Orford Castle inland. Small scale and low landmarks generally. Current windfarms in zone not perceptible from the coast.
Contribution to the setting of a coast or seascape character area							The zone contributes to the character of the coast but the eastern part of the area lies beyond the limits of visual perception.
Weather-visibility modifiers	Based on 10 years local weather station data, the % of time that visibility is excellent (40km+).						High levels of visibility Weybourne (20%) and Shoeburyness (9.5%).
Main criteria	**Sub-criteria**	**H**	**H / M**	**M**	**M /L**	**L**	**Comments**
Visual Characteristics							
Key views- **land to sea** **sea to land** **sea to sea**	Including nature of views and elevation, perhaps including iconic features. Views from within area and from outside.						Land to sea- views from coastal Conservation Areas, Orford Castle, Martello towers and from Suffolk Coast Path and England Coast Path. Sea to sea- views from ferries.
Intervisibility of the area with important visual receptors	Amount/length/extent /nature of intervisibility and distance away from unit/development. eg relationship in terms of angle of view, topographic influences						Most of the coast is accessible and directly facing the sea with a direct relationship with the seascape zone but at a distance.
Typical receptors - type and number	eg coast walkers, visitors to coast/features, beach visitors, residents, leisure sailors, ferries, shipping, urban areas etc. In designated areas or outside designated areas						Users of coast within AONB and Heritage Coast, Suffolk Coast Path, visitors to historic towns and beaches. Leisure sailors from various estuaries at a distance. Harwich ferry users.
OVERALL SUSCEPTIBILITY							

VALUE							
DESIGNATIONS							
Landscape designations	*AONB Designation*	Suffolk Coast and Heaths AONB					
	Heritage Coast Designation	Suffolk Heritage Coast					
Historic designations	*Key scheduled monuments*	Orford Castle; Landguard Fort- Felixstowe and associated Napoleonic Wars Martello Towers. Greyfriars, Dunwich- sheltered from views except at the south eastern coastal edge.					
	Conservation Areas	Felixstowe, Orford, Aldeburgh, Thorpeness, Dunwich, Southwold, Lowestoft (south).					
	Key listed buildings	Orford Castle- Grade I listed building tower, Bawdsey Manor and associated buildings and structures, various Martello towers and battery observation post. Aldeburgh- eg Moot Hall, White Lion Hotel, Market Cross House, 8-14, Market Cross Place; Dunwich- Greyfriars Monastery; Southwold- numerous eg Gun Hill Place, Centre Cliff, Cliff House and Shrimp Cottage, Bay View and East Cliff; Lowestoft- Wellington Esplanade.					
	Historic parks and gardens	Bawdsey Manor Historic Park and Garden; Cliff Gardens (and Town Hall Garden), Felixstowe.					
Marine nature conservation designations	*SPA/SAC*	Outer Thames Estuary SPA; Haisborough, Hammond and Winterton SAC.					
	Marine Conservation Zone	Kentish Knock MCZ					
VALUE CRITERIA							
Main criteria	**Sub-criteria**	**H**	**H / M**	**M**	**M /L**	**L**	**Comments**
Landscape designations- National, regional, local	eg National Parks, AONBs, Heritage Coast, local countryside designations, (distance, relationship, extent of role as setting).						Suffolk Coast and Heaths AONB and Suffolk Heritage Coast combined overlook zone but at a distance of 40km+.
Nature conservation designations	Main relevant marine designations eg MCZ, RAMSAR, SAC, SPA, etc						Kentish Knock MCZ; Outer Thames Estuary SPA; Haisborough, Hammond and Winterton SAC; Southern North Sea SAC.
Heritage designations	Marine and coastal- eg scheduled monuments, Conservation Areas, listed buildings, historic parks and gardens, and their settings						Heritage assets dotted along the coast overlook the area but at a distance of 40km+.
Relevant special	If landscape/ coastal designation overlooks						The AONB and Heritage Coast directly overlook the seascape zone

qualities /natural beauty indicators	area. (List and define the degree to which the area contributes to these).						but at a distance of 40km+.
Main criteria	**Sub-criteria**	**H**	**H / M**	**M**	**M /L**	**L**	**Comments**
	Scenic quality- sense of place						Eastern edge of the zone may contribute to the sense of place.
	Scenic quality- panoramic views and vantage points						Large structures on the eastern edge of the zone would be visible in long views.
	Relative wildness, sense of remoteness, lack of human influence						Eastern edge of the zone contributes to feeling of remoteness.
	Relative tranquillity- absence of development						Eastern edge of the zone contributes to relative tranquillity.
	Relative tranquillity- dark skies						Eastern edge of the zone contributes to relative tranquillity.
	Cultural associations/artistic representations						Broader cultural associations of trade and defence.
Community values	Value associated with area or features by people- communities of interest/place, public attitudes.						Very limited community values
Recreational value	Use for leisure or sport on sea, intertidal, coast.						Very limited leisure sailing
OVERALL VALUE							

CUMULATIVE EFFECTS	Comments
Existing and consented offshore wind farms within zone	Existing East Anglia One and Greater Gabbard/ Galloper within and adjacent to the zone and London Array nearby to the south. Consented East Anglia Three and Norfolk Vanguard East and West. Further development potentially could cause cumulative effects with Greater Gabbard/Galloper and London Array if using very large turbines extending along a major part of the horizon along the eastern edge of the zone.
Potential planned further development in zone	Greater Gabbard/ Galloper extension, East Anglia TWO and ONE North. The Round 4 bidding area covers a large part of the northern part of the zone.
Current relationship of wind farms and effect on seascape character and setting of AONB	Existing and consented wind farms within the area are sufficiently far offshore and separated to not have an effect on the setting of the AONB. To the north, the character of the seascape is developing into an offshore wind farm seascape.
Potential cumulative combined	The Greater Gabbard/ Galloper extension within the zone is

effect of existing, consented and potential planned development on seascape character and setting of AONB	unlikely to significantly increase adverse effects on the AONB although the level of effects would depend on the size of turbine proposed. Views of East Anglia TWO and ONE North within the zone may be possible in very good/excellent visibility conditions which could create large groupings of turbines visible on the horizon and in close juxtaposition with Greater Gabbard/ Galloper (7km gap). Whilst at 40km+ the effects would be reduced, views to clear horizons between arrays are highly desirable off the AONB. Development within the Round 4 bidding area would be likely to increase cumulative effects of the developments above. Views to clear horizons between arrays are highly desirable off the AONB.
CUMULATIVE EFFECTS	**Comments**
Compatibility of cumulative combined effects with AONB policies	An extension using similar size turbines as existing for Greater Gabbard/ Galloper could be construed as minimising effects on the purposes of the AONB. The parts of East Anglia TWO and ONE North *within the zone* could also be considered to minimise effects through distance and the increase in spacing between arrays to the north.
Recommendations for constraint or opportunities setting out the most suitable locations for development with appropriate design, scale and spacing in order to provide benefits and/or mitigate and minimise effects	An extension of Greater Gabbard/ Galloper to the east and south east within the area may cause limited effects but the turbines should be similar in height and spacing to the existing. Turbines as proposed in East Anglia TWO and ONE North *within the zone* would not be considered to cause significant harm to the qualities and natural beauty of the AONB. Further proposals within the zone, such as in Round 4, should be located as far offshore as possible, and if located towards the eastern boundary maintain large gaps (say 12km+) between arrays (say a similar size to East Anglia ONE North) so clear views of the horizon between arrays is possible from the designated coast.

Appendix A Factors influencing the sensitivity of seascape character areas

FACTORS INFLUENCING SENSITIVITY

Seascape susceptibility criteria and indicators

Main criteria	Sub-criteria	Indicators of higher susceptibility	Indicators of lower susceptibility
Natural			
Hinterland	Form/ topography/ character	Mountainous or hilly hinterland ie long slopes rising from coast, high elevation	Plateau or flat hinterland. Highly enclosed by topography or land cover
Coastal edge	Cliffs, rocky coasts, upper beach, dunes etc	Intricate, complex, rugged forms and dramatic headlands/ends of peninsulas Where great simplicity is the key characteristic and introduction of structures into very horizontal composition would compromise this.	Flat, horizontal or gently undulating or largely straight coast. Simple forms
Coastal edge	Intertidal	Intricate, complex, rugged forms Simple large beaches	Man-made interventions/ structures in area
Key habitats, features and species	Marine, intertidal, coastal edge (if relevant).	Presence of marine habitats with high biodiversity in area of search.	Limited range and extent of biodiverse areas in area of search.
Cultural/ Social			
Use of the sea	Navigation, fishing, leisure, energy production, mineral extraction etc.	Uses with limited infrastructure.	Presence of energy production and large shipping vessels/trade routes nearby (not through area).
Use of the coast/ hinterland	Settlement, industry, energy, marine related development such as ports, power stations, leisure/tourism, agriculture, conservation etc.	Uses with limited infrastructure. Rural uses or semi-natural land. Small scale, traditional, historic settlements and harbours.	Presence of industry/energy production/dock infrastructure. Urban form
Historic features at sea, on seabed or buried below	eg wrecks, paleolandscapes	Substantial presence of wrecks and other submerged historic features which have significance as a group or make it difficult to microsite turbines.	Limited number or no heritage features.
Historic features on coast	eg coastal forts, castles, lighthouses	Presence of coastal and island historic features such as forts, castles, chapels, monasteries, other buildings and structures and other heritage features which have a strong relationship with the coast and sea visually, physically or	Limited number or no heritage features

		culturally.	
Main criteria	**Sub-criteria**	**Indicators of higher susceptibility**	**Indicators of lower susceptibility**
Cultural associat-ions	eg former use of the sea or coast, boatmaking, former trade routes, associations with artists and writers, food traditions, spiritual connections, education and interpretation etc	Where there are strong collective cultural associations with the sea and coast through people and events and their expression through literature, art, music or other media. These can include religious connections, legends, books and poems, pictures, music, films, plays and other cultural media.	Limited or no cultural associations, or cultural associations which are compatible with development, possibly relating to industry, military infrastructure and trade.
Quality/ Condition			
Intactness	Degree of completeness or fragmentation or area character or elements, presence of detractors and extent.	Intact and consistent character of seascape. Few or no detractors.	Seascape character fragmented. Presence of detractors.
State of repair	Condition of coastal natural and built features/ elements, maintained or not maintained.	Well maintained seascape or landscape character at coast.	Poorly maintained seascape or landscape character at coast. Presence of dereliction/neglect.
Aesthetic and Perceptual			
Scale	Of sea in relation to coastal form or offshore.	Small scale, enclosed, views to horizon limited by landform Introduction of an element of scale into previously un-scaled area	Large scale views
Openness and enclosure	Degree and nature of enclosure of sea by land, framing of views.	Where openness is a key characteristic and introduction of built elements would compromise this.	Unframed open views unimpeded by natural elements or features.
Exposure	Sheltered, calm, exposed.	Sheltered and calm seascapes Where seascape is extremely exposed such that the perceived wild, elemental nature is a key characteristic and development would significantly change this perception.	Open, exposed seascapes which does not provide a perception of elemental or wild seascape character and development would be perceived as relating to these characteristics.

Main criteria	Sub-criteria	Indicators of higher susceptibility	Indicators of lower susceptibility
Aspect	Relationship with sun.	Development would interfere with notable views of sunrises and particularly sunsets. Where turbines would be highlighted in contrast to their background by sun light or be highlighted in silhouette from backlighting, thereby increasing visual prominence. Development seen from higher level views, particularly where viewer elevation results in development, and its geometric layout pattern, being seen much closer than on the horizon line.	Development located away from sunrise and sunset positions
Seascape pattern and foci	Features and elements on/above the sea surface.	Complex or unified pattern which would be disrupted by development.	Presence of existing vertical or other elements at sea including shipping/ferries.
Seascape pattern and foci - coast and hinterland	eg Headlands, cliffs, high hills or landmarks such as towers or castles.	Important focal points eg islands, islets, headlands, distinctive sweeping beaches, and high hills. Open unspoilt views of the sea with no signs of development offshore.	Lack of intact pattern Lack of natural or historic feature focal points
Contribut-ion to the setting of a coast or seascape character area		Is perceived from, and forms the setting of, a sensitive coast or seascape character area within the limits of visual perception. (See sensitivity criteria below).	Is perceived from a less sensitive coast or seascape character area. Is beyond the limits of visual perception.
Visual Characteristics			
Key views- **land to sea** **sea to land** **sea to sea**	Including nature of views and elevation, perhaps including iconic features. Views from within area and from outside.	Open or framed views from key viewpoints. Views to key features eg islands, other coasts, headlands. Views from well used sea area for leisure focussed on seascape/scenic quality.	Few or no views from key viewpoints. Sea not used for leisure sailing.
Intervisib-ility of the area with important visual receptors	Amount/length/ extent /nature of intervisibility and distance away from unit/ development. eg relationship in terms of angle of view, topography influences	Strong intervisibility with coast in terms of length and/or area and/or relatively close to.	Poor intervisibility with coast in terms of length and/or area and/or relatively far away.

Main criteria	Sub-criteria	Indicators of higher susceptibility	Indicators of lower susceptibility
Typical receptors - type and number	eg coast walkers, visitors to coast/features, beach visitors, residents, leisure sailors, ferries, shipping, urban areas etc. In designated areas or outside designated areas	Coast path and users of paths and access land. Visitors to heritage features. Promenade and pier users. Leisure sailors.	Users of ferries. Shipping. People in urban areas at work. Users of roads (unless corniche). Users of railways.

Seascape value criteria and indicators

Main criteria	Sub-criteria	Indicators of higher value	Indicators of lower value
Landscape designations- National, regional, local	eg National Parks, AONBs, Heritage Coast, local countryside designations, (distance, relationship, extent of role as setting).	Presence of National Parks, AONBs, especially if combined with Heritage Coast, overlooking area. Perceived as lying within seascape setting of a designation.	Absence of landscape designations. Not within seascape setting of a landscape designation.
Nature conservation designations	Marine and coastal eg MCZ, RAMSAR, SAC, SPA, SSSI etc (if relevant).	Presence of nature conservation designations within or potentially affected by area of potential development.	Absence of nature conservation designations within or potentially affected by area of potential development
Heritage designations	Marine and coastal- eg scheduled monuments, Conservation Areas, listed buildings, historic parks and gardens, and their settings (if relevant).	Presence of heritage designations overlooking or within area of potential development. Perceived as lying within seascape setting of a designation.	Absence of heritage designations overlooking or within area of potential development
Relevant special qualities /natural beauty indicators	If landscape/ coastal designation overlooks area. (List and define the degree to which the area contributes to these).	Area contributes to special qualities/**natural beauty indicators**.	Area does not contribute to special qualities/ **natural beauty indicators**.
	Scenic quality- sense of place	A clear and recognisable sense of place which the area contributes to.	A limited sense of place and/or limited contribution to sense of place.
	Scenic quality- panoramic views and vantage points	Panoramic views out to sea and along Heritage Coast Views from elevated	No or very limited views out to sea or along coast

		vantage points out to sea	No or very limited vantage points
Main criteria	**Sub-criteria**	**Indicators of higher value**	**Indicators of lower value**
Relevant special qualities /natural beauty indicators (cont'd)	Relative wildness, sense of remoteness, lack of human influence	Sense of remoteness with little indication of development onshore and offshore	Sense of settled landscape with presence of development onshore and offshore
	Relative tranquillity- absence of development	Perception of semi-natural character and absence of development and people	Perception of movement, development, people.
	Relative tranquillity- dark skies	Presence of dark skies with very limited light sources onshore and offshore	Presence of light sources on coast and offshore
	Cultural associations/artistic representations	Area with rich cultural associations.	Area with limited cultural associations.
Community values	Value associated with area or features/elements by people- communities of interest and place, public attitudes.	Area or features highly valued by people.	Area or features with attributed limited value by people.
Recreational value	Use for leisure or sport on sea, intertidal, coast.	Area used extensively for leisure especially related to enjoying seascape character and views.	Area with limited use for leisure, or where leisure relates to motorised pursuits/speed.

Cumulative effects criteria and indicators

Criteria	Indicators of higher cumulative effect	Indicators of lower cumulative effect
Current relationship of existing and consented wind farms and effect on seascape character and setting of AONB	Current development already creates a wind farm seascape or is nearing this state and is beginning to have a significant adverse effect on the setting of the AONB, eg curtaining on the horizon.	There are no existing and consented wind farms or development is at a low density and forms a seascape with occasional wind farms and has a limited or no adverse effect on the setting of the AONB.
Potential cumulative combined effect of existing, consented and potential planned development on seascape character and setting of AONB	Combined development is likely to create a wind farm seascape or is nearing this state and is beginning to have a significant adverse effect on the setting of the AONB, eg curtaining.	There is no or very limited combined development or forms a seascape with occasional wind farms and has a limited or no adverse effect on the setting of the AONB.
Compatibility of potential cumulative combined effects with AONB policies	Combined development significantly adversely changes the perception of AONB natural beauty/special qualities.	Combined development has no or very limited effect on the perception of AONB natural beauty/ special qualities.
Recommendations for constraint or opportunity.	Recommendations may include avoiding or limiting further development with strict limits on size, scale and design of development.	Recommendations may be limited or include size, scale, location advice to avoid potential seascape issues in the future.

Appendix B Visibility modifiers

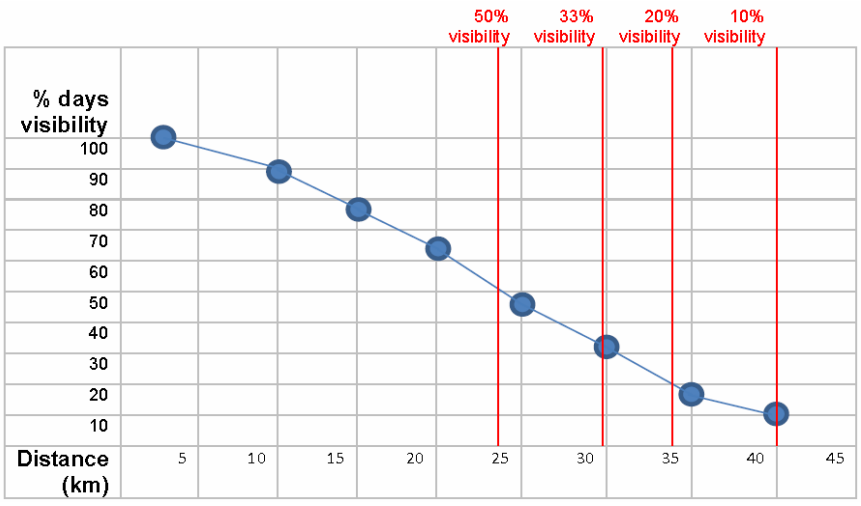
Visibility Distances for Coastal Stations in England and Wales over a 10 year period (2008-2017)- illustrating relative visibility of local weather stations with others *(Extract from OESEA,2020)*

Weather Stations	Visibility Distance (km)							
	0-5	6-10	11-15	16-20	21-25	26-30	35	40+
Boulmer % days visibility	10.9%	12.7%	12.4%	16.3%	13.9%	12.7%	4.6%	16.5%
cumulative totals	100.%	89.1%	76.4%	64.0%	47.7%	33.8%	21.1%	16.5%
Weybourne % days visibility	9.9%	13.0%	13.5%	11.1%	9.8%	14.1%	6.0%	22.6%
cumulative totals	100%	90.1%	77.1%	63.6%	52.5%	42.7%	28.6%	22.6%
Manston % days visibility	10.7%	13.2%	12.7%	13.1%	12.8%	17.0%	6.7%	13.7%
cumulative totals	100%	89.3%	76.1%	63.3%	50.2%	37.4%	20.5%	13.7%
Hurn % days visibility	11.0%	13.1%	13.8%	19.7%	15.1%	20.3%	3.7%	3.1%
cumulative totals	100%	89.0%	75.8%	62.1%	42.3%	27.2%	6.8%	3.1%
Culdrose % days visibility	19.9%	16.1%	17.5%	28.7%	11.8%	4.6%	0.7%	0.7%
cumulative totals	100%	80.1%	64.0%	46.5%	17.8%	6.0%	1.4%	0.7%
St Athan % days visibility	6.5%	9.6%	10.7%	14.3%	14.7%	22.9%	9.2%	12.0%
cumulative totals	100%	93.5%	83.8%	73.1%	58.8%	44.1%	21.2%	12.0%
Rhyl % days visibility	5.4%	7.4%	11.5%	14.0%	13.8%	20.1%	8.8%	19.1%
cumulative totals	100%	94.6%	87.2%	75.7%	61.7%	47.9%	27.9%	19.1%
St Bees Head % days visibility	13.5%	12.7%	17.5%	21.8%	18.3%	10.3%	1.8%	4.0%
cumulative totals	100%	86.5%	73.8%	56.3%	34.5%	16.2%	5.8%	4.0%
Average % days visibility	11%	12.2%	13.7%	17.4%	13.8%	15.2%	5.2%	11.5%
Avg. cumulative totals	100%	89.0%	76.8%	63.1%	45.7%	31.9%	16.7%	11.5%

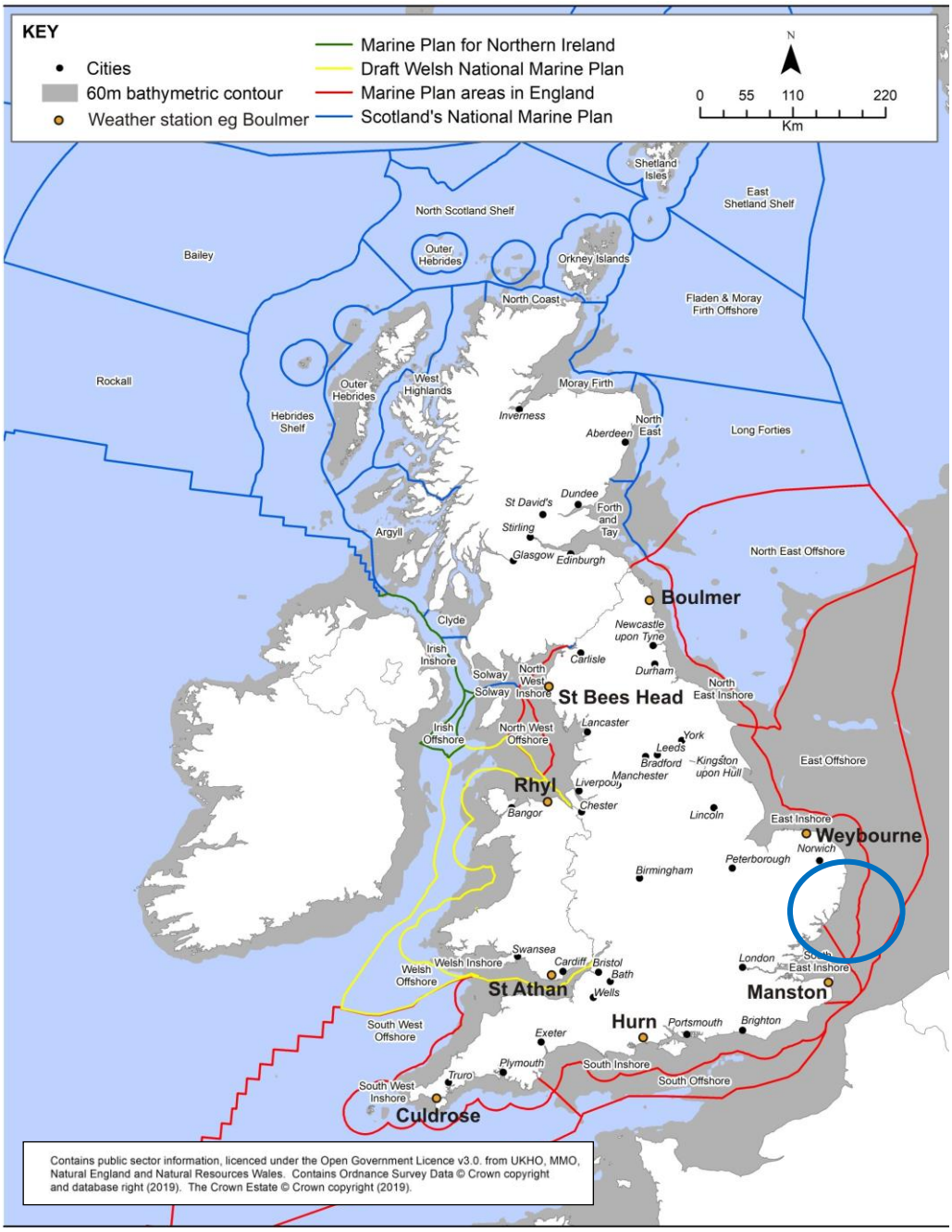
Notes:

The nearest coastal stations to the study area are highlighted in yellow- Weybourne and Manston (Ramsgate). Weybourne and Manston have substantially larger proportions of time with visibility over 35km and 40km than the national average.

Average national visibility distances related to % days per annum (2008-2017) *(Extract from OESEA, 2020)*



Weather Station Locations *(Extract from OESEA,2020)*

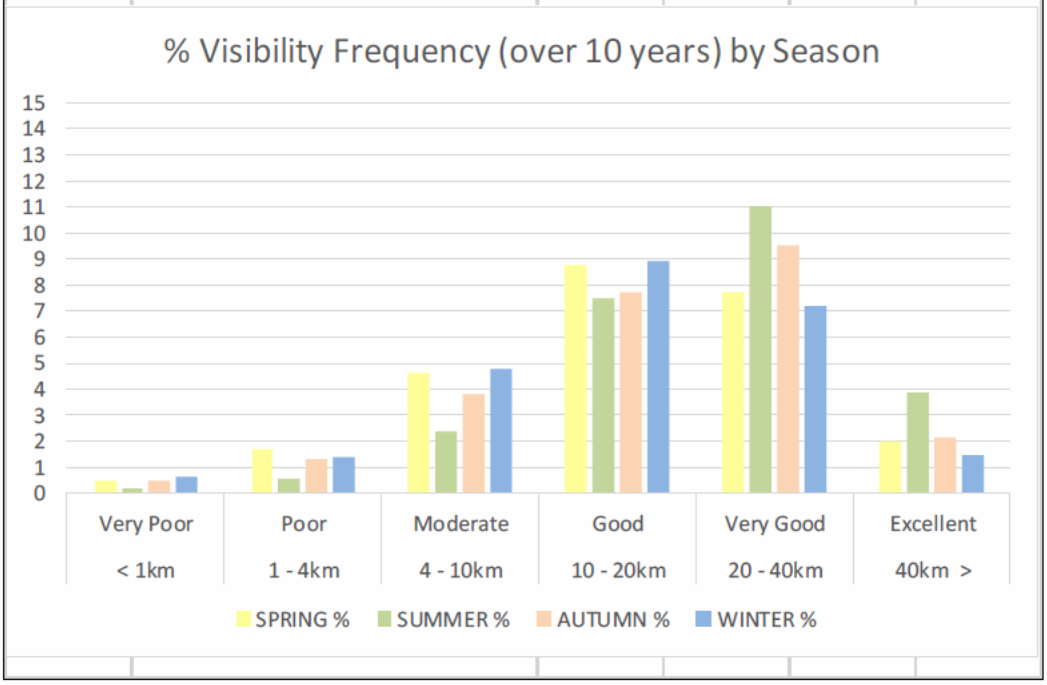


East Anglia TWO Environmental Statement (ES)

The effect of weather conditions on visibility was considered in the East Anglia TWO ES Appendix 28.8 Offshore Windfarm Visibility. This used data from Shoeburyness weather station (near Southend on Sea) which is relatively close to Manston. In addition to overall annual visibility at various distances which was similar to the nearby weather stations, the report also analysed frequency by season. This shows that there is a substantially higher proportion of days of very good and excellent visibility in the summer than in other seasons (see the table overleaf).

Visibility frequency by season *(extract from East Anglia TWO ES (Scottish Power) Appendix 28.8 Offshore Windfarm Visibility (page 17))*

% VISIBILITY FREQUENCY (10 YEARS)		SPRING	SUMMER	AUTUMN	WINTER
Visibility I	Visibility Definition	%	%	%	%
< 1km	Very Poor	0.51	0.16	0.50	0.60
1 - 4km	Poor	1.67	0.53	1.28	1.36
4 - 10km	Moderate	4.66	2.35	3.82	4.80
10 - 20km	Good	8.78	7.52	7.72	8.90
20 - 40km	Very Good	7.68	11.04	9.52	7.20
40km >	Excellent	2.02	3.86	2.14	1.42
		25	**25**	**25**	**24**



PlateA28.6 Visibility Frequency by Season

Appendix C Site visit

Suffolk seascape sensitivity to offshore windfarms

Site visit- 27-28 August 2020

The Suffolk coast was visited on the 27-28, August 2020. The findings of the site visit are incorporated in the detailed zone assessments.

The viewpoints visited are listed in order below.

27 August

- Bawdsey- East Street car park
- Shingle Street- near mouth of the River Alde/Ore
- Orford Castle- grounds
- Orford Ness- Slaughden Martello tower
- Aldeburgh- beach
- Thorpeness- beach to the north of settlement
- Sizewell beach

28 August

- Dunwich Coastguard Cottages
- Dunwich Heath
- Dunwich- priory and beach
- Southwold- IRB station beach
- Southwold – Gun Hill
- Southwold- East Cliff
- Kessingland- beach
- Lowestoft – Marine Parade- edge of South Beach
- Felixstowe Ferry

It was not possible to walk south down Orford Ness from the north much beyond Slaughden Martello tower due to National Trust restrictions on access.

The weather conditions on 27 August were a mixture of light to moderate cloud with occasional sun, with good visibility sometimes extending to very good visibility. The Thames Array was visible in the morning and the Greater Gabbard/Galloper array was visible for most of the day. Occasional sea mist offshore enveloped the Greater Gabbard/Galloper array at times. Sun reduced over the course of the day. This meant that the turbines were mostly viewed as grey shapes against a lighter background.

The weather conditions on 28 August were a mixture of light cloud with some sun, with good visibility sometimes extending to very good visibility. The Greater Gabbard/Galloper array was visible from the Dunwich and Felixstowe Ferry viewpoints but not from Southwold and further north- it is not clear if this was due to distance or sea mist. The turbines were mostly viewed as grey shapes against a lighter background in the morning and bright white in the afternoon (around 3pm) when highlighted by sunshine when viewed from Felixstowe Ferry. This did increase their visibility.

There were many visitors to the coast observed during the site visit. This may have been due to its proximity to the August Bank holiday weekend. Particular concentrations were located in Southwold, Aldeburgh, Orford Castle and Lowestoft with others observed along the coast path and on the beaches. The number of people reduced with distance away from the nearest car parks and settlement centres. In the settlements people promenaded along the coast or cliff paths or sat on beaches looking out to sea. Outside settlements people walked along beaches or the coast path where available, or on the adjacent heaths.

Visibility of the sea was mainly possible along the coastal edge and also from the more open low slopes behind the coast, including heaths. Elsewhere it was limited by vegetation such as hedges and trees or, in the case of coastal levels and marshes, by the seawall/embankment.

The visibility of Sizewell A and B nuclear power stations (c. 67m and c. 65m high respectively) and the masts at Orford Ness (c.60m down to c.13m high) were noted along the coast.

Appendix D Abbreviations and Glossary

Abbreviations

AOD	Above Ordnance Datum
AONB	Area of Outstanding Natural Beauty
BAP	Biodiversity Action Plan
CLVIA	Cumulative Landscape and Visual Impact Assessment
DCO	Development Consent Order
DPO	Draft Plan Option
EIA	Environmental impact assessment
ES	Environmental statement
ExA	Examining Authority
GLVIA	Guidelines for landscape and visual impact assessment
GIS	Geographic information system
HPMCZ	Highly protected marine conservation zone
HSC	Historic Seascape Characterisation
HWM	High water mark
ICZM	Integrated Coastal Zone Management
km	Kilometres
LCA	Landscape character assessment *or* landscape character area
LDP	Local Development Plan
LVIA	Landscape and visual impact assessment
LWM	low water mark
m	metres
MCA	Marine Character Area
MPA	Marine Planning Area
MPS	Marine Policy Statement
MHW	Mean high water
nm	nautical miles
NE	Natural England
PEIR	Preliminary Environmental Information Report
PU	Shoreline Management Plan policy unit
RSU	Regional Seascape Unit
SAC	Special Area of Conservation
SCA	Seascape character assessment / seascape character area
SCT	Seascape character type
SLA	Special Landscape Area
SM	Scheduled Monument
SMR	Scheduled Monument Record
SPA	Special Protection Area
SSSI	Site of Special Scientific Interest
SNH	Scottish Natural Heritage
SVIA	Seascape, (landscape) and visual impact assessment
UKCS	United Kingdom Continental Shelf
WHS	World Heritage Site
ZTV	Zone of theoretical visibility
ZVI	Zone of visual influence

Glossary

Term	Definition
Seascape, marine and coastal processes terms	
Abrasion	The mechanical wearing effect on rocks caused by corrosion. The abrading agent can take a variety of forms e.g. sand, pebbles or boulders moving across a rock surface.
Attrition	The mechanism by which the particle size of any material is reduced by friction during transport.
Biogenic	A feature that is created by living organisms, either animal or plant.
Characteristics	elements, features and qualities which make a particular contribution to distinctive character.
Characterisation	the process of identifying areas of similar character, classifying and mapping them and describing their character. (NECR105)
Classification	concerned with dividing the seascape into areas of distinct, recognisable and consistent common character in grouping areas of similar character together. It requires the identification of patterns in the seascape, created by the way the natural and human influences interact and are perceived and experienced to create character in the seascape. (NECR105)
Description	capturing the overall essence of the character of the seascape, with reference to geology, landform, bathymetry, habitats, use of the coast and sea, cultural associations etc, drawing out the ways in which these factors interact together and are perceived and experienced and are associated with events and people.
Demersal	In relation to marine organisms: those which flourish on the ocean floor.
Elements	individual component parts of the seascape such as beaches, cliffs, submerged reefs, sea walls, groynes and rocky outcrops.
Features	particularly prominent or eye-catching elements such as lighthouses, rock stacks and coastal cliffs.
Fetch	The distance of open water across which wind blows or over which wind generated water wave travels, unobstructed by major land obstacles. The amount of fetch helps to determine the magnitude and energy of a wave and therefore its erosional or depositional tendencies on neighbouring shorelines.
Hydraulic action	Force exerted by moving water on rocks e.g. air forced into cracks in solid rocks by breaking waves is capable of causing their disintegration by expanding the fissures.
Key characteristics	those combination of elements which help given area its distinct sense of place. They can in many cases to be 'positive' characteristics but they may also in some cases be 'negative' features which nevertheless are important to the current character of the seascape. (Natural England, 2014)
Landward limits (of a seascape character assessment)	the distance which the seascape character assessment will expand onshore and inland. Such considerations relate to the mainland, peninsulas and islands, regardless of their distance out at sea. The extent is dependent on the purpose and/or scope of the assessment being undertaken.
Littoral	Pertaining to a shoreline.
Longshore drift	A general movement of beach material along the shoreline due to the effect of waves breaking obliquely on to the beach.
Pelagic	In relation to the environment: the open ocean as distinct from the ocean floor. In relation to marine organisms: those which flourish independent of the ocean floor and shoreline environments.
Perception	perception combines the sensory (that which we receive through our senses) with the cognitive (knowledge and understanding gained from many sources and experiences).
Reef	A line of rocks or material in the tidal zone of the coast, submerged at high water but partly uncovered at low water.
Ria	Submerged coastal valley or estuary resulting from a rise of sea level, often associated with post-glacial coasts.
Marine character area	See seascape character area. (Term used for national/regional scale units).

Term	Definition
Saltation	Sediment transported by bouncing or hopping along a surface carried by water or wind.
Seascape	Seascape is landscapes with views of the coast or seas, and coasts and the adjacent marine environment with cultural, historical and archaeological links with each other. (MPS)
Seascape character	Seascape character is a distinct and recognisable pattern of elements in the seascape that makes one seascape different from another, rather than better or worse. (NECR105)
Seascape character assessment (SCA)	SCA is the process of identifying and describing variation in the character of the seascape, and using this information to assist in managing change in the seascape. It seeks to identify and explain the unique combination of elements and features that make seascape distinctive. (NECR105)
Seascape or marine character area	These are single unique geographical areas of a particular seascape character type. Each has its own individual character and identity, even though it shares the same generic characteristics with other seascape character areas of the same type. (NECR105)
Seascape or marine character capacity	Seascape capacity refers to the amount of specified development or change which a particular marine or local seascape character area and the associated visual resource is able to accommodate without undue negative effects on its character and qualities. (Adapted from Natural England, 2019)
Seascape or marine character sensitivity	Term applied to marine character and seascape and the associated visual resource, combining judgements of their susceptibility to a specific type of development / development scenario or other change being considered and the value(s) related to that seascape, marine character and visual resource. (Derived from Natural England, 2019)
Seascape or marine character susceptibility	The degree to which a defined seascape or marine character area and its associated visual qualities and attributes might respond to the specified types of development or change without undue negative effects on character and the visual resource. (Adapted from Natural England, 2019)
Seascape or marine character type	These are distinct types of seascape that are relatively homogeneous in character. They are generic in nature in that they may occur in different locations but wherever they occur they share broadly similar combinations of geology, bathymetry, ecology, human influences and perceptual and aesthetic attributes. (NECR105)
Seascape or marine character value	The relative value or importance attached to a seascape or marine character area, which may express national or local consensus, because of its quality, its special qualities including perceptual aspects such as scenic beauty, tranquillity and wildness, natural or historic attributes or features, cultural associations, or its relationship with designated or valued landscapes and coasts. (Adapted from Natural England, 2019)
Seascape quality	The physical state of the seascape. It includes the extent to which typical character is represented in individual areas, sometimes referred to as strength of character, the intactness of the seascape from visual, functional and ecological perspectives and the condition or state of repair of individual elements of the seascape. (NECR105)
Seascape strategy	the objectives and overall vision of what the seascape should be like in the future, and what is thought to be desirable for a particular seascape character type or area, as a whole. (Natural England, 2014)
Seascape, (Landscape) and Visual Impact Assessment (SVIA)	SVIA is an established methodology which is used to assess the impact of the development or other use change on seascape, landscape and visual amenity. It includes analysis of the effects during the construction, operation and decommissioning phases of the development, including any restoration or after uses.
Seaward limits (of an SCA)	distance out to sea that the SCA will extend.
Slack	an area of almost motionless water.
Suspension	The process by which lightweight materials are transported by moving water in the zone of turbulent flow.
Swash	The movement of a turbulent layer of water up the slope of the beach as a result of the breaking of a wave. It is capable of moving beach material of substantial size and is an important factor in longshore drift.

Term	Definition
Swell	A regular movement of marine waves created by wind stress in the open ocean.
Traction	Solid load carried by water.
Other terms associated with landscape	
Amenity (Planting)	planting to provide environmental benefit such as decorative or screen planting.
Analysis	the process of dividing up the seascape/landscape into its component parts to gain a better understanding of it.
Apparent	object visible in the seascape/landscape.
Approach	the step-by-step process by which seascape/landscape assessment is undertaken.
Arable	land used for growing crops other than grass or woody species.
Aspect	in Wales, an aspect is a component of the LANDMAP information recorded, organised and evaluated into a nationally consistent spatial data set. The landscape information is divided into five aspects- geological landscape, landscape habitats, visual and sensory, historic landscape and cultural landscape.
Aspect area	areas defined in each of the LANDMAP aspect assessments which are mutually exclusive
Assessment	term to describe all the various ways of looking at, analysing, evaluating and describing the seascape/landscape or assessing impacts on seascape/landscape and visual receptors.
Biodiversity	the variety of life including all the different habitats and species in the world.
Conservation	the protection and careful management of natural and built resources and the environment.
Complexity	(in the context of describing a skyline) how varied or complicated the skyline is from dead flat with even vegetation at one end of the scale to mountainous with varied vegetation at the other.
Consistent	relatively unchanging element or pattern across a given area of seascape/landscape.
Cultural heritage asset	see heritage asset
Cultural pattern	expression of the historic pattern of enclosure and rural settlement.
Cumulative impacts/effects	either additional changes caused by a proposed development in conjunction with similar developments or the combined effect of a set of developments, taken together
Distinctiveness	see sense of place
Diversity	(in terms of the function of an area) the variety of different functions of an area.
Dominant	main defining feature or pattern.
Effects	term used in environmental impact assessment (EIA) where effects are changes arising from the action, operation or implementation of a proposed development.
Effects, direct	where development lies within a seascape/landscape and physically removes an element or feature e.g. rocks, cliff, coastal vegetation
Effects, indirect	effects away from the development such as perceived change of character or from associated development such as transport infrastructure
Field Boundary	the defined edge of a field whether fence, hedge, bank, ditch or wall.
Field Size	Large 2 Ha Above, Medium Around 1.5 Ha, Small Less Than 1 Ha.
Geology	the study of the origin, structure, composition and history of the Earth together with the processes that have led to its present state.
Ground Type	expression of the soil forming environment and its influence in determining the surface pattern of vegetation and land use.
Hedge	fence of shrubs or low trees, living or dead, or of turf or stone. Though strictly a row of bushes forming a hedge, hedgerow has been taken to mean the same as a hedge.

Term	Definition
Hedge bank	earth bank or mound relating to a hedge
Heritage asset	a building, monument, site, place, area or landscape positively identified as having a degree of historical significance meriting consideration in planning decisions. Designated heritage assets include world heritage sites, scheduled ancient monuments, protected wreck sites, battlefields, listed buildings and registered parks and gardens.
Horticulture	intensive form of cropping, such as vegetables or fruit.
Impact	used as part of overall term, as in EIA or LVIA, to help describe the process of assessing potentially significant effects- see effects.
Inherent	dictionary definition- 'existing as an inseparable part'. In the context of sensitivity means the sensitivity of the seascape/landscape area itself with all its component elements and features rather than its relationship with types of development or adjacent areas.
Integrity	unspoilt by large-scale, visually intrusive or other inharmonious development
Landcover	combinations of natural and man-made elements including vegetation that cover the land surface.
Landform	combinations of slope and elevation which combine to give shape and form to the land.
Landscape	an area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors
Landscape and Visual Impact Assessment (LVIA)	A tool used to identify and assess the likely significance of the effects of change resulting from development both on the landscape as an environmental resource in its own right and on people's views and visual amenity. (GLVIA 3)
Landscape Character	a distinct, recognisable and consistent pattern of elements, features and qualities in the landscape that makes one landscape different from another, rather than better or worse.
Landscape Character Area (LCA)	these are single unique areas which are discrete geographical areas of a particular landscape character. Each has its own individual character and identity. These areas in Wales are primarily derived from LANDMAP aspects.
Landscape Resource	the overall stock of the landscape and its component parts. (The landscape considered as a measurable finite resource like any other e.g. minerals, land, water).
Landscape value	the relative value or importance attached to a landscape (often as a basis for designation or recognition), which expresses national or local consensus, because of its quality, special qualities including perceptual aspects such as scenic beauty, tranquillity or wildness, cultural associations or other conservation issues. In Wales, value is also attributed to each LANDMAP aspect using a variety of criteria.
Magnitude of effect	degree of change
Mixed Farmland	a combination of arable and pastoral farmland
Mosaic	mix of different landcovers at a fine grain such as woodland, pasture and heath.
Objective	method of assessment in which personal feelings and opinions do not influence characterisation or judgements.
Outcrop	the area where a particular rock appears at the surface.
Pastoral	land down to grass either grazed by animals or for cutting.
Physiography	expression of the shape and structure of the land surface as influenced both by the nature of the underlying geology and the effect of geomorphological processes.
Polygon	discrete digitised area in a geographic information system (GIS).
Prominent	Highly conspicuous feature or pattern in the landscape.
Protect	to keep from harm. 4.14.
Qualities	aesthetic (objective visible patterns) or perceptual (subjective responses by the seascape/landscape assessor) attributes of the seascape such as those relating to scale or tranquillity respectively.

Term	Definition
Receptor, visual	people in a variety of different situations who can experience views within an area and who may be affected by change or development. Receptors can include users of public footpaths, open access land, roads, rail or cycleways or urban or rural residents.
Receptor, seascape/landscape	seascape/landscape character areas, designations, elements or features which may be affected by development
Remoteness	physical isolation, removal from the presence of people, infrastructure (roads and railways, ferry and shipping routes) and settlement
Resource	see seascape/landscape resource.
Restore	repair or renew.
Riparian	vegetation associated with the water body, usually a river or stream.
Scenic quality	seascape/landscape with scenes of a picturesque quality with aesthetically pleasing elements in composition
Semi-natural vegetation	any type of vegetation that has been influenced by human activities, either directly or indirectly. The term is usually applied to areas which are reverting to nature due to lack of management.
Sense of place	the character of a place that makes it locally identifiable or distinctive i.e. different from other places. Some features or elements can evoke a strong sense of place e.g. islands, forts, vernacular architecture
Sensory	that which is received through the senses i.e. sight, hearing, smell, touch.
Setting, of a heritage asset	The surroundings in which the asset is experienced. Its extent is not fixed and may change as the asset and its surroundings evolve. Elements of a setting may make a positive or a negative contribution to an asset, may affect the ability to appreciate that significance or may be neutral.
Settlement	all dwellings/habitations, whether single or clustered in cities, towns and villages.
Settlement Pattern	the predominant pattern of settlement in an area.
Significance	a measure of the importance or gravity of the environmental effect, defined by significance criteria specific to the environmental topic. A significant effect needs to be taken into account in decision-making.
Subjective	method of assessment in which personal views and reaction are used in the characterisation process.
Topography	term used to describe the geological features of the Earth's surface e.g. mountains, hills, valleys, plains.
Unity	consistency of pattern over a wide area i.e. the repetition of similar elements, balance and proportion, scale and enclosure.
Value	see landscape value
Vernacular	built in the local style, from local materials.
Visual Effects	effects on specific views and on the general visual amenity experienced by people.

Suffolk County Council



North Falls

Local Impact Report Appendix K:

Seascape Sensitivity to Offshore Wind Farms, White Consultants, Update Addendum 2023

Suffolk

Seascape sensitivity to offshore wind farms

UPDATE ADDENDUM

Final Report

for

Suffolk County Council
East Suffolk Council
Suffolk Coast & Heaths AONB Partnership

June 2023

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PART 1: Update of baseline, approach and summary of findings

1. Introduction

1.1. White Consultants were appointed in April 2023 to carry out an update of the 'Suffolk seascape sensitivity study to offshore wind farms' report[1] 2020 located in the inshore and offshore waters off the Suffolk coast. The study was commissioned and funded by Suffolk County Council and Suffolk Coast & Heaths AONB Partnership in consultation with East Suffolk Council.

1.2. The intention of the Suffolk seascape sensitivity study is that it contributes to the baseline evidence for the Seascape, Landscape and Visual Impact Assessment (SLVIA) and development of the proposals for a series of projects in waters off Suffolk's coast.. This update is necessary in order to accommodate the more rapid than anticipated changes in offshore wind technology and considers the potential effects of turbines greater than 400m to blade tip–above Lowest Astronomical Tide (LAT).

1.3. The function of this report is as an addendum to the 2020 report and together they will act as baseline evidence and a framework for assessment. As such there is a minimum of repetition in this document. Unless otherwise expressly stated in this document the content of the Suffolk seascape sensitivity study to offshore wind farms report, 2020 (from here on referred to as the Suffolk, 2020 report) including text and figures remain unchanged and relevant.

1.4. The study considers the same study area as the Suffolk, 2020 report and the analysis of sensitive receptors is limited to the County of Suffolk including Suffolk Coast and Heaths Area of Outstanding Natural Beauty (AONB) within the county.

1.5. The Suffolk, 2020 report relied on the buffers the turbines up to 400m to blade tip set out in the 'Review and update of OESEA seascape and visual buffer study', 2020[2] (from here on referred to as the OESEA, 2020 study.) These were derived from substantial research including reviewing and analysing 28 UK windfarm SVIAs, wireframe analysis and considering visibility modifiers alongside results of examinations and European experience. In order to future proof the study, turbines upto 550m high to blade tip are considered in this update even though none of this size are known to be in development at present.

1.6. It is not intended to carry out baseline analysis of further SVIAs or wireframes for this study as this should be carried out as part of future OESEA reports. As such it is proposed to:

- Briefly review the current national and local planning policy context and status of the OESEA 4 Environment Report and related studies (Section 2).
- Summarise any changes in the baseline (Section 3).
- Review the findings of the OESEA, 2020 study and the factors which influenced the proposed buffers with a commentary on how this relates to turbines over 400m to blade tip. This will be divided into expected effects of different sizes of turbines and different distances on the one hand and consideration of visibility modifiers and visual acuity on the other. Other studies such as NRW seascape sensitivity studies are also referred to (Section 3).
- Summarise the findings (Section 5).
- Review each seascape zone and set out a commentary on the sensitivity to turbines over 400m high for each (Part 2).

2. Policy update

UK National Policy Statements

2.1. The UK Government's National Policy Statements (NPSs) under the Planning Act (2008) set out Government policy for the development of Nationally Significant Infrastructure Projects (NSIPs). National policy statements EN-1 and EN-3 address national infrastructure planning

[1] Suffolk: Seascape sensitivity to offshore wind farms, White Consultants, October 2020.
[2] Offshore Energy Strategic Environmental Assessment (OESEA): Review and update of Seascape and Visual Buffer study for Offshore Wind farms, BEIS/Hartley Anderson, 2020

in relation to renewable energy including offshore wind farms with an output above 100MW but are a material consideration for smaller projects.

2.2. EN-1 and EN-3 drive the evidence for this guidance. They were published in 2011 and are current at the time of writing this report. However, there are revised drafts dated March 2023 out to consultation at present. These are broadly consistent with the current versions and do not affect the relevance or weight of the Suffolk 2020 study or this addendum. Relevant potential changes are set out below.

EN-1

2.3. The EN-1 March 2023 revised draft expresses a renewed sense of urgency to work towards net zero emissions by 2050 and provides more detail on achieving this. Like the previous policy substantial weight is given to the need for renewable energy infrastructure (3.2.5-3.2.6).

2.4. Nationally designated landscapes are confirmed as having the highest status of protection in relation to landscape and natural beauty (5.10.7). The duty to have regard to the purposes of nationally designated areas also applies in consideration of projects outside the boundaries of an area but which may have impacts within them. The aims should be to either avoid harm to the purposes or minimise adverse effects (5.10.8).

2.5. As before, the assessment should include the visibility and conspicuousness of the project and potential impact on views and visual amenity (5.10.20).

EN-3

2.6. The key difference in the EN-3 March 2023 revised draft is that the provision of offshore wind and associated infrastructure is now considered a 'critical national priority' (CNP) (3.8.12). However, applicants must continue to show how their application meets the requirements of EN-1 and EN-3 applying mitigation hierarchy.

2.7. An additional paragraph indicates that seascape is an issue for consideration especially where it provides the setting for a nationally designated landscape and supports the delivery of the designated area's statutory purpose (3.8.221).

2.8. The text states that where a proposed offshore windfarm will be visible from the shore within the setting of a nationally designated landscape with potential effects on the area's statutory purpose, an SLVIA should be undertaken in accordance with the relevant offshore windfarm EIA policy and the latest offshore energy SEA including the 'White 2020'[3] report (ie OESEA, 2020 report). This will always be the case where coastal national park or their settings are potentially affected. (3.8.224).

2.9. Four principal considerations on the likely effect of offshore windfarms on the coast are mentioned (3.8.225):

- the limit of visual perception from the coast under poor, good and best lighting conditions:
- the effects of navigation and hazardous lighting on dark night skies;
- individual landscape and visual characteristics of the coast and the special qualities of designated landscapes, such as World Heritage Sites, which limits the coast's capacity to absorb a development;
- how people perceive and interact with the coast and natural seascape.

2.10. This adds to the previous EN-3 text to include lighting and special qualities.

2.11. In terms of decision-making the Secretary of State should not refuse to grant consent unless the harmful effects on the statutory purposes of designated landscapes are considered to outweigh the benefits taking into consideration offshore wind energy's CNP status (3.8.369).

2.12. Overall, the draft revised EN-3 text reinforces and expands on the EN-3 text specifically supporting the OESEA, 2020 report and potential effects on designated landscapes and their setting which underpin the Suffolk 2020 study.

[3] Offshore Energy Strategic Environmental Assessment (OESEA): Review and update of Seascape and Visual Buffer study for Offshore Wind farms, BEIS/Hartley Anderson, 2020

AONBs and Heritage Coasts

2.13. Policies on AONBs and Heritage Coasts have not changed since the Suffolk 2020 study. However, the extent of the AONB has been increased to include an area in Essex and the AONB Management Plan has been updated. The statutory purposes remain the same. There has been a review of the Heritage Coasts report dated 30 August 2022. The landscape character baseline information remains essentially the same.

Marine Planning

2.14. Marine planning policies have not changed since the Suffolk 2020 study. The seascape character information baseline also remains the same.

2.15. The OESEA 4 Environmental Report[4] (ER) was published in March 2022 along with Feedback[5] and Consultation Response[6] reports in September 2022. The ER refers to the OESEA, 2020 report and sets outs its findings and these are not substantially challenged in the contributions to the Feedback report although the Response makes appropriate corrections. As such the OESEA, 2020 report remains valid as the underpinning analysis to the Suffolk, 2020 report. The plan/programme based on OESEA 4 is expected to have a lifespan of approximately four years from 2022.

3. Baseline seascape and consents update

Baseline

3.1. No substantive changes have occurred in the physical baseline since completion of the Suffolk 2020 study.

Consents

3.2. The following developments have been consented since completion of the Suffolk 2020 study:

- East Anglia ONE North offshore windfarm 37.7km at its closest point from shore with wind turbines upto 282m to blade tip.
- East Anglia TWO offshore windfarm 32.6km at its closest point from shore with wind turbines upto 282m to blade tip.
- Sizewell C nuclear power station.
- Kittiwake nesting structures, 17.5m high above LAT and 11m wide, as compensation for Hornsea Three offshore windfarm. One is proposed 1.4km offshore from Minsmere and up to two are proposed 1km off the coast of Lowestoft. These will be in situ for 40 years.

3.3. The consented proposals will add to cumulative effects of development and will be reflected in the update for each seascape zone.

4. Update approach

Focus and limitations of the report

4.1. The OESEA, 2020 study sets out visual buffers for different types of coastal character and designations at an England and Wales level. These are refined in the Suffolk seascape study, 2020 and seascape zones are derived with different levels of sensitivity to different sizes of turbines upto 400m to blade tip. The aim is to avoid significant adverse effects on high sensitivity seascape receptors. The premise that the study works on is that the most

[4] UK Offshore Energy Strategic Environmental Assessment, OESEA 4 Environmental Report, BEIS, March 2022
[5] UK Offshore Energy Strategic Environmental Assessment, Consultation Feedback, BEIS, September 2022
[6] UK Offshore Energy Strategic Environmental Assessment, Government response to OESEA 4 public consultation, BEIS, September 2022

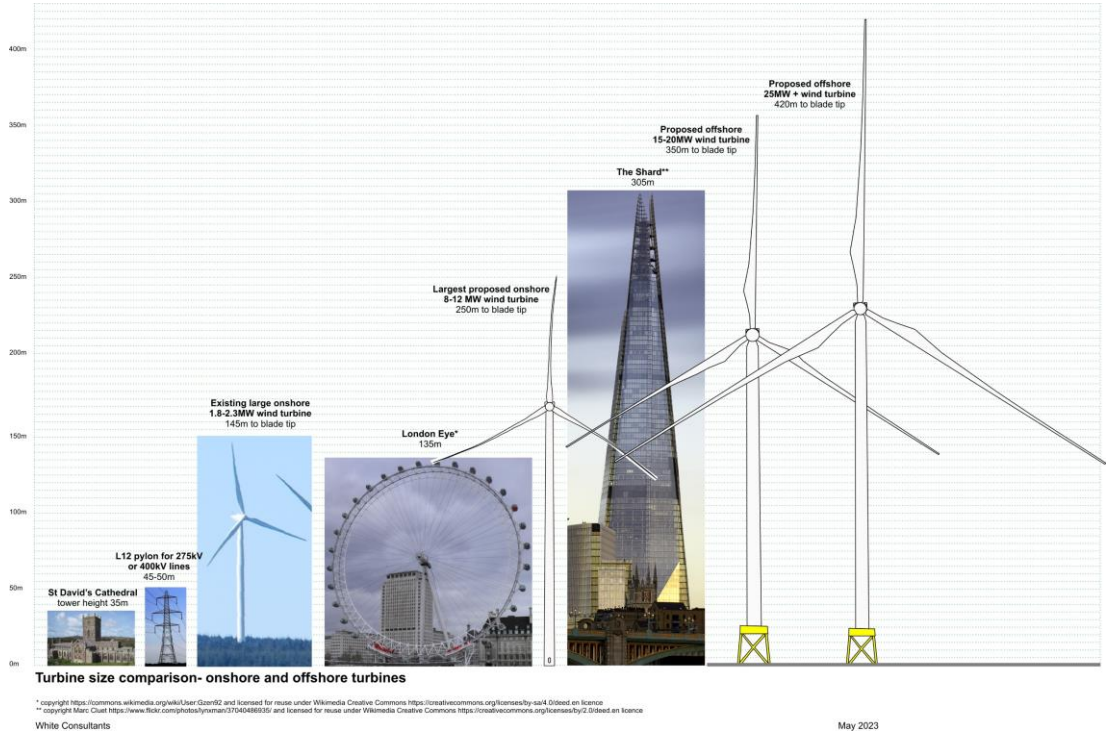
important effect of offshore windfarms is on the perception of seascape character from the coast ie the relationship between any proposed development with coastal seascape character when seen in juxtaposition with each other. This means that the main drivers are distance from the coast and the character and value of the coastal seascape and its component sensitive receptors. Therefore, the seascape zones identified are focussed on this purpose alone and should not be used for other purposes or development types which may need full seascape characterisation taking intrinsic natural and cultural processes and other characteristics into account.

Relevant guidance, reports and publications

4.2. The most relevant guidelines and reports are the Suffolk, 2020 report itself and those set out in paragraph 3.3 of that report.

4.3. An article published in Landscape Design 2021[7] sets out the case for a strategic approach to offshore wind farm planning incorporating seascape and visual factors. The scale of offshore turbines in relation to established landmarks such as the Shard at 305m high was set out in a diagram. This has been updated to incorporate turbines currently proposed as an option for Five Estuaries offshore windfarm (see **Figure 1**). These are 420m tall to blade tip- just under 40% taller than the Shard. These are therefore very large structures with associated movement of blades with very wide swept paths at high levels which are likely to be seen over long distances.

Figure 1 Relative size of offshore wind turbines



Seascape sensitivity and zones

4.4. Based on a review of the updated planning and baseline context it is considered that the findings of the Suffolk, 2020 report remain valid for turbines upto 400m to blade tip.

4.5. As it is not intended to carry out further baseline analysis of SVIAs or wireframes for this study the approach is to consider if the findings can be reasonably built upon or extrapolated to consider turbines upto 550m to blade tip to reasonably future proof the study.

4.6. A NRW, 2019[8] study predated the OESEA, 2020 study but used a similar approach analysing

[7] https://issuu.com/landscape-institute/docs/landscape_issue_3-2021/s/12849347

[8] Seascape and visual sensitivity to offshore wind farms in Wales: Strategic assessment and guidance.

fewer SVIAs. The findings showed a relationship between the likely scale of effect of different sizes of turbines to distance from the viewer. The 'very approximate ratio' between turbine height and distance for an average low magnitude of effect was found to be 1:133. For an average medium magnitude of effect the ratio was 1:100 (2.3 on page 14 and 7.8 on page 37). For example, a 300m high turbine is likely on average to have a low magnitude of effect at around 40km and a medium magnitude of effect at 30km. These are the equivalent of 'possible' and 'probable' significant effects respectively when considering views from high sensitivity receptors (2.5 page 15). This is relevant to Suffolk Coast & Heaths AONB. These are useful rules of thumb although there are caveats including the fact these are averages and there could be significant effects beyond these distances. These also assume worst case visibility conditions ie very good or excellent visibility.

4.7. It is useful to consider the OESEA, 2020 analysis of visual effects of offshore windfarms for 28 SVIAs based on turbine height summarised in Tables 7.2, 7.3 and 7.4 of that report to plot the relationship between turbine height and effects at various distances and to consider if similar rules of thumb apply. This is illustrated in **Figure 2** with derived potential distances for low and medium magnitude of effects in **Table 1**.

Table 1 Derived potential low and medium magnitude of effects

Heights of turbine to blade tip (m)	Low magnitude of effect average distance (to nearest km)	Medium magnitude of effect average distance (to nearest km)
425	56.5	42.5
450	60	45
500	66.5	50
550	73	55

4.8. **Figure 2** indicates that the low magnitude of effect is likely to occur at a ratio of *over* 1:133 for turbines over 225m- the line shows the 1:133 ratio and most of the levels of effects are above this. For example, turbines 400m high potentially have a low magnitude of effect at around 53km. Medium magnitudes of effect are likely to occur at a ratio of just *over* 1:100- the line shows the 1:100 ratio and most of the levels of effects are above this. These bear out the NRW, 2019 study findings. So, for example, an array of 425m high turbines potentially/probably have significant effects on high sensitivity receptors at 42.5km depending on visibility modifiers and other factors such as their relationship with existing turbines.

4.9. The OESEA, 2020 study also included an assessment of likely visual effects of turbines over 300m high to blade tip using wireframes. This was a useful additional analysis which supported the trajectory of expected effects from the SVIA analysis. As such it is not intended to repeat or extend these findings in this report.

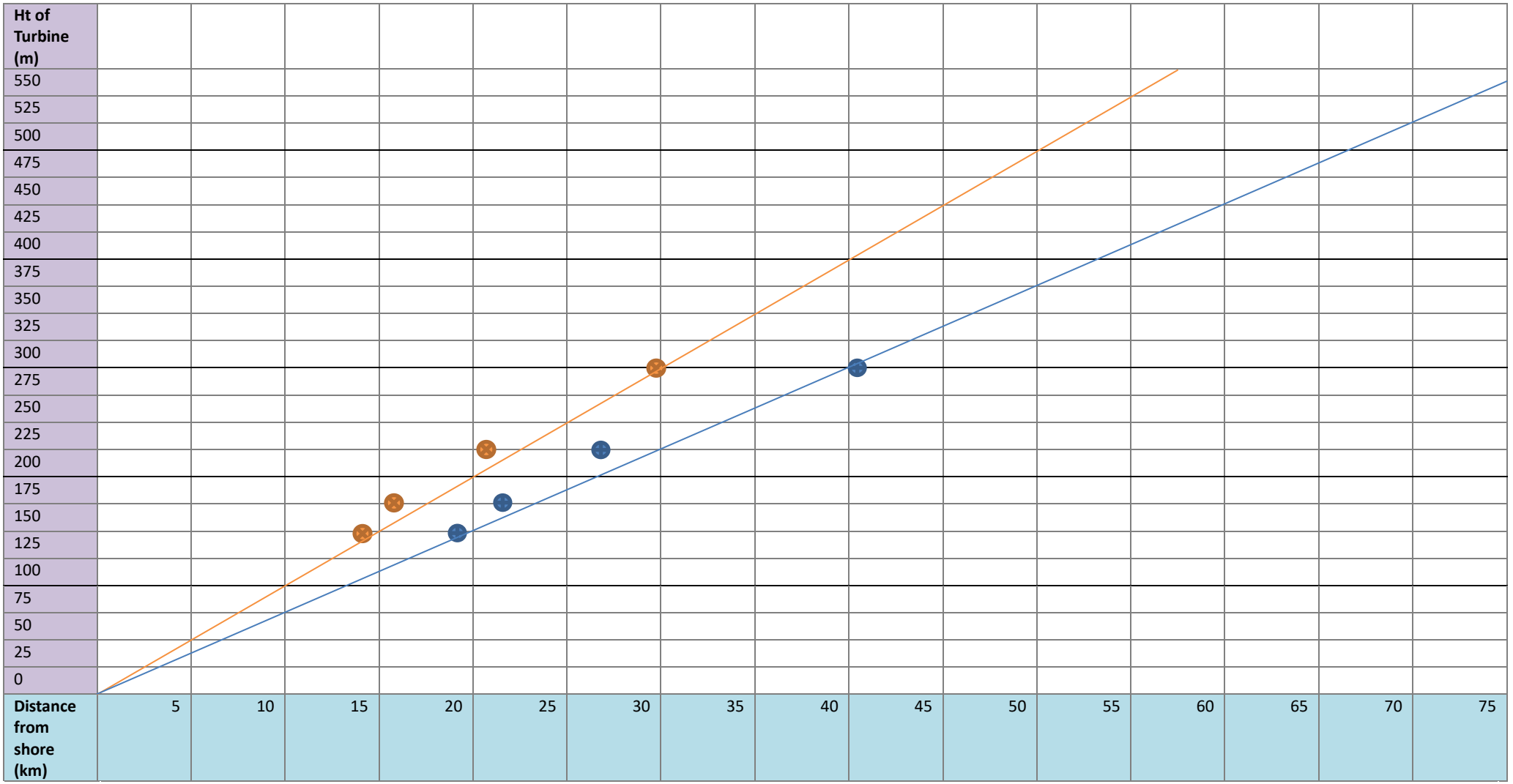
Visibility modifiers

4.10. The influence of visibility modifiers increases with distance. The Suffolk, 2020 report considered visibility modifiers off the Suffolk coast in Appendix 2 using data from the OESEA, 2020 report. The nearest coastal stations identified were Weybourne and Manston (Ramsgate). It was concluded that visibility from these locations have substantially larger proportions of time with visibility over 35km and 40km than the national average. This is explored further in **Table 2** below which extracts and analyses data from those two coastal stations. This measures only upto 40km in increments with distances over 40km left open. **Figure 3** graphically illustrates the measured percentage of days' visibility from the data and then extrapolates to explore a possible range of percentage of days where visibility may be possible above 40km.

4.11. The key conclusion of the existing data visibility analysis is that developments at around 39km offshore may be visible for 20% days annually. This is a significantly larger proportion than the national average of 10% noted for 40km in the OESEA, 2020 report. This latter figure fed into the OESEA, 2020 conclusions that 40km was a reasonable buffer from designated

Stages 1-3. NRW Evidence Series. Report No: 315, NRW, Bangor, 2019

Figure 2: Low and medium magnitude of visual effects of wind turbines



Key

Average distance for low magnitude of effect

Average distance for medium magnitude of effect

Source of average effects: OESEA, 2020: Table 7.4 Summary of SVIA visual effects of offshore windfarms excluding extensions, page 66.

Average 1:133 ratio of turbine height to distance for low magnitude of effect

Average 1:100 ratio of turbine height to distance for medium magnitude of effect

White Consultants/060623

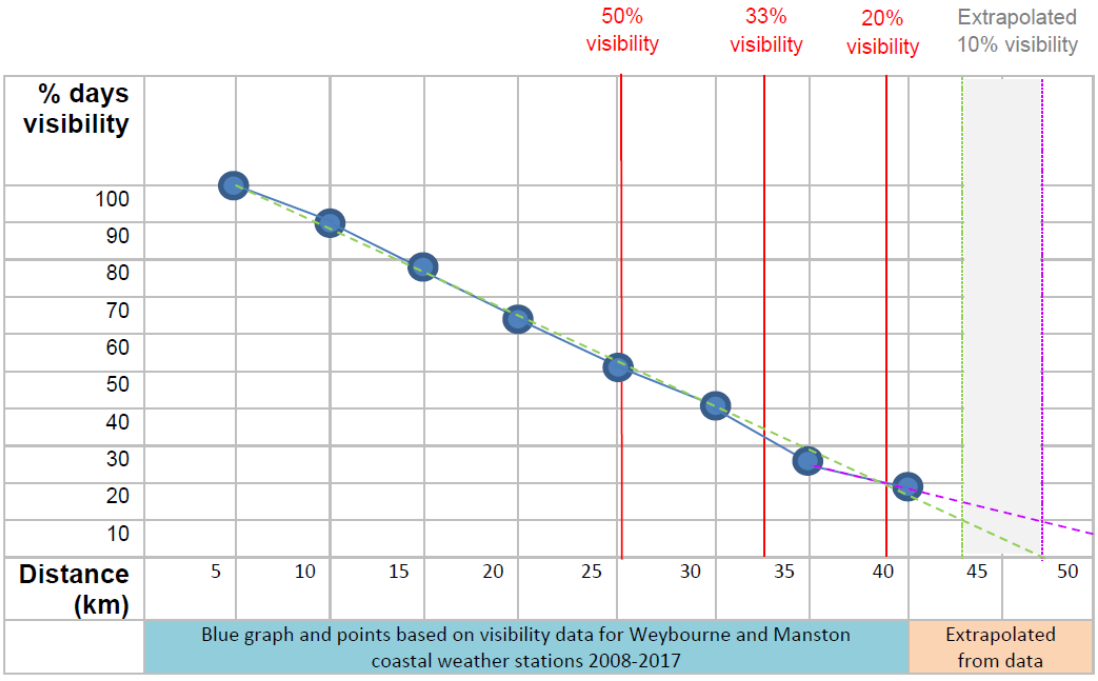
coastal landscapes for turbines upto 400m high to blade tip.

4.12. The extrapolated part of **Figure 3** explores visibility over 40km. It illustrates that 10% days visibility may be possible 43-47km offshore but this depends on the rate of reduction of visibility over distance being roughly the same as for lesser distances. Observation indicates that landscape features and objects can be seen over long distances eg Lundy at around 50km from the Gower and Whitelee wind farm's upto 140m high turbines visible from 57km away (mentioned in the East Anglia TWO Environmental Statement (EA2 ES) Appendix 28.8 on visibility, paragraph 28).

Table 2 Visibility distances at East Coast coastal stations in a 10 year period (2008-2017)

Weather Stations	Visibility Distance (km)							
	0-5	6-10	11-15	16-20	21-25	26-30	35	40+
Weybourne % days visibility	9.90%	13.00%	13.50%	11.10%	9.80%	14.10%	6.00%	22.60%
cumulative totals	100%	90.10%	77.10%	63.60%	52.50%	42.70%	28.60%	22.60%
Manston % days visibility	10.70%	13.20%	12.70%	13.10%	12.80%	17.00%	6.70%	13.70%
cumulative totals	100%	89.30%	76.10%	63.30%	50.20%	37.40%	20.50%	13.70%
Average % days visibility	10.3%	13.1%	13.1%	12.1%	11.3%	15.6%	6.4%	18.2%
Avg. cumulative totals	100%	90%	77%	63%	51%	40%	25%	18%

Figure 3 Average offshore visibility distances related to percentage days per annum



4.13. The Suffolk, 2020 report Appendix 2 also noted the seasonal variation set out in the EA2 ES Appendix 28.8. This shows that visibility over longer distances are most prevalent in summer. This is when the most people would be visiting or enjoying coastal and sea views.

4.14. It is appropriate to mention EA2 ES Appendix 28.9 concerning visibility measured on vessels off the East coast and compiled by the Met Office. This indicated that developments at distances over 36km may be visible less than 10% of the year (10, page 4). This analysis has not been verified in this study.

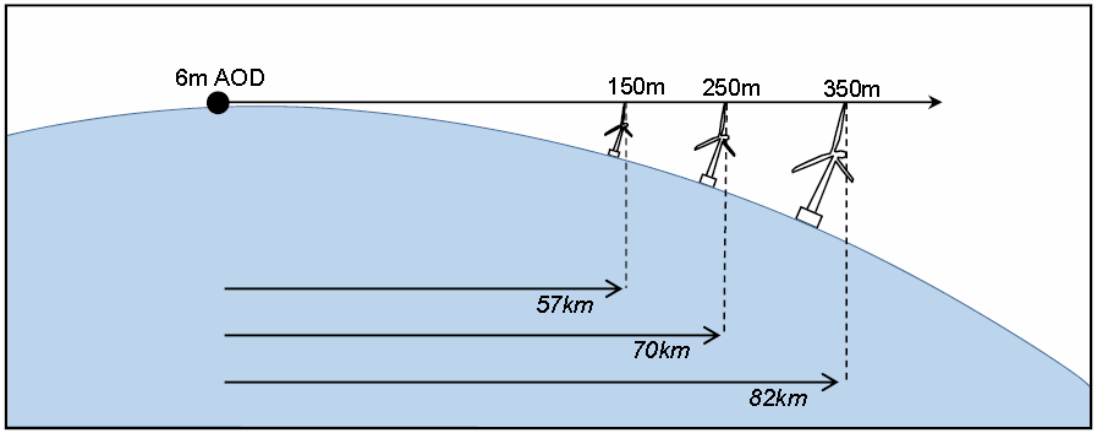
Aspect

4.15. The direction and angle of the sun in relation to a wind turbine and visual receptor is a notable factor influencing how clearly a turbine can be seen. Viewed from the east coast, offshore turbines broadly have the sun behind them in the morning, to one side in the middle of the day and highlighting them in the afternoon and evening. The effect of a lower angle of sun, particularly in the latter part of the day means turbines beyond 40km may be more likely to be visible in the afternoon/early evening. It is broadly the case that more people are likely to be enjoying the coast and views out to sea at this time which in turn influences sensitivity.

Earth's curvature

4.16. As the distance from the coast increases the effect of the earth's curvature on the amount of turbine visible also increases. This factor is implicitly already taken into account in SVIAs magnitude of visual effects analysed in the OESEA, 2020 study which underpin the buffers in the Suffolk 2020 study. The furthest SVIA distance analysed is 53km (Moray West in Table 7.2). The height of turbines screened by the earth's curvature at different distances from a viewpoint at 6m AOD is illustrated in **Figure 2**. This may be typical of views from the lower parts of the Suffolk Coast. For instance, at 57km a 150m high turbine is completely below the horizon. Therefore, the top 275m of a 425m high turbine, including the majority of its blade sweep, would theoretically be visible at this distance.

Figure 4 Effect of curvature of the Earth on visibility of turbines (Source: NRW (2019))



Discussion

4.17. A low magnitude of effect combined with a high sensitivity of receptor is relevant to visual buffers in the study area upto 40km. However, beyond this distance the influence of visibility modifiers as set out in **Figure 3** increases in influence. Therefore, a reasonable, if conservative, measure for significant effects is the medium magnitude of effect set out in **Table 1**. It is suggested that the following constraints buffers from the Suffolk Coast & Heaths AONB should be considered to guide development:

- Turbines 400+-425m high to blade tip- 42.5km buffer
- Turbines 425+-450m high to blade tip- 45km buffer
- Turbines 450+-500m high to blade tip- 50km buffer (although visibility may be less than 10%)
- Turbines 500m+-550m high to blade tip- 55km buffer (although visibility may be less than 10%)

4.18. The buffers above (effectively in the western part of Seascape Zone 8) are part of a reasoned approach to the future strategic location of offshore wind farms in relation to the AONB and are relevant in reviewing the likely seascape and visual effects of current proposals. However, it is recognised that 40km is a substantial buffer for larger wind turbines off sensitive designated coastal landscapes based on the evidence and meteorological data set out in OESEA, 2020. In determining individual proposals, decision-makers will need to balance the potential harm to the purposes of the AONB, including the combined cumulative effects of existing and proposed developments, with the likely future status of offshore wind as CNP

development.

5. Summary of findings and recommendations

5.1. In general, larger wind turbines both in terms of overall height and diameter of tower and swept path have a larger magnitude impact than smaller wind turbines at the same distance. Therefore, larger buffers for larger turbines are reasonable.

5.2. The percentage of time visibility is possible over long distances and the aspect of the east coast both increase the likelihood of visibility of turbines beyond 40km.

5.3. Turbines over 400m to blade tip are likely to be visible beyond 40km at times although their visibility decreases with distance due to reduced perceived scale of effect and the influence of visibility modifiers.

5.4. Wind farms with turbines over 400m high should be at least 40km away from the coast and preferably more as set out in the buffers in 4.17. If the nearest turbines of any given array are around 40km away from the AONB coast it is highly desirable for the number around this distance to be minimised in order to avoid significant adverse effects on the AONB and curtaining effects on the skyline in excellent visibility conditions.

5.5. The sensitivity of each seascape zone (SCZ) to wind turbine development remains the same except where East Anglia TWO windfarm overlaps with SCZ04 where it reduces to medium- see text for this zone below.

5.6. The treatment of turbines over 400m to blade tip in each Seascape Zone is set out in Part 2.

PART 2: Detailed seascape zone updates

Note: The sensitivity noted below is the overall sensitivity of each seascape zone to wind turbines generally as per the Suffolk, 2020 study, not specifically to turbines over 400m high to blade tip.

Seascape zone No: 01	Name: Suffolk Heritage Coast Inshore- South
Sensitivity	High/medium
Additional comments relating to turbines above 400m to blade tip	
The comments made in the summary of recommendations for offshore windfarms apply to turbines greater than 400m high. Turbines of this size are likely to have greater individual effects than smaller turbines as well as contrasting in scale more acutely with the existing development at Greater Gabbard/Galloper. This would be likely to increase cumulative effects.	

Seascape zone No: 02	Name: Suffolk Heritage Coast Offshore- South
Sensitivity	Medium
Additional comments relating to turbines above 400m to blade tip	
The comments made in the summary of recommendations for offshore windfarms as a suggested constraints buffer apply to turbines greater than 400m high. Turbines of this size are likely to have greater individual effects than smaller turbines as well as contrasting in scale more acutely with the existing development at Greater Gabbard/Galloper and increasing a curtaining effect towards the London Array. This would be likely to increase cumulative effects.	

Seascape zone No: 03	Name: Greater Gabbard Environs
Sensitivity	Medium
Additional comments relating to turbines above 400m to blade tip	
The comments made in the summary of recommendations describing this zone as a constraints buffer for turbines above 175m high apply to a greater degree to turbines more than 400m high. Turbines of this size are likely to have greater individual effects than smaller turbines as well as contrasting in scale more acutely with the existing development at Greater Gabbard/Galloper. This would be likely to substantially increase cumulative effects.	

Seascape zone No: 04	Name: Suffolk Heritage Coast Inshore- North
Sensitivity	High
Additional comments relating to turbines above 400m to blade tip	
The comments made in the summary of recommendations for offshore windfarms apply to turbines greater than 400m high. Turbines of this size are likely to have greater individual effects than smaller turbines as well as contrasting in scale more acutely with the existing development at Greater Gabbard/Galloper where extensions are proposed. This would be likely to increase cumulative effects. Now that East Anglia TWO is consented this becomes part of the baseline. Sensitivity *within* its boundaries reduces to medium as per SCZ03 which includes Greater Gabbard. Any replacement of turbines within the windfarm extent should not exceed 282m to blade tip. Sensitivity within the zone directly adjacent to East Anglia TWO remains high due to the proximity to the coast. It should remain as a constraint buffer for turbines of all sizes, especially those above 400m, to avoid significant adverse effects on the combined AONB and Heritage Coast. As with Greater Gabbard/Galloper extensions of the arrays into this zone may also exacerbate adverse combined cumulative effects if the turbines are above 400m high due to the contrast in scale and spacing. In addition, turbines over 400m could contribute strongly to a curtaining effect on the skyline between existing and consented wind farms and to the north.	

Seascape zone No: 05	Suffolk Heritage Coast Offshore- North
Sensitivity	Medium
Additional comments relating to turbines above 400m to blade tip	
The comments made in the summary of recommendations as a constraints buffer for turbines above 225m-400m high apply to turbines greater than 400m high. Turbines of this size are likely to have greater individual effects than smaller turbines as well as contrasting in scale more acutely with the	

existing development at Greater Gabbard/Galloper and East Anglia TWO. This would be likely to increase cumulative as well curtaining effects.

Seascape zone No: 06	Name: North Suffolk and Norfolk Inshore
Sensitivity	Medium
Additional comments relating to turbines above 400m to blade tip	
The comments made in the summary of recommendations for offshore windfarms apply to turbines greater than 400m high. Turbines of this size are likely to have greater individual effects than smaller turbines as well as contrasting in scale acutely with existing development at Scroby Sands. This would be likely to increase cumulative effects.	

Seascape zone No: 07	Name: North Suffolk and Norfolk Offshore
Sensitivity	Medium
Additional comments relating to turbines above 400m to blade tip	
The comments made in the summary of recommendations for offshore windfarms as a buffer for turbines over 350m high clearly also applies to turbines over 400m. Turbines of this size are likely to have greater individual effects than smaller turbines as well as contrasting in scale with existing development at Scroby Sands. This would be likely to increase cumulative effects.	

Seascape zone No: 08	Name: East Anglia Outer Offshore
Sensitivity	Medium/low
Additional comments relating to turbines above 400m to blade tip	

The comments made in the summary of recommendations for offshore windfarms apply to turbines greater than 400m high. Turbines of this size are likely to have greater individual effects than smaller turbines as well as contrasting in scale more acutely with the existing development at Greater Gabbard/Galloper where extensions are proposed and also East Anglia ONE North and East Anglia TWO. This would be likely to increase cumulative effects. In addition, turbines over 400m could contribute to a curtaining effect on the skyline between existing and consented wind farms and to the north.

A low magnitude of effect combined with a high sensitivity of receptor is relevant to visual buffers in the study area upto 40km. However, beyond this distance the influence of visibility modifiers as set out in **Figure 3** increase in significance. Therefore, a measure for significant effects is the medium magnitude of effect set out in **Table 1.** it is recommended that the following constraints buffers should be considered to guide development:

- Turbines 400+-425m high to blade tip- 42.5km buffer
- Turbines 425+-450m high to blade tip- 45km buffer
- Turbines 450+-500m high to blade tip- 50km buffer (although visibility may be less than 10%)
- Turbines 500m+-550m high to blade tip- 55km buffer (although visibility may be less than 10%)

Now that East Anglia TWO is consented this becomes part of the baseline. Any replacement of turbines within the windfarm extent should also be subject to the above buffers due to potential contrasts in scale with consented turbines.

Suffolk County Council



North Falls

Local Impact Report Appendix L:

East Anglia ONE North Offshore Windfarm Outline Port Construction Traffic Management and Travel Plan

East Anglia ONE North Offshore Windfarm

Outline Port Construction Traffic Management and Travel Plan

Applicant: East Anglia ONE North Limited
Document Reference: ExA.AS-5.D12.V5
SPR Reference: EA1N-DWF-ENV-REP-IBR-000529 Rev 05

Date: 28th June 2021
Revision: Version 05
Author: ScottishPower Renewables

Applicable to
East Anglia ONE North

Revision Summary				
Rev	**Date**	**Prepared by**	**Checked by**	**Approved by**
01	15/12/2020	Brian McGrellis	Lesley Jamieson	Rich Morris
02	24/02/2021	Brian McGrellis	Lesley Jamieson	Rich Morris
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05	28/06/2021	Brian McGrellis	Lesley Jamieson	Rich Morris

Description of Revisions			
Rev	**Page**	**Section**	**Description**
01	n/a	n/a	Submitted to Examination at Deadline 3
02	n/a	n/a	Updated for submission at Deadline 6
03	n/a	n/a	Final submitted to the Examining Authority at Deadline 8
04	n/a	n/a	Final submitted to the Examining Authority at Deadline 11
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Glossary of Acronyms

DCO	Development Consent Order
HGV	Heavy Good Vehicles
NPPF	National Planning Policy Framework
NPS	National Policy Statement
PCTMP	Post Construction Traffic Management Plan (constrcution phase only)
PTP	Port Travel Plam (operational phase only)
SCC	Suffolk County Council
TA	Transport Assessment

Glossary of Terminology

Applicant	East Anglia ONE North Limited
East Anglia ONE North Project	The proposed project consisting of up to 67 wind turbines, up to four offshore electrical platforms, up to one construction, operation and maintenance platform, inter-array cables, platform link cables, up to one operational meteorological mast, up to two offshore export cables, fibre optic cables, landfall infrastructure, onshore cables and ducts, onshore substation, and National Grid infrastructure.

1 Introduction

1.1 Project Overview

1. This Outline Port Construction Traffic Management and Travel Plan (the Outline Port Traffic/Travel Plan) forms part of a set of documents that supports the Development Consent Order (DCO) application submitted by East Anglia ONE North Limited ('the Applicant') for the East Anglia ONE North offshore windfarm ('the Project').

2. Requirement 36 of the ***draft DCO*** (document reference 3.1) requires a port construction traffic management plan, and a port travel plan, both of which must be in accordance with outline port construction traffic management and travel plan to be submitted to and approved by the relevant highway authority in consultation with the planning authority, and states:

(1) No part of Work No. 1 may commence until—

i. a port construction traffic management plan (which accords with the outline port construction traffic management and travel plan) for the onshore port-related traffic to and from the construction port or ports and relating to that part of the authorised development, has been submitted to and approved by the relevant highway authority in consultation with the relevant planning authority; or

ii. the relevant highway authority has confirmed, after consultation with the relevant planning authority, that no port construction traffic management plan is required for that part of the authorised development.

1. No part of Work No. 1 may begin operating until—

(a) a port travel plan (which accords with the outline port construction traffic management and travel plan) for the onshore port-related traffic to and from the operation port or ports and relating to that part of the authorised development, has been submitted to and approved by the relevant highway authority in consultation with the relevant planning authority; or

(b) the relevant highway authority has confirmed, after consultation with the relevant planning authority, that no port travel plan is required for that part of the authorised development.

2. The port construction traffic management plan must be implemented as approved at all times specified within the port construction traffic management plan during the construction of the authorised project.

3. The port travel plan must be implemented as approved at all times specified within the port travel plan during the operation of the authorised project.

4. For the purposes of this requirement—

"relevant planning authority" and "relevant highway authority" mean—

(a) in respect of paragraph (1), the planning or highway authority or authorities in whose area the relevant construction port is located; and

(b) in respect of paragraph (2), the planning or highway authority or authorities in whose area the relevant operation port is located;

"construction port" or "ports" means a port or ports situated in England and/or Wales and used for construction of the authorised project; and

"operation port" or "ports" means a port or ports situated in England and/or Wales and used by management personnel for the ongoing operational management of the authorised project.

1.2 Purpose and Scope

3. At the time of writing this Outline Port Traffic/Travel Plan, the Applicant has not identified the port(s) to be used for construction of the Project (construction port(s)) or for the ongoing operational management of the Project (operation port). Therefore, the Outline Port Traffic/Travel Plan serves to capture a framework of measures and commitments to be implemented should the need for a Port Construction Traffic Management Plan (PCTMP) and / or a Port Travel Plan (PTP) be established in consultation with the relevant planning authority for the selected construction port(s) or operation port(s).

4. The final PCTMP and PTP will be specific to the construction port(s) and operation port(s) selected, and will provide details on the construction and operational traffic demand and related effects associated with these phases of the Project. The final PCTMP and PTP will include an evaluation of potential traffic and transport impacts associated with construction and operational movements.

5. Components delivered to the construction port(s) or operation port(s) by ship do not fall within the scope of the Outline PCTMP and PTP.

1.3 Consultation

6. The Applicant will consult with the relevant planning and highway authorities within which the construction and operation ports are located to establish whether, based on the projected traffic flows and infrastructure within and surrounding of the construction port(s) and operation port(s), a PCTMP and / or a PTP is required.

7. Where required, the final PCTMP and PTP will be produced in consultation with the relevant planning and highway authorities within which the construction port(s) and operational port(s) are located.

8. Should the final construction and/or operation ports be located outside of the administration boundary for Suffolk County Council (SCC), the Applicant will consult with SCC regarding the potential for construction or operational vehicle movements to impact cumulatively within their administrative boundary. This would include providing details of expected traffic flows, routes and loads that could pass into SCCs administrative boundary and the requirement for assessment of resultant impacts.

2 Policy and Guidance

9. The final PCTMP and PTP will provide a review of current and relevant guidance including National Policy Statements (NPS), the National Planning Policy Framework (NPPF), County Level Policy, Local Level Policy and Travel Plan Guidance as appropriate.

2.1 National Policy

10. NPS EN-1 states that the Planning Inspectorate will also consider Development Plan Documents or other documents in the Local Development Framework relevant to its decision making (Department of Energy and Climate Change 2011).

11. Paragraph 111 of the NPPF states that "*all developments that will generate significant amounts of movement should be required to provide a travel plan*" (Ministry of Housing, Communities and Local Government 2019).

2.2 County Level and Regional Policy

12. Once the Applicant has entered into an agreement with a port for the construction phase and the operation phase of the Project, a review of the relevant local policies and development plans pertinent to the jurisdiction within which the port(s) are located will be undertaken.

13. The final PCTMP and PTP will identify relevant local policies and guidance and demonstrate compliance or justify departure from the identified local policies and guidance.

3 Input and Baseline Data

14. The following sections set out the processes for determining the scale of the input and baseline data to be used in the final PCTMP and PTP.

3.1 Port Construction Traffic Management Plan

3.1.1 Construction Programme

15. Details of the proposed construction programme relative to the construction port(s) will be presented in the final PCTMP. The Project's port traffic demand forecast will be prepared on the basis of this information. Heavy Goods Vehicles (HGV) movements associated with the delivery of materials and components will also be detailed once known.

3.1.2 Construction Phase Workforce Traffic Demand

16. A review of the detailed design and construction programme will be undertaken to identify the workforce requirements at the construction port(s) over the construction phase. Information obtained from the review will be used to calculate the workforce traffic flows travelling to and from the construction port(s) utilising the methodologies previously agreed and set out in ***Chapter 26 Traffic and Transport*** (APP-074).

17. Details of the shift times will also be established to understand the potential distribution of workforce movements.

18. Opportunities for construction workers commuting to the construction port(s) by means other than by car will be established through a sustainable transport audit. This will consider pedestrian infrastructure, cycle infrastructure, and public transport connectivity to inform a judgement upon number of workforce vehicle movements. The results of the sustainable transport audit will be clearly communicated to site personnel and any such opportunities to commute to the construction port(s) other than by car will be explored.

3.1.3 Construction Phase HGV Demand

19. A review of the detailed design and construction programme will be undertaken to identify the road based delivery schedule of materials and components from HGVs to the construction port(s) over the construction phase. Information obtained from the review will be used to calculate the HGV traffic flows travelling to and from the construction port(s) utilising the methodologies previously agreed and set out in ***Chapter 26 Traffic and Transport*** (APP-074).

20. Details of the predicted traffic flows and the timeframes within which any effects are anticipated to occur will be discussed with the relevant highway authorities.

3.1.4 Port(s) Access and Highway Conditions

21. A review of the existing port permissions, traffic conditions, including the local network traffic profile and any other considerations (such as seasonal traffic), will be completed.

3.2 Port Travel Plan

3.2.1 Operational Phase Personnel Traffic Demand

22. A review of the Project's operational management will be undertaken to identify the personnel requirements during the operational phase. Information obtained from the review will be used to calculate the personnel traffic flows travelling to and from the operation port.

23. Details of the shift times will also be established to understand the potential distribution of workforce movements.

24. Opportunities for operational personnel to commute to the operation port by means other than by car will be established through a sustainable transport audit. This will consider pedestrian infrastructure, cycle infrastructure, and public transport connectivity to inform a judgement upon number of vehicle movements. The results of the sustainable transport audit will be clearly communicated to site personnel and any such opportunities to commute to the operation port(s) other than by car will be explored.

3.2.2 Operational Phase HGV Traffic Demand

25. A review of the Project's operational management will be undertaken to identify the delivery schedule of materials and components during the operational phase. Information obtained from the review will be used to calculate the HGV traffic flows travelling to and from the operational management port.

3.2.3 Port Access and Highway Conditions

26. A review of the existing port permissions, traffic conditions, including the local network traffic profile and any other considerations (such as seasonal traffic), will be completed.

4 Impact Assessment

27. The input and baseline data parameters (***section 3***) will establish the likely number of net vehicle movements (Project's traffic demand minus permitted development traffic for the port in question) to the operation and construction port(s) and their assignment to the highway network.

28. These parameters will be used to inform a Transport Assessment (TA) screening report that will be submitted to the relevant highway authorities (including SCC) to understand if there would be a requirement for a TA.

29. Utilising the same parameters, a separate screening exercise will also be undertaken for noise and air quality with the relevant planning authorities to establish if there is a requirement for the assessment of the proposed operation and construction port(s) traffic demand upon these effects.

30. If screening determines that a TA, noise or air quality assessment are required the scopes would be agreed with the relevant highway and planning authorities. In determining the scope full consideration will be afforded to impacts that may cross administration boundaries. The air quality screening exercise and (if required) assessment will be carried out in accordance with Institute of Air Quality Management Guidance Land-Use Planning & Development Control: Planning For Air Quality (v1.2), January 2017, or any update to this guidance. Should the assessments identify any significant impacts on human or ecological receptors, appropriate and available measures to reduce such impacts should be specified and agreed in writing with the relevant local planning authority.

5 Objectives

31. The key objective of the final PCTMP and PTP is to consider traffic and transport impacts as a result of delivery of materials and components, and workforce and operational personnel travel to the construction port(s) and operation port(s) respectively. The final PCTMP and PTP will also set out a strategy for reducing workers' dependency on travel by private car, thereby reflecting Government policy in respect of transport which aims to replace private car usage in favour of more sustainable modes of travel. The final PCTMP and PTP will include further details on the PCTMP and PTP objectives.

32. Where appropriate, the final PCTMP and PTP will also seek to minimise traffic impact (including air quality impacts) and congestion in the proximity of the port(s).

6 Management Strategy

33. Details regarding the roles, responsibilities, contact details and the communication procedures to be implemented will be set out within the final PCTMP and PTP for the following roles:

- Construction site manager (responsible for ensuring that the final PCTMP is implemented); and
- Operations manager (responsible for ensuring that the final PTP is implemented); and
- Plan coordinator (responsible for implement and administer the final PCTMP and PTP).

34. The final PCTMP and PTP will also include information regarding the promotion of the PCTMP and PTP amongst the construction workforce and operational personnel and the process for monitoring and updating information within the PCTMP and PTP.

7 Measures

35. Measures will be presented for consideration which will comprise a series of initiatives designed with reference to the baseline data and will be intended to encourage a modal shift within the commuting habits of the construction workforce and operational personnel, primarily away from single occupancy car use, and car use in general. These measures will be included as separate subsections regarding:

- Project-specific measures (including car parking control, provision of welcome packs and a travel noticeboard);
- Pedestrian measures (including pedestrian route plans);
- Cycle measures (including cycle route plans and cycle parking);
- Public transport measures (including bus route information); and
- Car share measures (including information sharing on available car share opportunities).

8 Targets

36. General, site-specific, measurable, achievable, realistic and time-related targets will be designed and specified within the final PCTMP and PTP. The targets must accord with the objectives of the final PCTMP and PTP (see ***Section 4***) and shall address both traffic demand on the local highways network and the associated impacts.

9 Monitoring

37. Performance against the final PCTMP and PTP will be reviewed every 12 months to measure success against the set targets and to identify potential areas of refinement.

38. A staff travel survey will be undertaken prior to the above mentioned PCTMP and PTP review.

39. Arrangements for investigating a breach of the final PCTMP and PTP and the process for establishing corrective actions will be presented within the final PCTMP and PTP.

10 Action Plan

40. An action plan setting out the steps to be undertaken throughout the construction and operational phases of the Project will be included within the final PCTMP and PTP. This will likely comprise a checklist of timebound key actions to be undertaken in order to guide the responsible person in meeting the stated targets of the final PCTMP and PTP.

41. Estimated deadlines will be assigned to each one-off task specified within the final PCTMP and PTP action plans, with the recurrence frequency of repeatable tasks clearly stated.

11 References

Department of Energy and Climate Change (2011). National Policy Statement for Energy (EN-1) DECC Publications

Ministry of Housing, Communities and Local Government (2019) National Planning Policy Framework.

Suffolk County Council



North Falls

Local Impact Report Appendix M:

East Anglia TWO Offshore Windfarm Outline Port Construction Traffic Management and Travel Plan

East Anglia TWO Offshore Windfarm

Outline Port Construction Traffic Management and Travel Plan

Applicant: East Anglia TWO Limited
Document Reference: ExA.AS-5.D12.V5
SPR Reference: EA2-DWF-ENV-REP-IBR-001043 Rev 05

Date: 28th June 2021
Revision: Version 05
Author: ScottishPower Renewables

Applicable to East Anglia TWO

Revision Summary				
Rev	**Date**	**Prepared by**	**Checked by**	**Approved by**
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03	25/03/2021	Brian McGrellis	Lesley Jamieson	Rich Morris
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Glossary of Acronyms

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HGV	Heavy Goods Vehicles
NPPF	National Planning Policy Framework
NPS	National Policy Statement
PCTMP	Port Construction Traffic Management Plan (construction phase only)
PTP	Port Travel Plan (operational management phase only)
SCC	Suffolk County Council
TA	Transport Assessment

Glossary of Terminology

Applicant	East Anglia TWO Limited
East Anglia TWO project	The proposed project consisting of up to 75 wind turbines, up to four offshore electrical platforms, up to one construction, operation and maintenance platform, inter-array cables, platform link cables, up to one operational meteorological mast, up to two offshore export cables, fibre optic cables, landfall infrastructure, onshore cables and ducts, onshore substation, and National Grid infrastructure.

1 Introduction

1.1 Project Overview

1. This Outline Port Construction Traffic Management and Travel Plan (the Outline Port Traffic/Travel Plan) forms part of a set of documents that supports the Development Consent Order (DCO) application submitted by East Anglia TWO Limited ('the Applicant') for the East Anglia TWO offshore windfarm ('the Project').

2. Requirement 36 of the ***draft DCO*** (document reference 3.1) requires a port construction traffic management plan, and a port travel plan, both of which must be in accordance with outline port construction traffic management and travel plan to be submitted to and approved by the relevant highway authority in consultation with the planning authority, and states:

(1) No part of Work No. 1 may commence until—

(a) a port construction traffic management plan (which accords with the outline port construction traffic management and travel plan) for the onshore port-related traffic to and from the construction port or ports and relating to that part of the authorised development, has been submitted to and approved by the relevant highway authority in consultation with the relevant planning authority; or

(b) the relevant highway authority has confirmed, after consultation with the relevant planning authority, that no port construction traffic management plan is required for that part of the authorised development.

(2) No part of Work No. 1 may begin operating until—

(a) a port travel plan (which accords with the outline port construction traffic management and travel plan) for the onshore port-related traffic to and from the operation port or ports and relating to that part of the authorised development, has been submitted to and approved by the relevant highway authority in consultation with the relevant planning authority; or

(b) the relevant highway authority has confirmed, after consultation with the relevant planning authority, that no port travel plan is required for that part of the authorised development.

(3) The port construction traffic management plan must be implemented as approved at all times specified within the port construction traffic management plan during the construction of the authorised project.

(4) The port travel plan must be implemented as approved at all times specified within the port travel plan during the operation of the authorised project.

(5) For the purposes of this requirement—

"relevant planning authority" and "relevant highway authority" mean—

(a) in respect of paragraph (1), the planning or highway authority or authorities in whose area the relevant construction port is located; and

(b) in respect of paragraph (2), the planning or highway authority or authorities in whose area the relevant operation port is located;

"construction port" or "ports" means a port or ports situated in England and/or Wales and used for construction of the authorised project; and

"operation port" or "ports" means a port or ports situated in England and/or Wales and used by management personnel for the ongoing operational management of the authorised project.

1.2 Purpose and Scope

3. At the time of writing this Outline Port Traffic/Travel Plan, the Applicant has not identified the port(s) to be used for construction of the Project (construction port(s)) or for the ongoing operational management of the Project (operation port). Therefore, the Outline Port Traffic/Travel Plan serves to capture a framework of measures and commitments to be implemented should the need for a Port Construction Traffic Management Plan (PCTMP) and / or a Port Travel Plan (PTP) be established in consultation with the relevant planning authority for the selected construction port(s) or operation port(s).

4. The final PCTMP and PTP will be specific to the construction port(s) and operation port(s) selected, and will provide details on the construction and operational traffic demand and related effects associated with these phases of the Project. The final PCTMP and PTP will include an evaluation of potential traffic and transport impacts associated with construction and operational movements.

5. Components delivered to the construction port(s) or operation port(s) by ship do not fall within the scope of the Outline PCTMP and PTP.

1.3 Consultation

6. The Applicant will consult with the relevant planning and highway authorities within which the construction and operation ports are located to establish whether, based on the projected traffic flows and infrastructure within and surrounding of the construction port(s) and operation port(s), a PCTMP and / or a PTP is required.

7. Where required, the final PCTMP and PTP will be produced in consultation with the relevant planning and highway authorities within which the construction port(s) and operational port(s) are located.

8. Should the final construction and/or operation ports be located outside of the administration boundary for Suffolk County Council (SCC), the Applicant will consult with SCC regarding the potential for construction or operational vehicle movements to impact cumulatively within their administrative boundary. This would include providing details of expected traffic flows, routes and loads that could pass into SCCs administrative boundary and the requirement for assessment of resultant impacts.

2 Policy and Guidance

9. The final PCTMP and PTP will provide a review of current and relevant guidance including National Policy Statements (NPS), the National Planning Policy Framework (NPPF), County Level Policy, Local Level Policy and Travel Plan Guidance as appropriate.

2.1 National Policy

10. NPS EN-1 states that the Planning Inspectorate will also consider Development Plan Documents or other documents in the Local Development Framework relevant to its decision making (Department of Energy and Climate Change 2011).

11. Paragraph 111 of the NPPF states that "*all developments that will generate significant amounts of movement should be required to provide a travel plan*" (Ministry of Housing, Communities and Local Government 2019).

2.2 County Level and Regional Policy

12. Once the Applicant has entered into an agreement with a port for the construction phase and the operation phase of the Project, a review of the relevant local policies and development plans pertinent to the jurisdiction within which the port(s) are located will be undertaken.

13. The final PCTMP and PTP will identify relevant local policies and guidance and demonstrate compliance or justify departure from the identified local policies and guidance.

3 Input and Baseline Data

14. The following sections set out the processes for determining the scale of the input and baseline data to be used in the final PCTMP and PTP.

3.1 Port Construction Traffic Management Plan

3.1.1 Construction Programme

15. Details of the proposed construction programme relative to the construction port(s) will be presented in the final PCTMP. The Project's port traffic demand forecast will be prepared on the basis of this information. Heavy Goods Vehicles (HGV) movements associated with the delivery of materials and components will also be detailed once known.

3.1.2 Construction Phase Workforce Traffic Demand

16. A review of the detailed design and construction programme will be undertaken to identify the workforce requirements at the construction port(s) over the construction phase. Information obtained from the review will be used to calculate the workforce traffic flows travelling to and from the construction port(s) utilising the methodologies previously agreed and set out in ***Chapter 26 Traffic and Transport*** (APP-074).

17. Details of the shift times will also be established to understand the potential distribution of workforce movements.

18. Opportunities for construction workers commuting to the construction port(s) by means other than by car will be established through a sustainable transport audit. This will consider pedestrian infrastructure, cycle infrastructure, and public transport connectivity to inform a judgement upon number of workforce vehicle movements. The results of the sustainable transport audit will be clearly communicated to site personnel and any such opportunities to commute to the construction port(s) other than by car will be explored.

3.1.3 Construction Phase HGV Demand

19. A review of the detailed design and construction programme will be undertaken to identify the road based delivery schedule of materials and components from HGVs to the construction port(s) over the construction phase. Information obtained from the review will be used to calculate the HGV traffic flows travelling to and from the construction port(s) utilising the methodologies previously agreed and set out in ***Chapter 26 Traffic and Transport*** (APP-074).

20. Details of the predicted traffic flows and the timeframes within which any effects are anticipated to occur will be discussed with the relevant highway authorities.

3.1.4 Port(s) Access and Highway Conditions

21. A review of the existing port permissions, traffic conditions, including the local network traffic profile and any other considerations (such as seasonal traffic), will be completed.

3.2 Port Travel Plan

3.2.1 Operational Phase Personnel Traffic Demand

22. A review of the Project's operational management will be undertaken to identify the personnel requirements during the operational phase. Information obtained from the review will be used to calculate the personnel traffic flows travelling to and from the operation port.

23. Details of the shift times will also be established to understand the potential distribution of workforce movements.

24. Opportunities for operational personnel to commute to the operation port by means other than by car will be established through a sustainable transport audit. This will consider pedestrian infrastructure, cycle infrastructure, and public transport connectivity to inform a judgement upon number of vehicle movements. The results of the sustainable transport audit will be clearly communicated to site personnel and any such opportunities to commute to the operation port(s) other than by car will be explored.

3.2.2 Operational Phase HGV Traffic Demand

25. A review of the Project's operational management will be undertaken to identify the delivery schedule of materials and components during the operational phase. Information obtained from the review will be used to calculate the HGV traffic flows travelling to and from the operational management port.

3.2.3 Port Access and Highway Conditions

26. A review of the existing port permissions, traffic conditions, including the local network traffic profile and any other considerations (such as seasonal traffic), will be completed.

4 Impact Assessment

27. The input and baseline data parameters (***section 3***) will establish the likely number of net vehicle movements (Project's traffic demand minus permitted development traffic for the port in question) to the operation and construction port(s) and their assignment to the highway network.

28. These parameters will be used to inform a Transport Assessment (TA) screening report that will be submitted to the relevant highway authorities (including SCC) to understand if there would be a requirement for a TA.

29. Utilising the same parameters, a separate screening exercise will also be undertaken for noise and air quality with the relevant planning authorities to establish if there is a requirement for the assessment of the proposed operation and construction port(s) traffic demand upon these effects.

30. If screening determines that a TA, noise or air quality assessment are required the scopes would be agreed with the relevant highway and planning authorities. In determining the scope full consideration will be afforded to impacts that may cross administration boundaries. The air quality screening exercise and (if required) assessment will be carried out in accordance with Institute of Air Quality Management Guidance Land-Use Planning & Development Control: Planning For Air Quality (v1.2), January 2017, or any update to this guidance. Should the assessments identify any significant impacts on human or ecological receptors, appropriate and available measures to reduce such impacts should be specified and agreed in writing with the relevant local planning authority.

5 Objectives

31. The key objective of the final PCTMP and PTP is to consider traffic and transport impacts as a result of delivery of materials and components, and workforce and operational personnel travel to the construction port(s) and operation port(s) respectively. The final PCTMP and PTP will also set out a strategy for reducing workers' dependency on travel by private car, thereby reflecting Government policy in respect of transport which aims to replace private car usage in favour of more sustainable modes of travel. The final PCTMP and PTP will include further details on the PCTMP and PTP objectives.

32. Where appropriate, the final PCTMP and PTP will also seek to minimise traffic impact (including air quality impacts) and congestion in the proximity of the port(s).

6 Management Strategy

33. Details regarding the roles, responsibilities, contact details and the communication procedures to be implemented will be set out within the final PCTMP and PTP for the following roles:

- Construction site manager (responsible for ensuring that the final PCTMP is implemented); and
- Operations manager (responsible for ensuring that the final PTP is implemented); and
- Plan coordinator (responsible for implement and administer the final PCTMP and PTP).

34. The final PCTMP and PTP will also include information regarding the promotion of the PCTMP and PTP amongst the construction workforce and operational personnel and the process for monitoring and updating information within the PCTMP and PTP.

7 Measures

35. Measures will be presented for consideration which will comprise a series of initiatives designed with reference to the baseline data and will be intended to encourage a modal shift within the commuting habits of the construction workforce and operational personnel, primarily away from single occupancy car use, and car use in general. These measures will be included as separate subsections regarding:

- Project-specific measures (including car parking control, provision of welcome packs and a travel noticeboard);
- Pedestrian measures (including pedestrian route plans);
- Cycle measures (including cycle route plans and cycle parking);
- Public transport measures (including bus route information); and
- Car share measures (including information sharing on available car share opportunities).

8 Targets

36. General, site-specific, measurable, achievable, realistic and time-related targets will be designed and specified within the final PCTMP and PTP. The targets must accord with the objectives of the final PCTMP and PTP (see ***Section 4***) and shall address both traffic demand on the local highways network and the associated impacts.

9 Monitoring

37. Performance against the final PCTMP and PTP will be reviewed every 12 months to measure success against the set targets and to identify potential areas of refinement.

38. A staff travel survey will be undertaken prior to the above mentioned PCTMP and PTP review.

39. Arrangements for investigating a breach of the final PCTMP and PTP and the process for establishing corrective actions will be presented within the final PCTMP and PTP.

10 Action Plan

40. An action plan setting out the steps to be undertaken throughout the construction and operational phases of the Project will be included within the final PCTMP and PTP. This will likely comprise a checklist of timebound key actions to be undertaken in order to guide the responsible person in meeting the stated targets of the final PCTMP and PTP.

41. Estimated deadlines will be assigned to each one-off task specified within the final PCTMP and PTP action plans, with the recurrence frequency of repeatable tasks clearly stated.

11 References

Department of Energy and Climate Change (2011). National Policy Statement for Energy (EN-1) DECC Publications

Ministry of Housing, Communities and Local Government (2019) National Planning Policy Framework.

Suffolk County Council



North Falls

Local Impact Report Appendix N:

East Anglia ONE Offshore Windfarm Port Travel Plan

East Anglia ONE
Offshore Windfarm

East Anglia ONE Offshore Windfarm

Lowestoft Port Travel Plan
DCO Requirement 26

Final for Discharge

ID: EA1-CON-F-GBE-010254

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REVISION CONTROL

Revision and Approvals					
Rev	**Date**	**Reason for Issue**	**Originated by**	**Checked by**	**Approved by**
1	10.05.16	Internal review	AT	AH	AS
2	21.07.16	Interim for Consultation	SLR	JR	RM
3	13.10.16	Final for Approval	SLR	JR	RM
4	11.11.16	Final for Discharge	SLR	AS	RM

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Abbreviations

EA ONE - East Anglia ONE Offshore Wind Farm
SPR – ScottishPower Renewables
DCO – Development Consent Order
PTP – Port Travel Plan
TPC – Travel Plan Coordinator
CMMP – Construction Monitoring and Management Port
CP – Construction Port
WTG – Wind Turbine Generators
FTIC – Foundations Transport and Installation Contractor
MW – Megawatts
LPA – Local Planning Authority
SCC – Suffolk County Council
DC – Direct Current
AC – Alternating Current

1 Introduction

1.1 Project Overview

1. East Anglia ONE Limited (EAOL) was awarded a Development Consent Order (DCO) by the Secretary of State, Department of Energy and Climate Change (DECC) on June 17th 2014 for East Anglia ONE Offshore Wind Farm (EA ONE). The DCO granted consent for the development of a 1200MW offshore windfarm and associated infrastructure.

2. In February 2015 EAOL secured a Contract for Difference (CfD) award to build a 714MW project and Scottish Power Renewables announced its role in leading EA ONE towards construction. In April 2015 EAOL submitted a non-material change application to DECC to amend the consent from direct current (DC) technology to alternating current (AC). In March 2016 DECC authorised the proposed change application and issued an Amendments Order.

1.2 Purpose and Scope

3. This Interim Port Travel Plan (PTP) sets out strategies and initiatives to mitigate any potential detrimental impacts on the surrounding environment posed by trip generation (vehicular or otherwise) from the off shore construction phase of the EA ONE. This PTP has been produced to fulfil DCO Requirement 26 which states:

'**(1)** *No stage of the connection works shall be commenced until a travel plan for the onshore port-related traffic to and from the selected base port or ports and relating to the authorised project, has been submitted to and approved in writing by the relevant planning authority in consultation with the relevant highway authority. The travel plan must be implemented as approved at all times specified within the travel plan during the construction and/or operation of the authorised development'.*

'**(2)** For the purposes of this Requirement –

- "base port" means the port used by management personnel for construction of the authorised development and for the ongoing operational management of the authorised development;
- "relevant planning authority" and "relevant highway authority" mean the planning or highway authority or authorities in whose area the relevant port is located; and
- "selected base port" or "ports" means a port or ports situated in England and/or Wales'.

4. This Port Travel Plan (PTP) provides details of the identified potential detrimental impacts arising from the construction of the EA ONE and mitigation measures proposed to address those impacts.

1.3 Consultation with Local Highway Authority

5. This PTP has been produced with full consultation with Suffolk County Council (SCC). A meeting was undertaken on the 2nd September 2016 at SCC's Endeavour House, Ipswich, where the scope of the PTP and potential measures and initiatives were discussed with SCC's Highway Engineers and Travel Plan Officers.

6. This PTP reflects the discussions held and additional information provided subsequent to the meeting.

1.4 Background

7. Two support bases and a Wind Turbine Generator Base Port (WTGBP) and will be set up.

8. The two support bases will be a Construction Monitoring and Management Port (CMMP) and a Construction Port (CP). The CMMP is located Lowestoft at and the CP location has yet to be confirmed.

9. It has been confirmed that Great Yarmouth will be the location of the WTGBP, the facility will be operated by Siemens. A PTP for Great Yarmouth has also been prepared in the context of Requirement 29 of the DCO.

10. The construction phase of the offshore works associated with the EA ONE Offshore Windfarm has been subdivided into nine stages. The installation of the Wind Turbine Generators (WTGs) represents the final stage of the construction phase of the project and this is to be completed by 1st May 2020. The duration of works by stage is outlined within the Table 1.1:

Table 1.1 Anticipated Programme

Phase	Estimated Date of Commencement	Estimated Date of Completion
Temporary onshore facilities at Lowestoft (by EAOL)	1st January 2018	1st February 2019
Construction of permanent onshore Operation and Maintenance (O&M) facilities at Lowestoft (by EAOL)	1st January 2018	1st February 2019
Foundations Installation	1st February 2018	31st August 2019
Offshore substation Installation	1st July 2018	1st October 2018
Offshore export cable Installation	1st June 2018	1st January 2019
IA - Cable Installation	1st May 2019	1st April 2020
Offshore export cable Installation	1st May 2019	1st November 2019
Wind Turbine Generator Installation	1st June 2019	1st May 2020

1.5 The Port of Lowestoft

11. The Port of Lowestoft is located at the heart of the town near to the Commercial Town Centre and public transport hubs. Access to the port is gained directly from the A12; a principal road which routes through Lowestoft linking with the strategic road network via the A14 and M11 Motorway.

12. The harbour is made up of two sections divided by a bascule bridge. The inner harbour is formed by Lake Lothing whilst the outer harbour is constructed from breakwaters. A site Location Plan is included at Appendix 1.

1.6 Limits of the Port Travel Plan (PTP)

13. This PTP has been produced in respect of the Port of Lowestoft based on the latest information available and some assumptions in terms of staffing levels and likely transport patterns.

14. The Lowestoft PTP will be developed following the appointment of the successful contractors. Suffolk County Council, as the relevant highway authority and Waveney District Council as the relevant planning authority will be consulted on the revised document.

2 Policy and Guidance

2.1 National Policy

2.1.1 National Planning Policy Framework

15. The National Planning Policy Framework (NPPF) was published in March 2012, setting out the Government's planning policies for England and how these are expected to be applied.

16. Paragraph 1 states that the NPPF:

'…sets out the Government's requirements for the planning system only to the extent that it is relevant, proportionate and necessary to do so. It provides a framework within which local people and their accountable councils can produce their own distinctive local and neighbourhood plans, which reflect the needs and priorities of their communities'.

17. NPPF promotes the use of sustainable transport under Section 4 of the document 'Delivering Sustainable Development'. Paragraph 29 recognises that:

'Transport policies have an important role to play in facilitating sustainable development but also in contributing to wider sustainability and health objectives. Smarter use of technologies can reduce the need to travel. The transport system needs to be balanced in favour of sustainable transport modes, giving people a real choice about how they travel. However, the Government recognises that different policies and measures will be required in different communities and opportunities to maximise sustainable transport solutions will vary from urban to rural areas'.

18. The NPPF identifies the provision of a Travel Plan as being fundamental to achieving the policy objectives indicated above; Paragraph 36 states that:

'a key tool to facilitate this will be a Travel Plan. All developments which generate significant amounts of movement should be required to provide a Travel Plan'.

2.2 County Level Policy

2.2.1 Suffolk County Council LTP3

19. The Suffolk Local Transport Plan 2011-2031 sets out Suffolk County Councils long-term goals for the development of transportation infrastructure and practice throughout the county up to the year 2031.

20. The plan demonstrates how transport:

'…will play its part in supporting and facilitating future sustainable economic growth by:

- *maintaining (and in the future improving) our transport networks;*
- *tackling congestion;*
- *improving access to jobs and markets; and*
- *encouraging a shift to more sustainable travel patterns.'*

21. LPT3 is presented in two parts:

- 'Part 1 - Transport Strategy'; and
- 'Part 2 - Implementation Plan'.

Part 1 provides a comprehensive overview of the core themes and strategies of the plan as a whole, part 2 identifies specific strategic transport improvements necessary in key areas throughout the county, and offers clarification on the various schemes in terms of the relevant promoting agency, likely funding sources and timescales for completion.

22. While the second part of the LTP comprised a short term plan for the period 2011/2012 to 2014/2015, it was acknowledged within the plan that *"..timescales and delivery mechanisms for these projects will vary and it may not be possible to achieve all of them within this plan period...".* As such, the plan is still considered relevant.

The key urban areas are:

- Ipswich;
- Lowestoft;
- Bury St Edmunds;
- Felixstowe;
- Haverhill;
- Stowmarket;
- Newmarket;
- Sudbury and Great Cornard;
- Beccles;
- Brandon; and
- Bungay.

The Lowestoft Plan is outlined within section 4 of the Suffolk LTP 2011-31 Part 2. Each plan has been devised to appropriately reflect the intrinsic differences between locations, however it is noted that the following three principles are relevant in all locations, and as such form the core of each individual urban plan.

The three principles are as follows:

- reducing the need for travel;
- making efficient use of transport networks; and
- improving infrastructure.

23. The individual plan for Lowestoft recognises that '*…economic recovery for Lowestoft is expected to focus on the energy sector and development of port related industries.'*

It continues:

'There are ambitious plans for further regeneration of Lowestoft that could lead to significant growth in housing and employment over the next 20 years. This will add to current levels of congestion if current travel trends continue.'

It further notes:

'A key characteristic of Lowestoft is that approximately 80% of people who work in the town also live there. Thus the majority of journeys to work are relatively short, with one third of journeys being less than about a mile and two thirds less than about three miles. This means that many regular journeys could be taken without the car.'

24. The individual plan for Lowestoft recognises that '*…economic recovery for Lowestoft is expected to focus on the energy sector and development of port related industries.'*

2.3 County Regional Policy (Waveney)

25. The Approach to Future Development in Waveney to 2021 Core Strategy Development Plan Document, adopted in January 2009, constitutes one of the principal documents prepared as part of The Waveney Local Development Framework which will replaces the adopted Waveney Local Plan (Nov 1996). The Approach to Future Development in Waveney to 2021 Core Strategy Development Plan Document sets out Waveney District Councils approach to future development within the region in strategic terms, identifying specific locations earmarked for development, and key factors to be taken into account when reviewing relevant proposals.

2.3.1 Sustainable Transport Policy

26. A key policy of the Approach to Future Development in Waveney to 2021 Core Strategy Development Plan Document is Policy CS15 - Sustainable Transport that identifies the necessary actions to be taken to achieve the overarching vision of the Waveney Local Development Framework. The strategy seeks to improve public accessibility throughout the region while simultaneously reducing the rate of increase in traffic volumes on the highways infrastructure.

'Policy CS15 - Sustainable Transport

The District Council will work with partners including Suffolk County Council, 1st East Urban Regeneration Company, Great Yarmouth Borough Council, public transport infrastructure providers and operators and developers to secure the necessary transport infrastructure and sustainable transport measures to facilitate the regeneration of Lowestoft and the market towns, support the local economy, improve access to services and facilities particularly in rural areas and minimise the impact of traffic on the environment.

Key infrastructure required includes:

a) Beccles southern relief road

b) Measures to reduce traffic impact in Bungay town centre

Schemes that will assist in achieving the strategy for the sub-region:

c) Lowestoft Access project that includes completion of the northern spine road, improvement to Denmark Road and a new road giving access to development sites south of Lake Lothing

d) A146 Barnby to Carlton Colville Bypass

e) East Suffolk Line - Beccles Rail Loop

f) Transport interchange at Lowestoft Station

g) Quality bus corridor from Lowestoft to Great Yarmouth

h) New cycle/pedestrian crossings of Lake Lothing to increase accessibility between development sites in Lowestoft and the town's employment sites, services and facilities'.

The District Council will continue to promote the creation of a third road crossing of Lake Lothing, as an integral part of dealing with transport problems and issues in Lowestoft and the sub-region. This proposal will be pursued through the Area Action Plan.

In addition, measures to make local improvements on the A12 Lowestoft to Ipswich will be pursued through lobbying to assist in securing economic benefits to Waveney. Other localised road, cycle and pedestrian improvements will also be progressed, including opportunities to deliver the proposed additions to the National Cycle Network.

Development proposals:

Development that could generate significant traffic, including goods vehicles, will only be acceptable in the most accessible locations where there are opportunities to reduce the need to travel.

Proposals for development will need to provide for travel by a choice of means of transport

other than the private car, in accordance with the following hierarchy:

- *walking*
- *cycling*

- *public transport*
- *taxis and car pooling*

Development proposals that will have significant transport implications will need to be accompanied by a transport assessment and travel plan showing how car based travel to the site can be minimised."

2.4 Travel Plan Guidance

2.4.1 The Essential Guide to Travel Planning (March 2008)

27. National guidance relating to the implementation of Travel Plans for businesses and organisations was published in the Department for Transport's 'The Essential Guide to Travel Planning (March 2008)'.

28. The Essential Guide to Travel Planning provides valuable information for employers on the design of workplace Travel Plans, how they can be applied to encourage employees to foster sustainable travel habits and reduce single occupancy car journeys by staff.

29. The guidance details realistic measures that can be put into practice as part of a Travel Plan and provides a number of case studies that demonstrate how good practice has been introduced at companies across the UK to tackle single occupancy private car use.

2.4.2 Suffolk – Creating the Greenest County

30. SCC works in partnership with 'Suffolk - Creating the Greenest County' (SCGC), an organisation with a committed aspiration to involve the whole County in an effort to enhance the natural and historic environment with a focus on climate change mitigation.

31. SCGC operates as an umbrella organisation for partnerships between many other organisations with various existing projects in Suffolk. While membership of the Partnership is diverse, all parties strive toward the common goal.

32. SCGC operates in line with three key themes:

- Climate Mitigation;
- Climate Adaptation; and
- Protecting and enhancing the natural environment.

33. The organisation seek to achieve the aims of these three themes via the following actions:

- Tackling climate change and its effects;
- Engaging with communities and businesses in Suffolk;
- Enhancing Suffolk's landscape, biodiversity and historic environment; and
- Promoting and supporting local food and drink production.

34. Four 'delivery partnerships' currently work together to deliver the above listed aims, each comprising a broad cross-section of national organisations. They are:

- Suffolk Biodiversity Partnership;
- Suffolk Climate Change Partnership;
- Suffolk Flood Risk Management Partnership / The Suffolk Coast Forum;
- Suffolk Waste Partnership

35. The SCGC Board provides the above listed partnerships with strategic support for their operations. Further information regarding SCGC's partners, affiliates, and operations within Suffolk can be found on their official website, via the following link: http://www.greensuffolk.org/. Available via the website are links to several documents published by Suffolk County Council (SCC) which provide guidance regarding what is required by SCC to be included within travel plans.

36. Separate guidance is available for Residential Developments, School Developments, and Commercial/Workplace Developments along with a Section 106 Developer Guidance document.

37. The document 'Suffolk Workplace Travel Plan Components' obtained from the website, has been used in the preparation of this Interim Travel Plan. It comprises a comprehensive list of travel plan components for commercial/workplace developments as required by SCC.

2.5 Policy Summary & Conclusion

38. National and local transport planning policy supports the increased use of sustainable transport as a means to achieving a reduction in vehicular traffic congestion and environmental impact.

39. The location of the Lowestoft Port was a key factor in the choice of location for the facilities. The site is well placed within an established area which will be fully integrated in terms of sustainable transport infrastructure comprising pedestrian, cycle and public transport facilities, and there are many hotels and other rental accommodation available to non-local staff.

40. This Lowestoft PTP has been produced in accordance with all of the identified policy and with reference to the identified guidance.

3 Proposed Construction Infrastructure

3.1 Support Bases

41. In order to optimise the logistics and offshore installation for the construction of the EA ONE wind farm, EAOL will secure and set-up (partially) the following bases:

- Construction Monitoring and Management Port (CMMP);
- Construction Port (CP); and a
- Wind Turbine Generator (WTG) Base Port.

42. It has been confirmed that Lowestoft will be the location of the CMMP, Great Yarmouth will be the location of the WTG base port.

3.2 Construction Monitoring and Management Port (CMMP)

43. Port facilities and associated infrastructure for activities such as transfer of personnel and minor tools and supplies to the construction site will be located at the CMMP.

44. The CMMP will be used by the Employer for project management, marine coordination, weather monitoring and forecasting, etc. and will be made available to the Main Contractors/Suppliers to set-up a commissioning base and office for the construction management teams.

45. The final location of the CMMP has been confirmed as the Outer Harbour of Lowestoft Port at Hamilton Docks. The CMMP will comprise the following facilities at Table 2.1:

Table 3.1 CMMP Facilities

Facility	Size
Offices	50 desks
Change house	Dimensioned for 70 uses per day.
Parking	Up to 80 parking spaces
Warehouse	1,200sqm
Land areas (for laydown and temporary facilities)	1,500sqm
Berths	6 berths for Crew Transfer Vessels (typical 12 pax CTV's, LOA ~ 24 m), or other vessels of similar dimensions. The berths will be located in the proximity of the land areas assigned to EA One
Quay side	Quay side adjacent to the berths

46. A draft concept layout of the site provides 8-10 'priority' car parking spaces immediately beside the O&M building. These will be for visitors and disabled staff/visitor use.

47. Within the draft Lease for the port facilities, it states that the CMMP will have rights to 80 parking spaces off the premises within the Port Estate which must be within 400m of the main (Hamilton Road) entrance to the premises. Essentially this means the car park right inside the main entrance to the Port Estate, or somewhere closer to the premises.

48. A secure cycle store is also included within the draft concept plans.

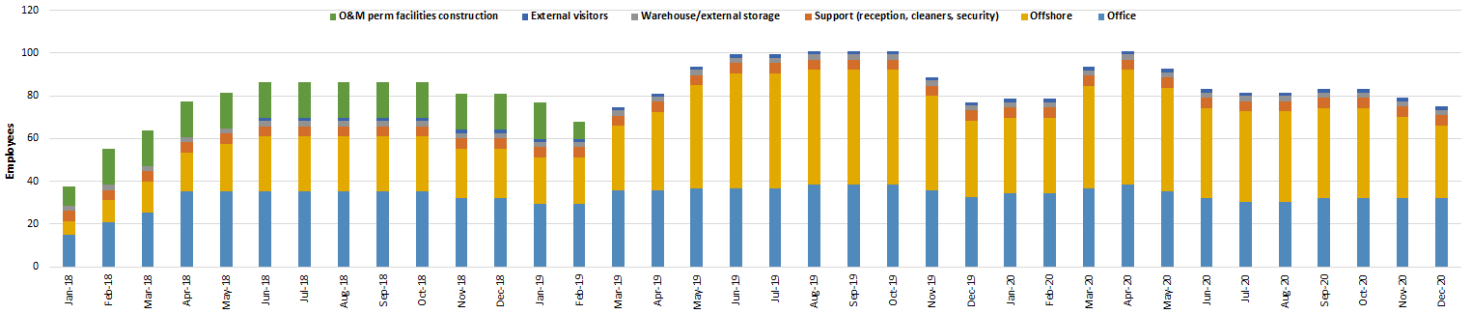
4 Staff Forecast

4.1 Staff Forecast

49. It should be noted that as the PTP is being produced prior to much of the construction methodology being finalised and it is anticipated that the programme may well be altered. How the works progress in combination with one another will determine the peaks in travel demand to the port. It is anticipated that as the programme and associated shift patterns become finalised the PTP will be developed and provided to Suffolk County Council, as Highways, and Waveney District Council as the Local Planning Authority.

50. January 2018 is likely to be when office personnel, support staff (reception/cleaners, security), warehouse/external storage staff and offshore personnel will commence work at Lowestoft, along with visitors. Figure 1 provides a graph which demonstrates the currently anticipated staff attendance profile during construction and through to the Operation and Maintenance (O&M) Phase. This covers the peak of staff activity.

Figure 1 Staff Forecast Profile



51. The above profile shows that the site works would peak during the summer of 2019.

52. Whilst daily numbers will vary dependant on the stage of the project, Table 4.1 provides a staff forecast for a typical day's activity when the site is in full operation.

Table 4.1 Staff Forecast – Typical Day

Personnel Class	Typical Day/Average Estimate
O&M Facility Construction	8
Offshore personnel: 3 CTVs depart @ 75% capacity = 3 X 9 people =	27
Offshore personnel already offshore (same again)	27
Offices: 50 desks, 50% occupied	25
Warehouse	2
Ancillary personnel	4
Visitors	2
Total staff	**95**

53. The above summary indicates that the site would on an average accommodate 95 staff between January 2018 and December 2020.

54. The following Table 4.2 provides a staff forecast for a busy day at the peak of activities.

Table 4.2 Staff Forecast – Busy Day

Personnel Class	Typical Day/Average Estimate
O&M facility construction	15
Offshore personnel: 6 CTVs depart @ 75% capacity = 3 X 9 people =	54
Offshore personnel already offshore (from a typical day)	27
Offices: 50 desks, 50% occupied	38
Warehouse	2
Ancillary personnel	4
Visitors	2
Total staff	**142**

55. The above summary indicates that the site could generate up to 142 staff during a busy day, which is likely to be during the summer of 2019.

56. The above staff forecasts are best possible predictions at the time of the PTP production. These figures will be revised as further information becomes available on the anticipated staff numbers.

4.2 Likely Staff Transport Patterns

57. Staffing patterns for the CMMP are unknown at this time; this will be confirmed closer to the start date and incorporated into a update of the Lowestoft PTP. However, typical staff scenarios have been assumed at this stage in order to identify areas that the PTP can target.

4.2.1 Office Personnel

58. Many office staff working on the project will be based away from Lowestoft (e.g. in London, Glasgow) and will be hot-desking in Lowestoft for a day to a week at a time. Similar to offshore personnel, some office employees will likely travel by plane or train and will then be within walking distance of the port or use a taxi rather than hire a car.

4.2.2 Offshore Personnel

59. Offshore workers are likely to be largely specialist in nature and employed on a contract basis.

60. It is anticipated that staff will stay offshore for an average of 2 days. This is because there are likely to be a large number of day shifts which will balance out a minority of longer offshore shifts.

61. Personnel will work 10-12 hour shifts typically, so their arrival and departures hours will not coincide with rush hour peaks. The shifts will be governed in part by the tides and weather conditions.

4.2.3 Operation and Maintenance (O&M) Facilities Construction Workers

62. The onshore O&M facilities construction workers are unlikely to work weekends or nights. Equally very few staff will be in the O&M building at night.

63. It is anticipated that onshore O&M facilities construction workers will travel in pairs (at least).

4.2.4 Staff Origin Assumptions

64. The following provides assumptions on where staff members are likely to be based/staying during their employment at Lowestoft Port. These assumptions are based on previous experience with offshore windfarm sites.

Table 4.3 Staff Assumptions

Personnel Class	Assumption
Office	50% based locally/50% non-local staying in hotels/other accommodation. Visiting office personnel are likely to visit for short time periods and so stay in hotels in Lowestoft.
Support (reception/cleaners, security)	100% based locally.
Warehouse/external storage	100% based locally.
Offshore	25% based locally/75% non-local staying in hotels/other accommodation.
O&M permanent facilities construction	50% based locally/50% non-local staying in hotels/other accommodation.

65. On the basis of the above assumptions Table 4.4 quantifies the potential number of local staff and other staff staying in hotels or other accommodation, based on a typical day (Table 4.1)

Table 4.4 Staff Origin Forecast

Personnel Class	Local	Not Local, staying in hotels/other accommodation
Office	12	13
Support (reception/cleaners, security)	6	0
Warehouse/external storage	2	0
Offshore	13	41
O&M permanent facilities construction	4	4
Total	**37 (39%)**	**58 (61%)**

66. The above forecast indicates that the PTP will be required to target a combination of locally sourced staff (39%) and staff staying in local accommodation (61%).

5 Site Location and Highway Conditions

5.1 Site Location

67. Access to the port is gained directly from the A12; a principal road which routes through Lowestoft linking with the strategic road network via the A14 and M11 Motorway.

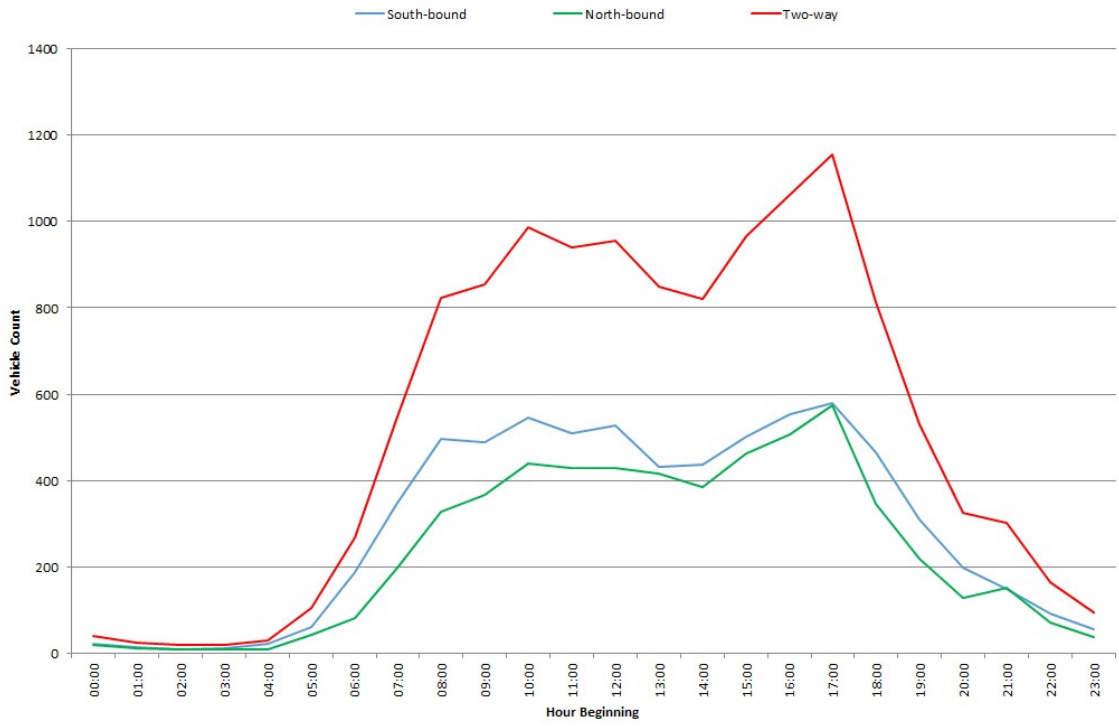
68. The harbour is made up of two sections divided by a bascule bridge. The inner harbour is formed by Lake Lothing whilst the outer harbour is constructed from breakwaters. A Site Location Plan is included at Appendix 1. The location of the facility is within the outer harbour.

5.2 Existing Traffic Conditions

69. The existing traffic conditions have been reviewed in order to determine the weekday peak periods on the local highway network. Traffic data were provided to SLR by the Highway Management Team at SCC comprising data collected by a permanent traffic count point situated on the A12 in the vicinity of the application site. Count Point 97 is positioned along the carriageway of Artillery Way, approximately 80 metres south of the roundabout junction between the A12 Artillery Way and Jubilee Way and therefore provides an accurate indication of traffic levels in the proximity of the site.

70. A summary is provided at Figure 2 in the form of a graph that provides northbound, southbound and a two-way traffic flow.

Figure 2 Local Network Traffic Profile



71. The average weekday traffic profile shows two defined peak periods occurring during the hour beginning at 10:00 and 17:00hrs.

72. After the 10:00hrs peak at 987 movements, volumes drop by approximately 20% to 821 movements over the course of four hours. Post 14:00hrs volumes increase steadily to the PM peak of 1154 movements at 17:00hrs, after which they decline steadily until 23:00hrs.

5.2.1 Other

73. It was highlighted during discussions with SCC that there are currently a number of cars that park on-street in and around the port area which the Travel Plan should be aware of and seek to avoid exacerbating.

6 Sustainable Transport Audit

74. This section considers the existing travel opportunities for those construction workers commuting to the port by means other than the private car. Each mode of transport has been assessed in terms of the facility location and its surrounding transport conditions, with an appraisal of the suitability of each mode.

6.1 Pedestrian Infrastructure

75. The pedestrian assessment has considered the accessibility of the port to local amenities and facilities by foot and the quality of the surrounding pedestrian environment.

76. Pedestrian access will be gained via the existing port access off Hamilton Road.

77. Pedestrian amenity in the immediate vicinity of the port access is of a high standard. Footways are present on both sides of the carriageway and street lighting is installed along the northern footway.

78. Pedestrian crossing facilities exist at several points along Waveney Road/Battery Green Road, and provision of street lighting is abundant, affording pedestrians a high degree of safety when travelling within the area at any time of day. Figure 3 provides a northbound view of A12 Waveney Road/Battery Green Road at the signalised port access junction to the south of Hamilton Road which would be on route to the train station.

Figure 3 Photograph of the A12 Waveney Road/Battery Green Road



79. The 'Manual for Streets[1]' notes at Section 4.4.1 that:

"walkable neighbourhoods are typically characterised by having a range of facilities within 10 minutes' (up to 800m) walking distance of residential areas".

This is not an upper limit and:

"walking offers the greatest potential to replace short car trips, particularly those under 2km".

[1] Produced for the Department for Transport and Communities & Local Government, 2007

80. Walk time isochrones which detail the areas covered within 400 metres, 800 metres, 1,200 metres, 1,600 metres and 2km (25 minutes) of the site are shown in Appendix 2 of this PTP.

81. The Pedestrian Isochrone Plan shows that a large area of Lowestoft can be reached on foot within a 25 minute walk from the port. Onshore port based staff and/or those daily commuting who live or stay within Lowestoft have the opportunity to walk to work should they not have to bring any tools or materials on a daily basis.

82. Pedestrian infrastructure linkage exists between the port access and both the bus and train stations, which are reachable from the port access on foot in less than ten and five minutes' walk respectively. A Pedestrian Amenity Plan is included at Appendix 3 which shows the pedestrian connectivity between the Port and the bus and train stations. Levels of service for both bus and rail are considered in detail in subsequent sections of this PTP.

83. There are various useful amenities which are located within walking distance of the port access, including food outlets, convenience stores and cash points, which all could reduce the need for employees to use their car during breaks.

6.1 Cycle Infrastructure

84. Lowestoft benefits from a good level of cycle infrastructure, incorporating National Cycle Network (NCN) Route 517. The route begins at a junction with Regional Routes 30 & 31 in the south of Beccles, a small town approximately 13km due west of Lowestoft.

85. NCN 517 travels east through southern Beccles and Worlingham before joining with the A146. The route separates from the A146 in the vicinity of North Cove, although continuing in the same general orientation, re-joining for a short distance, then departing completely, following New Road to Muttfordwood Lane which takes the route into the south of Lowestoft.

86. Routing through the entirety of Lowestoft from south to north, NCN 517 passes within immediate proximity of both Lowestoft Port and Rail Station. Continuing through Lowestoft to the northern, the NCN 517 departs the town at Corton, a suburb of Lowestoft, and continues north for approximately 10km to its terminus towards the north of Great Yarmouth.

87. NCN Route 1 is reachable from Lowestoft via NCN 517 & Regional Route 30. NCN Route 1 comprises a long distance cycle way routing both on and off-road between Dover and the Shetland Islands via the east coast. Numerous unclassified cycle ways cross Lowestoft, inter connecting with NCN 517, and provide substantial coverage of the area in terms of bespoke and shared cycle amenity.

88. Additionally, there is a cycle hire scheme based at Lowestoft Train Station operated by 'Bike and Go' (www.bikeandgo.co.uk). The scheme costs £4 per day. The Travel Plan Coordinator (TPC) may seek to arrange a discount should it be expected that the demand would be there.

89. For the purposes of local cycle accessibility, a cycle time of 20 minutes which equates to 5km at an average speed of 15km/h can been assumed. A Cycle Access Plan is provided within Appendix 4 of this PTP depicting the local cycle catchment within a 5km radius of the port access, and the location of the cycle route network.

90. The Cycle Access Plan indicates that within a 5km cycle of the port, the majority of Lowestoft can be reached. Furthermore, keen cyclists in employment at the port may be considered more likely to travel greater distances as part of their daily commute.

91. To encourage cycling, the project would seek to promote cycle use by providing secure, covered storage units/cycle sheds for employees.

92. On the basis of the above audit, it is considered that cycle amenity in the vicinity of the port is of a high standard and more than sufficient to support any usage potentially generated by the construction phase of the EA ONE project.

6.2 Public Transport Connectivity

93. Public transport accessibility is measured with reference to the number and frequency of public services available within easy walking distance of the port.

6.2.1 Bus

94. Lowestoft is served by numerous bus services, all of which operate within the vicinity of the port being within close proximity of the town centre.

95. The bus stops within closest proximity of the port access are those at the Lowestoft Bus Station.

96. The nearest standalone bus stop is that designated as "Opposite Railway Station" and identified by its Stop ID *sufjtatp*, It serves some bus routes which are in addition to those available from the bus station. It is located approximately 500 metres west of the port access, which equates to a walk time of just over 5 minutes.

97. The following table summarises the services in terms of their coverage and availability from the two locations:

Table 3.1 Local Bus Services

Service Number	Route	Available From	
		Opp. Rail Station	Lowestoft Bus Station
1/1A	Martham - Lowestoft	X	O
61	Southwold - Norwich	O	X
99	Lowestoft - Kessingland	O	O
101	Gunton - Hollow Grove	O	X
103	Lowestoft - Carlton Colville	O	O
106	Lowestoft - Burnt Hill	X	O
X1	Great Yarmouth - Lowestoft	X	O
X2/X22	Norwich - Lowestoft	O	O

98. The bus services detailed within table 3.1 commence in the first instance at 06:10hrs, and operate throughout the day Monday to Friday, with an approximate frequency of 4-5 journeys per hour, with services ceasing at 24:00hrs.

99. A similar level of service is available across the weekend, commencing at 07:53hrs with an approximate frequency of 3-4 journeys per hour, with services ceasing at 24:00hrs.

100. Particularly useful among the above listed services are the X-prefixed services, providing comprehensive links to both Norwich and Great Yarmouth from the early hours of the morning until the late evening seven days per week.

101. The X1 operates between Great Yarmouth and Lowestoft with a weekday frequency of 30 minutes from 07:26 until 09:10hrs, with a 15-20 minute frequency thereafter until 18:40hrs. The return journey departs from Lowestoft in the first instance at 05:45hrs. Departures then occur at 06:47, 07:05, 07:40, and 08:20hrs. From 09:00hrs, departures occur every 30 minutes until 18:00hrs.

102. The X1 operates on Saturdays between Great Yarmouth and Lowestoft with a frequency of 30 minutes from 07:30 until 10:00hrs, with a 15-20 minute frequency thereafter until 18:50hrs. The return journey departs from Lowestoft in the first instance at 05:50hrs. Departures then occur at 06:45, 07:05, and 07:40 hrs. From 08:00hrs, departures occur every 30 minutes until 18:00hrs.

103. The X1 operates on Sundays between Great Yarmouth and Lowestoft with a frequency of 60 minutes from 08:50 until 17:50hrs. The return journey departs from Lowestoft in the first instance at 08:46hrs. Departures then occur every 60 minutes until 17:46hrs.

104. The X2/22 operates between Norwich and Lowestoft departing weekdays in the first instance at 07:55hrs. Departures then occur at 08:20 and 08:30hrs with a 15 minute frequency thereafter until 15:00hrs. Thereafter, departures occur at 15 minute

intervals between 15:20 and 18:05hrs. The remaining departures leave at 18:30, 19:00, 19:30, 20:30, and 22:50hrs. The return journey departs from Lowestoft in the first instance at 06:00hrs. Departures then occur at 06:20, 06:40, 07:00, 07:30 and 08:10hrs. From 09:00hrs, departures occur every 30 minutes until 16:00hrs. The remaining departures leave at 16:35, 17:25, 18:00, 19:00, 21:25, and 23:15hrs.

105. The X2/22 operates on Saturdays between Norwich and Lowestoft with a frequency of 30 minutes from 08:00 until 10:00hrs, and with a 15-20 minute frequency thereafter until 18:05hrs. The remaining departures leave at 18:30, 19:00, 19:30, 20:30, 21:55, and 22:50hrs. The return journey departs from Lowestoft in the first instance at 06:30hrs. Departures then occur at 07:30, and 08:20. From 09:00hrs, departures occur every 30 minutes until 16:00hrs.

106. The X2/22 operates on Sundays between Norwich and Lowestoft with a frequency of 60 minutes from 09:50 until 17:50hrs. The return journey departs from Lowestoft in the first instance at 08:20hrs. Departures then occur every 60 minutes until 17:20hrs.

107. The bus services as detailed above provide a comprehensive and flexible daily transport option between Norwich and Great Yarmouth which constitute the two largest settlements in proximity of Lowestoft.

6.2.2 Rail

108. Lowestoft Rail Station is in close proximity of the port access, with a walk time under five minutes. The station, managed by Abellio Greater Anglia, offers two main services:

- Lowestoft and Felixstowe to Ipswich; and
- Norwich to Great Yarmouth and Lowestoft.

109. The station provides frequent services on the above routes seven days per week. It would be reasonable to expect commuters from beyond the extents of Lowestoft to take advantage of the convenience of rail travel over other forms for transport to and from the vicinity of the port given the close proximity of the station.

6.3 Identified Sustainable Transport Issues

110. No major barriers/issues have been identified within relevant proximity of the port which may adversely affect construction workers access to sustainable transport modes.

6.4 Transport Infrastructure Improvements

111. No imminent transport infrastructure improvements have been identified which will affect the baseline transport conditions.

6.1 Sustainable Transport Audit Summary

112. It is considered that the port is ideally located to utilise the rail infrastructure in the vicinity of Lowestoft. With the construction workforce likely to be of a specialist nature on a contract basis, and as such originating from outside the area, the convenient location of Lowestoft Rail Station relative to the site access promotes itself as the most versatile sustainable transport option.

113. As previously stated, it is unlikely that construction workers will be sourced from local employment hubs, owing to the specialist nature of the construction. However, there does exist the potential for construction workers to secure temporary accommodation within Lowestoft for the duration of the construction phase, and as such cycle links in the vicinity of the port have been thoroughly assessed. It is considered that cycle links within Lowestoft are of a high standard with NCN Route 517 and various tributary cycle routes providing largely traffic free cycling across the region.

114. Pedestrian amenity has also been assessed, mainly in terms of accessing other sustainable transport options, however there does exist the potential for construction workers to secure temporary accommodation within Lowestoft for the duration of the construction phase. Owing to the nature of the area as a tourist destination, temporary accommodation is prolific in the vicinity and walk times to the site access are favourable with a high level of pedestrian amenity in the area.

7 Objectives

7.1 Purpose of the Lowestoft Port Travel Plan

115. The purpose of the Lowestoft PTP is to set out a strategy for reducing construction workers' dependence on travel by private car, thereby reflecting current Government policy in respect of transport which aims to reduce private car usage in favour of more sustainable modes of travel.

7.2 Lowestoft Port Travel Plan Aims

116. In addition to reducing the environmental impact of the construction phase, the Lowestoft PTP will seek to minimise any traffic impact and congestion in the proximity of the port and ensure that the port car park does not exceed its capacity and impact any local on-street parking facilities.

117. The primary aims are:

- to reduce the number of single occupancy cars, associated with the project, arriving at the port;
- to increase project staff awareness of the advantages and potential for travel by more environmentally-friendly modes; and
- to introduce a package of physical and management measures that will assist travel by modes other than the private car.

8 Management Strategy

8.1 Administration of the Travel Plan

118. Ultimately EAOL would be responsible for the project and implementation of the Lowestoft PTP, providing an appropriate budget to operate effectively.

8.2 Site Manager

119. The Site Manager would be responsible for appointing a suitable member of staff as a TPC and ensuring that the PTP is implemented. The role of the TPC is detailed within Section 8.3 below.

120. The Site Manager would be responsible for the following:

- providing the management support required to make strategic decisions;
- liaising with the TPC and review and revise the PTP on a regular basis;
- securing any necessary funding required to operate and evolve the PTP; and
- keeping key decision makers informed of progress with the PTP.

8.3 Travel Plan Coordinator

121. A TPC will be appointed to implement and administer the Travel Plan 2 months prior to the commencement of construction, in line with SCC requests.

122. The position would be assumed by a senior member of staff with the ability to influence site management practices, and equally, they must have the time to dedicate to the role.

123. The TPC will be responsible for:

- organising the production and distribution of the survey, and collection and compilation of the results;
- updating of the baseline information within the PTP with a view to producing the Full Travel Plan in a timely fashion;
- day-to-day administration of the scheme;
- consultation and promotion of the scheme;
- implementation of the schemes measures;
- setting targets;
- on-going monitoring of the scheme including annual travel surveys; and
- an annual review.

124. The TPC will be responsible for setting up and maintaining the staff travel database and conducting the annual review. Any staff new to the site will be added into the database on commencement of employment and staff leaving employment will be removed.

125. In the interests of confidentiality, the TPC alone will hold the database and be responsible for the release of information. Information contained within the database will be released to the Suffolk County Council on request but in the interests of security, only postcode details may be supplied.

8.4 Suffolk County Council

126. The contact details for the SCC Travel Plan Officer in position at the time of writing this PTP are as follows:

Chris Ward Telephone: 01473 264970

Email: chris.ward@suffolk.gov.uk

127. Chris Ward attended the scoping meeting and has been consulted during the PTP process.

8.5 Information and Awareness

128. The success of the Lowestoft PTP will be dependent on the forthright contribution of relevant information from employees with regards to their travel habits and preferences.

129. The TPC will be the primary point of contact for those who require information regarding the PTP. Each member of staff can liaise directly with the TPC on a one-to-one basis in order discuss their specific travel requirements and understand how they can travel to/from work in a sustainable manner. However, it should be also clearly communicated that it is the responsibility of the TPC to provide regular and relevant feedback regarding the PTP, and to ensure that the PTP is flexible enough to accommodate such feedback.

130. To ensure lines of communication are maintained during the lifetime of the PTP, an information board will be provided within the offices, including up to date contact details for the site TPC. Throughout the life of the PTP its measures and actions will form part of a marketing strategy based around the display of posters, leaflets and timetables.

131. Details concerning the frequency, venue, and date of PTP meetings, both before and after commencement of construction, shall be included within the PTP and/or otherwise made available to all concerned at the first appropriate juncture.

132. The TPC will have responsibility for all liaison with outside bodies including the planning and highway authorities and those local authority officers with responsibility for cycling and public transport.

8.6 Promotion and Marketing

133. All port based staff will be made aware of the PTP on the commencement of their employment. Details of the scheme, its objectives in enhancing the environment and the role of individuals in achieving its objectives will be explained.

134. Information and promotional material will be available in a range of formats and will be issued to each employee and displayed prominently in staff rest areas. Employees who wish to raise specific transport-related matters will be invited to discuss them with the appropriate nominated person. Promotional material will also be made available to visitors.

135. A Welcome Pack will be produced containing details of the measures and initiatives including any staff shuttle bus arrangements and up-to-date public transport information. It is the TPC's responsibility to keep the welcome pack up to date, and even evolve the content incorporating any new elements that may benefit the overall objectives of the PTP reacting to changes to the transport conditions. Welcome Packs will be provided to each employee prior to their start date on site, it is envisaged that the pack would be given alongside typical introductory materials.

8.7 Updating

The PTP will evolve over time. Although fundamental objectives will not change, over time it may be possible to define and alter specific targets. The on-going monitoring programme, and in particular the annual review, will provide updated information that will allow the scheme to be revised, refined and improved.

9 Measures

9.1 General

136. Scheme Measures comprise a series of initiatives designed with reference to the baseline data and are intended to encourage modal shift within the commuting habits of the constructing workforce, primarily away from single occupancy car use, and car use in general.

9.2 Project Specific Measures

137. The staff forecast indicates at Table 4.4 that based on a typical day's operation and staff origin assumptions, the Travel Plan would typically be targeting approximately 37 locally based staff and 58 staff who live elsewhere but are staying in hotels or other accommodation.

138. Additionally, the review of traffic survey data has demonstrated that the average weekday traffic profile on the local highway network has two defined peak periods occurring during the hour beginning at 10:00 and 17:00hrs, which could be taken into consideration whilst formulating site specific measures and initiatives.

139. Based on the nature of the scheme the measures described in 9.2.1 - 9.2.4 will be considered.

9.2.1 Private Staff Transport Service

140. All of the necessary on-shore specialist staff are unlikely to live within the local area. These construction phase staff will stay during the week within rented or hotel accommodation in and around Lowestoft.

141. A minibus service will be considered, if there is sufficient demand, which provides a pickup round 'on request' from local hotels and other accommodation where staff are staying. The minibus would also be used pick up staff from agreed car parking arrangements outside of Lowestoft.

9.2.2 Car Parking Control

142. Car parking demand would be between generated by the following different user groups, which roughly split as:

- onshore personnel full time in Lowestoft;
- visiting onshore personnel not based in Lowestoft full time;
- offshore personnel;
- contractors building the permanent onshore O&M facilities; and
- external visitors/guests.

143. A draft concept layout of the site provides 8-10 'priority' car parking spaces; these will be for visitors and disabled staff/visitor use. Within the draft Lease for the port facilities, it states that the CMMP will have rights to 80 parking spaces off the premises within the Port Estate which must be within 400m of the main (Hamilton Road) entrance to the premises.

144. The CMMP car parking spaces will be controlled in order to manage and promote sustainable transport use.

145. Car parking could be allocated to the staff that need them most, such as construction staff who have no choice but to travel by car as they are travelling from a long distance and/or have materials/tools that need bringing to the site.

146. Parking control will require consideration during each phase. The number of spaces provided as part of the lease is clearly well in excess of the likely demand that could be generated during many stages of the construction process.

147. It is expected that car parking would be limited for offshore personnel, as they are likely to be at sea for days at a time, and non-local staff as they will be staying in local accommodation within walking/cycling distance or could be picked up by a staff minibus.

9.2.3 Welcome Packs

148. A Welcome Pack will be produced and provided to each member of construction workforce. The pack would accompany typical introductory materials prior to the commencement of an employment period.

149. The pack will introduce the PTP and include information relating to the implemented measures and initiatives. Information will include details of sustainable transport provision and promotional material highlighting the benefits to the environment and personal health and wellbeing. The pack will also detail all site specific transport arrangements and include a survey form which should be completed in order to create a confidential PTP database.

150. It is the TPC's responsibility to keep the welcome pack up to date and evolve the content to keep it relevant incorporating any new elements that may benefit the overall objectives of the PTP, reacting to changes to the transport conditions.

151. SCC has advised that they would want to review the Welcome Pack a minimum of 6 months in advance of distribution in order to ensure that the latest information is included and it meets their requirements.

9.2.4 PTP Noticeboard

152. A PTP noticeboard will be provided within the communal area of the CMMP office. This may be within the foyer/reception or within the break out area. It will provide a concise summary of the information contained within the PTP Welcome Pack providing sustainable transport infrastructure.

153. The noticeboards will provide contact details for the TPC and any upcoming promotional events. They will be kept up to date and relevant by the TPC.

9.3 Pedestrian Measures

154. The measures identified in 9.3.1 - 9.3.3 will be considered in order to encourage staff to travel on foot:

9.3.1 Pedestrian Route Plans

155. Clear, up to date route maps will be provided to each employee. The maps will show pedestrian friendly routes to residential areas, hotels and public transport hubs. The maps will be included within the staff welcome packs and displayed on the PTP noticeboard.

9.3.2 The Environment, Personal Health and Wellbeing

156. Promotional material highlighting the benefits of walking to work will be provided to all staff. The promotional material will be included within the staff welcome packs and displayed on the PTP noticeboard.

9.3.3 Other Pedestrian Measures

157. The following measures will be considered in order to encourage staff to walk to work where possible:

- provision of free personal alarms and umbrella (on request) for walkers; and
- promotional events to encourage behaviour change such as Walk to Work Week.

9.4 Cycle Measures

158. The measures identified in 9.4.1 - 9.4.4 will be considered in order to encourage staff to travel by cycle:

9.4.1 Cycle Route Plans

159. Clear, up to date route maps will be provided to each employee. The maps will show cycle friendly routes to residential areas, hotels and public transport hubs. The maps will be included within the staff welcome packs and displayed on the PTP noticeboard.

9.4.2 Cycle Parking

160. Easily located, secure and covered cycle parking will be provided. All staff will be made aware of this provision.

9.4.3 The Environment, Personal Health and Wellbeing

161. Promotional material highlighting the benefits of cycling to work will be provided to all staff. The promotional material will be included within the staff welcome packs and displayed on the PTP noticeboard.

9.4.4 Other Cycle Measures

162. The following measures will be considered in order to encourage cycle use:

- Provision of a pool of bikes which would be available for workers to use travelling to and from the port;
- showers, lockers and clothes drying facilities for walkers and cyclists;
- provision of free cycle safety equipment for employees, such as high-vis vests and cycle lights;
- interest-free loans (Cycle to Work Scheme) or vouchers to purchase bikes, or other cycle equipment;
- negotiated discounts with cycle retailers for employees;
- Bicycle Users Group (BUG), or cycle training schemes for non-confident cyclists; and
- promotional Events to encourage behaviour change, such as Bike Week.

9.5 Public Transport Measures

163. The CMMP has excellent links with a good range of public transport services. The measures identified in 9.5.1 - 9.5.2 will be considered in order to further encourage staff to travel by public transport:

9.5.1 Bus Route Information

164. The PTP will provide up to date public transport information, including route maps, travel costs and journey times. Maps and timetable information will be included within the staff welcome packs and displayed on the PTP noticeboard.

9.5.2 Other Public Transport Measures

165. The following measures will considered in order to encourage public transport use:

- negotiated discounts for employees from bus or rail companies;
- interest-free loans to help employees purchase public transport season tickets; and
- vouchers to purchase public transport season tickets, or taster tickets;

9.6 Car Share

166. Car sharing has the potential to significantly reduce the number of single occupancy car trips to the site. 62% of the specialist construction workforce are forecast to be staying in hotels and it is expected that this will be in gangs and sharing a lift to the port is an obvious benefit.

167. A travel survey will find compatible employees and identify car sharing opportunities and the PTP will consider providing dedicated car parking bays for car sharers, which would not be available to singular occupied vehicles.

168. In order to reassure staff, the TPC will provide a guaranteed ride home in emergency situations or when a car share arrangement falls through. Staff will be made aware of the Suffolk Car Share scheme (www.suffolkcarshare.com).

169. Information on the car sharing scheme will be included within the staff welcome packs and displayed on the PTP noticeboard.

170. Where possible, consideration of shift start and finish times will take into account traffic peak times, these may be made flexible in order to allow employees using all modes of transport to avoid busy periods on the road.

10Targets

10.1 General

171. To meet the objectives of the PTP, set out in Section 7, it is essential that a series of targets are set. The targets must relate directly to the objectives and be set with reference to the baseline data collected pertaining to sustainable transport. The adoption of a target-based approach to Travel Planning facilitates effective monitoring and review as the PTP progresses, and serves to focus the efforts of those individuals responsible for its implementation.

10.2 SMART Targets

172. Targets should be Site-specific, Measurable, Achievable, Realistic and Time-related (SMART). They may be phased year on year, and fall into two categories: 'Action Targets' e.g. appoint a travel co-ordinator by (date); and/or 'Aim Targets', e.g. achieve (percentage) reduction of single car use by (date).

10.2.1.1 Action Targets

173. Action Targets considered within the PTP at Section 12 of this PTP.

10.2.1.2 Aim Targets

174. Examples of SMART Aim Targets relative to the EA ONE project include:

- Modal Shift Targets, measured annually, such as increase the level of public transport users by 20%; and
- Reduction of Single Occupancy Car Journeys by 15%, this figure is taken from the DfT document "The Essential Guide to Travel Planning'.

10.3 PTP Target

175. SCC has advised that they would expect the PTP to achieve a 15% reduction in single occupancy vehicles over a 5 year period.

176. Other PTP targets aimed at achieving the overall 15% reduction in single occupancy vehicles will be discussed and agreed with Suffolk County Council following the appointment of the successful construction contractors and confirmation of the construction methodology details.

177. Periodic revision of objectives/targets will be undertaken throughout the life of the PTP in order to keep them relevant, realistic and to further promote modal shift toward sustainable transportation.

11 Monitoring

11.1 General

178. A programme of monitoring and review will be undertaken to generate information by which the success of the PTP can be evaluated. Monitoring and review will be the responsibility of the TPC.

11.2 Bi-annual Review

179. Every 6 months, the TPC will undertake a comprehensive review of the performance of the PTP. The objective will be to measure the success of the scheme against its targets, and to identify the potential for refinements. It will also allow for the update of staffing numbers and the likely shift patterns, tides and location of staff.

180. The TPC will compile a report outlining the results, together with the results of ongoing monitoring throughout the preceding period. The report will comment on the overall success of the Travel Plan and will set out initiatives for the following 6 months.

181. The overall aim of the report will be to ensure that all employees are informed of progress and remain engaged with the PTP and its intent. This report will be filed for record and a copy made available to Suffolk County Council within 3 months of survey completion.

11.2.1.1 Staff Surveys

182. The major element of the review will involve the issuing of a staff travel survey. The initial PTP Welcome Packs will contain a Travel Survey which will require to be filled in and returned to the TPC.

183. Thereafter a survey will be undertaken in advance of each review every 6 months. The review should take place at the same times during each year during a neutral month in order to avoid any seasonal variations. The surveys should remain consistent to facilitate accurate comparisons and clear conclusions.

184. The results of the surveys will provide up-to-date modal-split information for comparison with the original data set compiled at the introduction of the PTP.

185. In line with SCC's preferred methods, the travel surveys would be undertaken using the online software 'Smart Survey' (www.smartsurvey.co.uk) which enables easy collation, analysis and summary.

11.3 Other Monitoring Methods

186. In addition to the conducting of regular surveys several other methods may be employed to assess the efficacy of the PTP. Examples may include physically monitoring the usage of cycle stands or observing the capacity of the car park.

11.4 Finance Plan

187. The PTP costs will be covered by EAOL throughout the construction phase.

11.5 Enforcement

188. National Travel Plan Guidance, *'Good Practice Guidelines: Delivering Travel Plans through the Planning Process'* highlights that the implementation of sanctions and penalties are encouraged and the onus is placed heavily on the developer/landowner to ensure that the needs of the Travel Plan are met and that it is implemented effectively throughout its lifetime.

189. SCC will agree details of a mechanism to monitor non-compliance with the Travel Plan and to take enforcement action in accordance with the corrective process outlined below.

190. A three stage correction process is proposed:

- Stage one – a potential breach is highlighted, SCC request that the TPC reviews the data and concerns. The TPC and SCC will then agree the extent of the breach and, if it is material, agree action. This is likely to be a contractor/employee warning at this stage;
- Stage two – If a further material breach is identified the contractor/employee will be given a further warning and required to produce an action plan to outline how the issue will be rectified and any additional mitigation measures proposed; and
- Stage three – Should further breaches still occur the contractor will be required to remove the offender from site.

12 Action Plan

12.1 General

191. An Action Plan has been devised in order to provide an indication of the likely direction of the PTP. Table 10.1 provides a Preliminary Action Plan.

Table 10.1 Preliminary Action Plan

Action	Comment	Estimated Date
Submit and obtain approval for Final PTP (this report) to fulfil DCO Requirement	Based on best information available prior to appointment of successful contractors and other details	October 2016
Produce Staff Welcome Packs	Review Welcome Packs with SCC (6 months in advance of distribution as advised).	April 2017
Develop PTP with updated staffing information	Develop the content of the PTP based on details provided by the appointed successful contractors	October/November 2017
Receive initial staff travel surveys	Undertake within 1 month of site occupation	January 2018
Produce first PTP Review	Based on survey results and any scheme changes	February 2018
Create staff car sharing database	Identify potential matches for opportunity to car share	February 2018
Regular review and update of the PTP	Regularly review the transport conditions and staff travel patterns for opportunities to improve the PTP	Ongoing every 6 months from June 2017
Undertake further staff travel surveys	Undertake following 6 months of site occupation	July 2018
Produce Bi-annual Review during construction	Based on survey results and any scheme changes	August 2018
Produce Annual Review during O and M	Based on survey results and any scheme changes	February 2019

192. The above key actions will be developed throughout the evolution of the PTP and construction phase.



NOTES

LEGEND

APPROXIMATE SITE LOCATION

SLR global environmental solutions
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UNIT 77, 2 CROMAR WAY
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ESSEX CM1 2QE
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F: 01245 392171
www.slrconsulting.com

EA ONE LOWESTOFT

OFFSHORE WINDFARM

SITE LOCATION PLAN

001

Scale	Date
NTS @ A3	MAY 2016

161007_404.05356.00001_GoBe Consultants_EA1 Lowestoft_Site Location Plan.dwg



NOTES

LEGEND

- APPROXIMATE SITE LOCATION
- AREA WITHIN 400M OF SITE ACCESS
- AREA WITHIN 800M OF SITE ACCESS
- AREA WITHIN 1200M OF SITE ACCESS
- AREA WITHIN 1600M OF SITE ACCESS

SLR global environmental solutions
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EA ONE LOWESTOFT

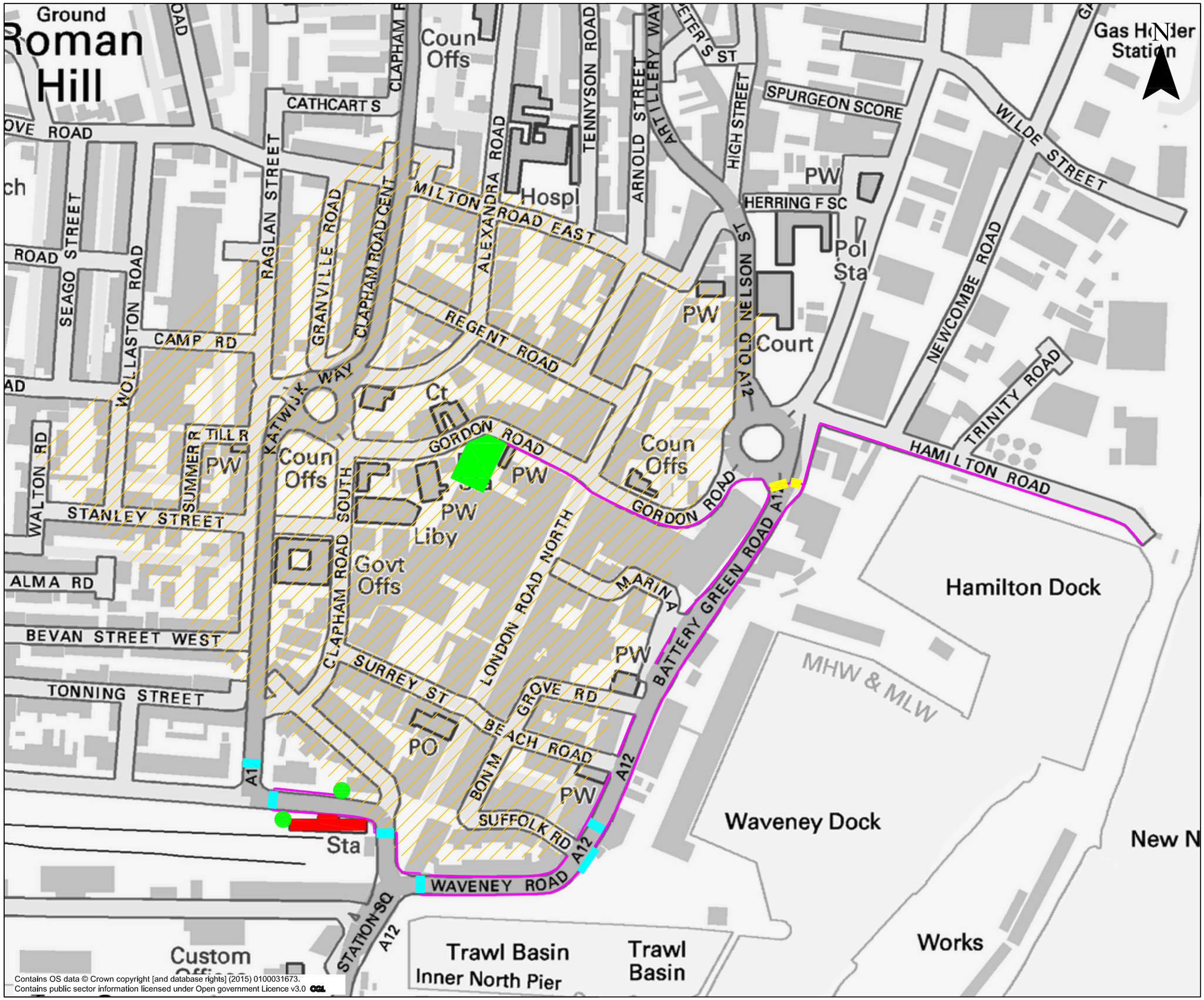
OFFSHORE WINDFARM

PEDESTRIAN ISOCRHONE PLAN

002

Scale	Date
NTS @ A3	MAY 2016

161007_404.05356.00001_GoBe Consultants_EA1 Lowestoft Pedestrian Isochrone Plan.dwg



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NOTES

LEGEND

- FOOTWAY LINKING SITE TO PUBLIC TRANSPORT HUBS
- BUS STATION
- BUS STOP
- RAIL STATION
- SIGNALISED PEDESTRIAN CROSSING
- UNCONTROLLED PEDESTRIAN CROSSING
- COMMERCIAL ZONE

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EA ONE LOWESTOFT

OFFSHORE WINDFARM

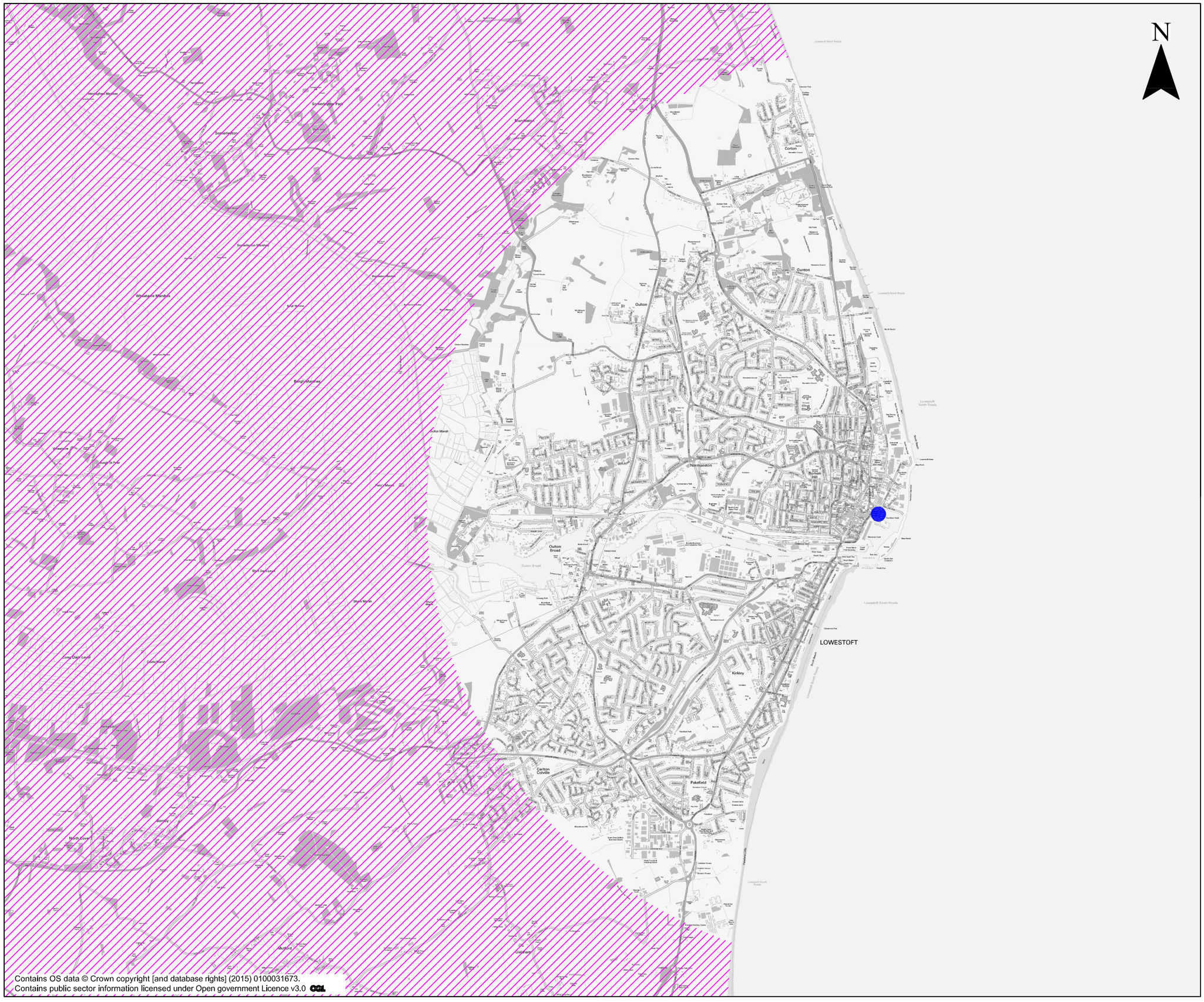
PEDESTRIAN AMENITY PLAN

004

Scale: NTS @ A3

Date: MAY 2016

161007_404.05356.00001_GoBe Consultants_EA1 Lowestoft_Pedestrian Amenity Plan.dwg



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LEGEND

APPROXIMATE SITE LOCATION

AREA >5000 METRES FROM SITE

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EA ONE LOWESTOFT

OFFSHORE WINDFARM

CYCLE ACCESIBILITY PLAN

003

Scale	Date
NTS @ A3	MAY 2016

161007_404.05356.00001_GoBe Consultants_EA1 Lowestoft_Cycle Accessiblity Plan.dwg

Suffolk County Council



North Falls

Local Impact Report Appendix O:

East Anglia THREE Offshore Windfarm Port Travel Plan

Lowestoft

Port Travel Plan

DCO Requirement 28

Applicable to Works No.s 1, 2, 3, 4 and 5A

FOR DISCHARGE

Prepared by:	Checked by:	Approved by:

Revision Summary				
Rev	**Date**	**Prepared by**	**Checked by**	**Approved by**
1	22/01/24	Kay Griffin	John Dunlop	Marta Menchi
2	25/06/24	Kay Griffin	John Dunlop	Marta Menchi

Description of Revisions			
Rev	**Page**	**Section**	**Description**
1	All	All	New Document
2	All	All	Updated in accordance with availability of information and consultee comments.

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1. INTRODUCTION AND SCOPE

1.1. Project Overview

1. East Anglia Three Limited (EATL) was awarded a Development Consent Order (DCO) by the Secretary of State, Department of Business, Energy & Industrial Strategy (DBEIS) on 7 August 2017 for the East Anglia THREE Offshore Windfarm (EA THREE). The DCO granted consent for the development of a 1,200MW offshore windfarm and associated infrastructure.

2. The DCO has now been subject to four non-material variations:

- In March 2019 EATL submitted a non-material change application to DBEIS to amend the consent to increase the maximum generating capacity from 1,200MW to 1,400MW and to limit the maximum number of gravity base foundations to 100. In June 2019 DBEIS authorised the proposed change application and issued an Amendments Order.
- In July 2020 EATL submitted a second non-material change application to DBEIS to amend the parameters of its offshore substations (reducing the number of these to one) and wind turbines (a decrease in the number of turbines and an increase in their hub height and rotor radius). On 15 April 2021 DBEIS authorised this proposed change application and issued an Amendments Order.
- In August 2021 EATL submitted a third non-material change application to DBEIS to amend the consent to remove the maximum generating capacity of 1,400MW and to amend the parameters of its wind turbines (a decrease in the number of turbines and an increase in their hub height and rotor radius). In September 2022 DBEIS authorised the proposed change application and issued an Amendments Order.
- The DCO was then further amended on 16 November 2022 to insert a requirement dealing with guidance and mitigation on the erection of primary surveillance radar at Cromer and deleting article 4(d) of the order which appeared in error and purported to amend a reference which had already been removed as the result of a previous variation.

3. The offshore construction works associated with EA THREE will comprise:

- A total site area of 305km^2, located 69km offshore from Lowestoft, Suffolk, UK;
- Water depths (below Lowest Astronomical Tide (LAT)) between 24.4m to 50.4m;
- Installation of 95 wind turbine generators using monopile foundations;
- One offshore substation (1 x 320kV HVDC convertor station) (water depth:36.5m);
- Total offshore export cable length of 139km; and
- Inter-array cables: 18 strings total length up to 244.2km x 66kV 3 phase HVAC cables.

4. The EA THREE onshore works commenced development in July 2022, with works at the Converter Station, Paper Mill Lane, Playford Corner and Clappits.

1.2. Purpose and Scope

5. This Port Travel Plan (PTP) sets out strategies and initiatives to mitigate any potential detrimental impacts on the surrounding environment posed by trip generation (vehicular or otherwise) from the offshore construction phase of EA THREE at Lowestoft Port.

6. This PTP has been produced to fulfil DCO Requirement 28 which states:

28 *(1) Work Nos. 1, 2, 3, 4 or 5A must not be commenced until a travel plan for the onshore port-related traffic to and from the selected base port or ports and relating to the authorised project, has been submitted to and approved by the relevant planning authority in consultation with the relevant highway authority. The travel plan must be implemented as approved at all times specified within the travel plan during the construction and/or operation of the authorised project.*

(2) For the purposes of this requirement—

"relevant planning authority" and "relevant highway authority" mean the planning or highway authority or authorities in whose area the relevant port is located;

"selected base port" or "ports" means a port or ports situated in England and/or Wales; and

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"base port" means the port used by management personnel for construction of the authorised project and for the ongoing operational management of the authorised project.

7. This document is intended to set out a plan to meet key objectives which will maximise the sustainability of travel methods used to get to and from the base port at Lowestoft, to reduce the associated volume of vehicular traffic and therefore minimise the carbon footprint generated and the impact on the environment and surrounding communities. This will involve ensuring that methods of travel used are more sustainable – e.g. active transport instead of cars – and that the need for travel to and from site is absolutely required. This PTP seeks to establish clear outcomes to be achieved in relation to access and sets out all the measures to be implemented, with timescales, targets and responsibilities for implementation, monitoring and review.

8. Though not directly relevant to this PTP, an Outline Travel Plan (Document 8.8 of the Environmental Statement (ES)) was produced to support the EA THREE DCO application. This PTP has been produced in accordance with the principles and guidance provided within the Outline Travel Plan which provides the necessary guidance to formulate a plan for managing the potential increase in vehicular traffic as a result of EA THREE offshore construction works.

9. While this PTP is a full Travel Plan (rather than an Interim Travel Plan in the terminology used by Suffolk County Council (SCC) guidance (SCC, undated) (see Section 3.4.2)), this PTP is a dynamic, living document that will be updated as required following review of monitoring outputs, to ensure that the aims and objectives represent the up-to-date situation in respect of travel and access. This PTP will be in use for the duration of the construction phase associated with the offshore works. Regular monitoring and review will be essential to ensuring that the document remains relevant.

10. This PTP has been developed with consideration for the scale of the development and the likely impact on travel behaviour for construction staff and vehicles as a result of any potential measures. The plan has been based on the latest information available and some assumptions in terms of staffing levels and likely transport patterns. These measures will only be revised with the agreement of East Suffolk Council (ESC) and Suffolk County Council (SCC). Any revisions to the PTP will be issued with the quarterly monitoring report (see Section 11). EATL will work with the SCC Highways Authority to ensure appropriate resourcing is in place to monitor compliance with the provisions of this PTP.

11. The information contained herein shall be adhered to by the appointed Principal Contractor and implementation and compliance will be monitored by the Offshore Construction Management Team.

1.3. Consultation with Local Highway Authority

12. This PTP has been produced in full consultation with SCC. A meeting was undertaken on 27 March 2024 where the scope of the PTP, potential measures and initiatives were discussed with SCC's Highway Engineers.

13. This PTP reflects the discussions held and additional information provided subsequent to the meeting.

1.4. Background

14. During construction of the authorised project, a Construction Monitoring and Management Port (CMMP), a Wind Turbine Generator Base Port, and a Marshalling Port will be set up. The CMMP will be located in the UK and it has been confirmed that this will be at Lowestoft. The facility will be operated by EATL and will be the port used by management personnel for construction of the authorised project.

15. The only port in England and Wales currently confirmed to be used during construction is the CMMP, which will be located at Lowestoft. The facility will be operated by EATL and will be the port used by management personnel for construction of the authorised project. The Marshalling Port will be based at Vlissingen, Netherlands and will be used for the shipping of foundations, piles and transition pieces. The Wind Turbine Generator Base Port has yet to be confirmed, but the port currently proposed is situated outside of the UK in Esbjerg, Denmark. In addition, the port to be used for the operational and maintenance (O&M) phase of the offshore windfarm has yet to be confirmed.

16. To enable the construction of Work No.s 1 to 4 and 5A to commence, this LPTP, therefore, seeks to discharge Requirement 28 in full. However, should the decision be made to base any additional activities (e.g. the O&M facility) in England or Wales, then further PTPs for these additional activities will be submitted to the relevant local authority and approval obtained prior to these additional activities commencing.

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17. The construction phase of the offshore works associated with the EA THREE Offshore Windfarm has been subdivided into stages, with the offshore works commencing in September 2024. The installation of the Wind Turbine Generators represents the final stage of the construction phase of the project and this is to be completed by August 2026. The duration of works, by stage, is outlined within the Table 1-1:

Table 1-1 Anticipated Programme

Phase	Estimated Date of Commencement	Estimated Date of Completion
Temporary onshore facilities at Lowestoft (by EATL)	August 2024	June 2027
Installation of Wind Turbine Generator scour and array seabed preparation	September 2024	March 2025
Wind Turbine Generator Foundations installation	April 2025	January 2026
Offshore substation installation	July 2025	August 2025
Offshore export cable installation	Pre-lay Survey October 2024 Construction activities March 2025	September 2025
Inter-Array cable installation	October 2025	February 2026
Wind Turbine Generator Installation	March 2026	August 2026

1.5. The Port of Lowestoft

19. The Port of Lowestoft is located at the heart of the town, near to the Commercial Town Centre and public transport hubs. Access to the port is gained directly from the A12; which routes through Lowestoft linking with the strategic road network via the A14 and M11 Motorway.

20. The harbour is currently made up of two sections divided by a bascule bridge. The inner harbour is formed by Lake Lothing whilst the outer harbour is constructed from breakwaters. A site Location Plan is included as Figure 1. The location of the facility is within the outer harbour. A third crossing of Lake Lothing, the Gull Wing Bridge, is due to open in 2024 and will reduce traffic congestion in the town.

1.6. Lowestoft Port Travel Plan Objectives

21. In addition to reducing the environmental impact of the construction phase, the Lowestoft PTP will seek to minimise any traffic impact and congestion in the proximity of the port and ensure that the port car park does not exceed its capacity and impact any local on-street parking facilities.

22. The primary objectives are:

- to reduce the number of single occupancy cars, associated with the construction of the project, arriving at the port;
- to increase project staff awareness of the advantages and potential for travel by more environmentally-friendly modes; and
- to introduce a package of physical and management measures that will assist travel by modes other than the private car.

23. In contrast to a more typical workplace Travel Plan, construction employees would be in a contractually controlled environment, ensuring that monitoring and enforcement regimes are more readily accepted.

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2. ABBREVIATIONS

ABP	Associated British Ports
BEIS	Department of Business, Energy and Industrial Strategy (now the Department for Energy Security and Net Zero)
CCS	Consolidated Construction Site
CIHT	Chartered Institution of Highways and Transportation
CLO	Community Liaison Officer
CMMP	Construction Monitoring and Management Port
CTV	Crew Transfer Vessels
DC	Direct Current
DCO	Development Consent Order
DESNZ	Department for Energy Security and Net Zero
EA ONE	East Anglia ONE Offshore Windfarm
EA THREE	East Anglia THREE Offshore Windfarm
EATL	East Anglia THREE Limited
ES	Environmental Statement
ESC	East Suffolk Council
HVDC	High Voltage Direct Current
LTP3	Suffolk County Council's 3rd Local Transport Plan
MP	Marshalling Port
MW	Megawatt
NCR	National Cycle Route
NG	National Grid
NPPF	National Planning Policy Framework
PRoW	Public Rights of Way
PTP	Port Travel Plan
SCC	Suffolk County Council
SOV	Service Operation Vessel
TPT	Travel Plan Co-ordinator
WTGBP	Wind Turbine Generator Base Port

3. POLICY AND GUIDANCE

3.1. National Policy

24. Travel plans are secured through a policy framework that extends from national through to local level when dealing with new development proposals.

25. The National Planning Policy Framework (NPPF)[1] includes a general objective of supporting and promoting sustainable transport and at paragraph 117, requires all developments that will generate significant amounts of movement to provide a travel plan.

26. The Department for Transport Circular 02/2013[2] entitled 'The Strategic Road Network and the Delivery of Sustainable Development' was published in September 2013 and sets out the ways in which the highways authority will engage with communities and developers to deliver sustainable development and, thus, economic growth, whilst safeguarding the primary function and purpose of the strategic road network. The overarching aim of Circular 02/2013 is to manage the impact of development through initiatives that manage down traffic impact and support the promotion of sustainable transport and the development of accessible sites. One of the key tools in achieving this would be the Travel Plan. Circular 02/2013 notes that:

> "*The preparation and implementation of a robust travel plan that promotes use of sustainable transport modes… is an effective means of managing the impact of development on the road network and reducing the need for major transport infrastructure*."

[1] National Planning Policy Framework, September 2023, Department of Levelling Up, Housing and Communities https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1182995/NPPF_Sept_23.pdf
[2] DfT Circular 02/2013, 10 September 2013, The Strategic Road Network and the Delivery of Sustainable Development, https://www.gov.uk/government/publications/strategic-road-network-and-the-delivery-of-sustainable-development

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3.2. County Level Policy

27. County level transport policy is represented by the 3rd Local Transport Plan (LTP3) for Suffolk 'Suffolk Local Transport Plan 2011-2031', which is freely available via a link from the SCC website www.suffolk.gov.uk. SCC is currently updating this document to produce Local Transport Plan 4 to cover 2024-2040.

28. The LTP3 sets out SCC's long-term goals for the development of transportation infrastructure and practice throughout the county up to the year 2031. The plan demonstrates how transport:

'…will play its part in supporting and facilitating future sustainable economic growth by:
- *maintaining (and in the future improving) our transport networks;*
- *tackling congestion;*
- *improving access to jobs and markets; and*
- *encouraging a shift to more sustainable travel patterns.'*

29. LTP3 is presented in two parts:

- 'Part 1 – Transport Strategy'; and
- 'Part 2 – Implementation Plan'.

30. Part 1 provides a comprehensive overview of the core themes and strategies of the plan as a whole, part 2 identifies specific strategic transport improvements necessary in key areas throughout the county and offers clarification on the various schemes in terms of the relevant promoting agency, likely funding sources and timescales for completion.

31. While the second part of the LTP3 comprised a short term plan for the period 2011/2012 to 2014/2015, it was acknowledged within the plan that *"..timescales and delivery mechanisms for these projects will vary and it may not be possible to achieve all of them within this plan period…"*. As such, the plan is still considered relevant.

32. Lowestoft is a key urban area within the LTP3 and as such, the Lowestoft Plan is outlined within Section 4 of the Suffolk LTP 2011-31 Part 2. Each key urban area plan has been devised to appropriately reflect the intrinsic differences between locations, however it is noted that the following three principles are relevant in all locations, and as such form the core of each individual urban plan. The three principles are as follows:

- reducing the need for travel;
- making efficient use of transport networks; and
- improving infrastructure.

33. The individual plan for Lowestoft recognises that *'…economic recovery for Lowestoft is expected to focus on the energy sector and development of port related industries.'*

34. It continues: *'There are ambitious plans for further regeneration of Lowestoft that could lead to significant growth in housing and employment over the next 20 years. This will add to current levels of congestion if current travel trends continue.'*

35. It further notes: *'A key characteristic of Lowestoft is that approximately 80% of people who work in the town also live there. Thus the majority of journeys to work are relatively short, with one third of journeys being less than about a mile and two thirds less than about three miles. This means that many regular journeys could be taken without the car.'*

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3.3. Local Level Policy (Waveney Local Plan)

36. The 'Waveney Local Plan'[3], adopted in March 2019, represents the local level policy regarding new development within the Waveney area of East Suffolk Council. The vision statement of the strategy states:

'By 2036 the quality of life for everyone growing up in, living in, working in, and visiting Waveney will have been sustainably improved. Waveney will have a healthy economy, a healthy population and a healthy environment. The District will have experienced significant levels of growth, but this growth will not have breached environmental limits and will have been supported by adequate infrastructure.'

37. With regards to the vision for the Lowestoft Area, the Waveney Local Plan states:

'Lowestoft, along with nearby Great Yarmouth will be important centres in the construction, operation and maintenance of offshore renewable projects. The Port of Lowestoft will be an offshore renewables centre of excellence supporting the employment of a significant number of people'.

3.3.1. Sustainable Transport Policy

38. A key policy of the Waveney Local Plan is Policy WLP8.–1 - Sustainable Transport. This policy identifies the necessary actions to be taken to achieve the overarching vision of the Waveney Local Plan and sets out requirements which should help improve the use of sustainable transport options and reduce the risk of congestion. The policy also sets out basic principles for encouraging sustainable modes of transport.

'*Policy WLP8.21 – Sustainable Transport*

Development proposals should be designed from the outset to incorporate measures that will encourage people to travel using non-car modes to access home, school, employment, services and facilities.

Development will be supported where:

- *It is proportionate in scale to the existing transport network;*
- *It is located close to, and provides safe pedestrian and cycle access to services, facilities and public transport;*
- *It is well integrated into and enhances the existing cycle network including the safe design and layout of new routes and provision of covered, secure cycle parking;*
- *It is well integrated into, protects and enhances the existing pedestrian routes and the public rights of way network;*
- *It reduces conflict between users of the transport network including pedestrians, cyclists, users of mobility vehicles and drivers and does not reduce road safety;*
- *It will improve public transport in the rural areas of the District;*
- *It includes facilities for charging plug-in and other ultra-low emission vehicles; and*
- *The cumulative impact of new development will not create severe impacts on the transport network.*

Developments should connect into the existing pedestrian and cycle network. Where possible, proposals are to include measures set out in the Waveney Cycle Strategy (2016 and subsequent updates) and demonstrate they have considered how the scheme will encourage people to walk and cycle to access services and facilities where practical.

Subject to design considerations under Policies WLP8.29, WLP8.30 and WLP8.31, new developments will be required to provide parking that meets the requirements set out in the Suffolk Guidance for Parking issued by Suffolk County Council (2014 and subsequent updates).

In consultation with the Highway Authority, the scale, location and nature of development will be considered in determining how the transport impacts of development should be assessed. As indicative thresholds, Transport Statements will be required for residential developments between 50-80 dwellings. Transport Assessments and Travel Plans will be required for residential developments larger than 80 dwellings. Non-residential development will be considered on a case by case basis.'

3.4. Travel Plan Guidance

39. There is no current national or local guidance that relates to the specific situation of preparing a Travel Plan for a temporary construction site. Therefore, this PTP has adopted good practice and guidelines published for more typical workplace Travel Plans. The following text sets out the salient guidance.

[3] https://www.eastsuffolk.gov.uk/assets/Planning/Waveney-Local-Plan/Adopted-Waveney-Local-Plan-including-Erratum.pdf

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3.4.1. National Travel Plan Guidance

40. The Department for Communities and Local Government published "*Travel plans, transport assessments and statements*"[4] in March 2014. The guidance supports the NPPF by setting out the general principals to be followed when preparing a Travel Plan, stating that they should be:

- Proportionate to the size and scope of the proposed development to which they relate, and build on existing information wherever possible;
- Established at the earliest practicable stage of a development proposal;
- Be tailored to particular local circumstances (other locally determined factors and information beyond those which are set out in the guidance may need to be considered, provided there is robust evidence for doing so locally);
- Be brought forward through collaborative ongoing working between the Local Planning Authority/ Transport Authority, transport operators, Rail Network Operators, Highways England where there may be implications for the strategic road network and other relevant bodies. Engaging communities and local businesses in Travel Plans, Transport Assessments and Statements can be beneficial in positively supporting higher levels of walking and cycling (which in turn can encourage greater social inclusion, community cohesion and healthier communities).

3.4.2. Local Travel Plan Guidance

41. SCC published "*Suffolk Travel Plan Guidance*" on their website in September 2022[5]. The document sets out the specific requirements for preparing a Travel Plan in Suffolk with respect to operational workplaces rather than construction sites but does specify that a Travel Plan is required for any development that is going to create "significant" amounts of movement on the highway network according to paragraph 117 of the NPPF.

42. Thresholds for when a Travel Plan is required are set out in the Guidance and for operational or administrative functions a full Travel Plan will be required for a site over 2,500 sq metres and selected Travel Plan measures will be required for a site between 1,500 and 2,500 sq metres. In this instance a full Travel Plan is required in accordance with DCO Requirement 28 and this will fulfil the requirements of the Suffolk Travel Plan Guidance.

3.5. Policy Summary & Conclusion

43. National and local transport planning policy supports the increased use of sustainable transport as a means to achieving a reduction in vehicular traffic congestion and environmental impact.

44. It is considered that the site is well placed within an established area which will be fully integrated in terms of sustainable transport infrastructure comprising pedestrian, cycle and public transport facilities.

45. This Lowestoft PTP has been produced in accordance with all of the identified policy and with reference to the identified guidance.

4. THE CONSTRUCTION MONITORING AND MANAGEMENT PORT (CMMP)

46. Port facilities and associated infrastructure for activities such as the transfer of personnel and minor tools and supplies to the offshore construction site will be located at the CMMP. The CMMP will be used by EATL for project management, marine coordination, weather monitoring and forecasting, etc. and will be made available to the Main Contractors/Suppliers to set-up a commissioning base and office for the construction management teams.

47. The CMMP will be located within ABP's Port of Lowestoft, adjacent to SPR's EA ONE Operations and Maintenance building at Hamilton Dock on the Outer Harbour of Lowestoft Port. The CMMP will comprise the following facilities at Table 2.1:

[4] https://www.gov.uk/guidance/travel-plans-transport-assessments-and-statements
[5] 2022-09-13-suffolk-travel-plan-guidance-third-edition-lo-res

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Table 4.1 CMMP Facilities

Facility	Size
Offices	Approx 60 desks
Welfare Facilities	Dimensioned for approx. 60 users per day.
Warehouse	1,200sqm
Land areas (for laydown and temporary facilities)	1,500sqm
Berths	3 berths for Crew Transfer Vessels (CTVs) (typical 12 persons, max length ~24 m). The berths will be located in the proximity of the land areas assigned to EA ONE. Potential for a small Construction Service Operation Vessel (SOV) depending on final logistics strategy.

48. The CMMP will have rights to 80 parking spaces within the port of Lowestoft adjacent to the office location. Essentially this means the car park right inside the main entrance to the Port Estate, or somewhere closer to the premises.

5. CONSTRUCTION STAFF FORECAST

5.1. CMMP Construction Staff Forecast

49. EATL will be utilising local resources, as well as some travelling resources from a global pool of specialist staff, dependent on the role. Additional to this will be the visiting project management team which will comprise:

- Site management;
- Site administration;
- Site supervisors;
- Foremen;
- Technicians;
- Crane operators;
- Commissioning engineering; and
- High Voltage personnel.

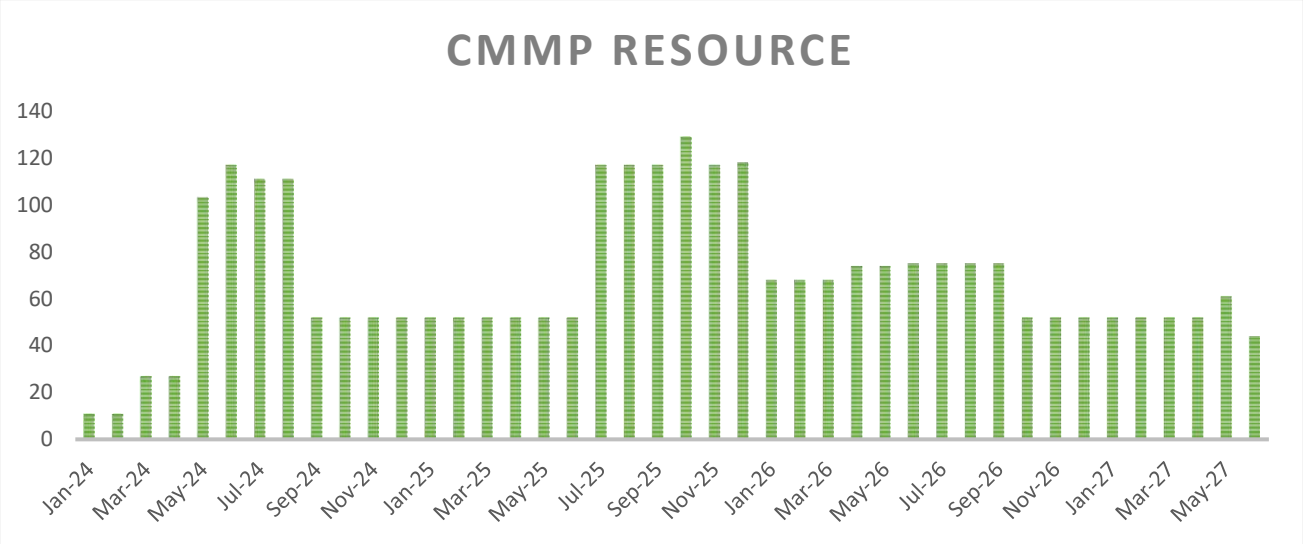
50. It should be noted that as this PTP is being produced prior to much of the construction methodology being finalised, it is anticipated that the programme may well be altered. How the works progress in combination with one another will determine the peaks in travel demand to the port. It is anticipated that as the programme and associated shift patterns become finalised, the PTP will be developed and provided to SCC, as Highways Authority, and ESC as the Local Planning Authority.

51. Office personnel, support staff (reception/cleaners, security), warehouse/external storage staff and offshore personnel are anticipated to commence work at Lowestoft in Q1 2024. Offshore construction works, which are to be addressed via this PTP, are currently programmed to commence in September 2024.

52. Figure 1 provides a graph which demonstrates the currently anticipated staff attendance profile during construction. This covers the peak of staff activity.

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Figure 1 Staff Forecast Profile



53. The above profile shows that the site works would peak during the summer of 2024 and autumn/winter of 2025.

54. Whilst daily numbers will vary dependent on the stage of the project, Table 5-1 provides a staff forecast for a typical day's activity when the site is in full operation.

Table 5-1 Staff Forecast – Typical Day

Personnel Class	Typical Day/Average Estimate
Offshore personnel: 3 CTVs depart @ 75% capacity = 3 X 9 people	27
Offices: 50 desks, 50% occupied	25
Warehouse	2
Ancillary personnel	4
Visitors	5
Total staff	63

55. The above summary indicates that the site would on an average accommodate 63 staff between September 2024 and June 2027. This does not consider offshore personnel on vessels or moving from other operational ports.

56. The following Table 5-2 provides a staff forecast for a busy day at the peak of activities.

Table 5-2 Staff Forecast- Busy Day

Personnel Class	Busy Day
Offshore personnel: 3 CTVs depart @ 100% capacity = 3 X 12 people	36
Offices: 50 desks, 80% occupied	40
Warehouse	2
Ancillary personnel	4

Personnel Class	Busy Day
Visitors	8
Total staff	90

57. The above summary indicates that the site could generate up to 90 staff during a busy day, which is likely to be during the summer of 2024 and the autumn/winter of 2025.

58. The above staff forecasts are best possible predictions at the time of the PTP production. These figures will be revised as further information becomes available on the anticipated staff numbers.

5.2. Likely Staff Transport Patterns

59. Staffing patterns for the CMMP are unknown at this time; this will be confirmed closer to the start date and incorporated into a update of the Lowestoft PTP. However, typical staff scenarios have been assumed at this stage in order to identify areas that the PTP can target.

5.2.1. Office Personnel

60. Many office staff working on the project will be based away from Lowestoft (e.g. in London, Glasgow) and will be hot-desking at the CMMP for a day to a week at a time. Similar to offshore personnel, some office employees will likely travel by plane or train and will then be within walking distance of the port or use a taxi rather than hire a car.

5.2.2. Offshore Personnel

61. Offshore workers are likely to be largely specialist in nature and employed on a contract basis. It is anticipated that staff will stay offshore for an average of 2 days. This is because there are likely to be a large number of day shifts which will balance out a minority of longer offshore shifts.

62. Personnel will work 10-12 hour shifts typically, so their arrival and departures hours will not coincide with rush hour peaks.

63. The shifts will be governed in part by the tides and weather conditions.

5.2.3. Staff Origin Assumptions

64. The following provides assumptions on where staff members are likely to be based/staying during their employment at Lowestoft Port. These assumptions are based on previous experience with offshore windfarm sites.

Table 5-3 Staff Assumptions

Personnel Class	Assumption
Office	70% based locally/30% non-local staying in hotels/other accommodation. Visiting office personnel are likely to visit for short time periods and so stay in hotels in Lowestoft.
Support (reception/cleaners, security)	100% based locally.
Warehouse/external storage	100% based locally.
Offshore	75% based locally/25% non-local staying in hotels/other accommodation.

65. On the basis of the above assumptions, Table 5-4 quantifies the potential number of local staff and other staff staying in hotels or other accommodation, based on a typical day (Table 5-1)

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Table 5-4 Staff Origin Forecast

Personnel Class	Local	Not Local, staying in hotels/other accommodation
Office	12	13
Support (reception/cleaners, security)	6	0
Warehouse/external storage	2	0
Offshore	13	22
Total	33 (49%)	35 (51%)

66. The above forecast indicates that the PTP will be required to target a combination of locally sourced staff (49%) and staff staying in local accommodation (51%).

5.3. Accommodation

67. Exact accommodation details will be determined 6 months prior to mobilization and will consist of temporary house rentals for office roles and hotels for visitors and non-office roles. The strategy will be to minimise commute times and limit these to a maximum 30 minutes dependent on accommodation availability.

68. The majority of technicians arriving from overseas and more distant parts of the UK will arrive and depart via London Stansted. All transportation from airports will be coordinated from Site from where appropriate coaches will be organized.

69. EATL will establish primary and secondary routes to and from site from local accommodation, airports and EATL offices.

6. HIGHWAY CONDITIONS

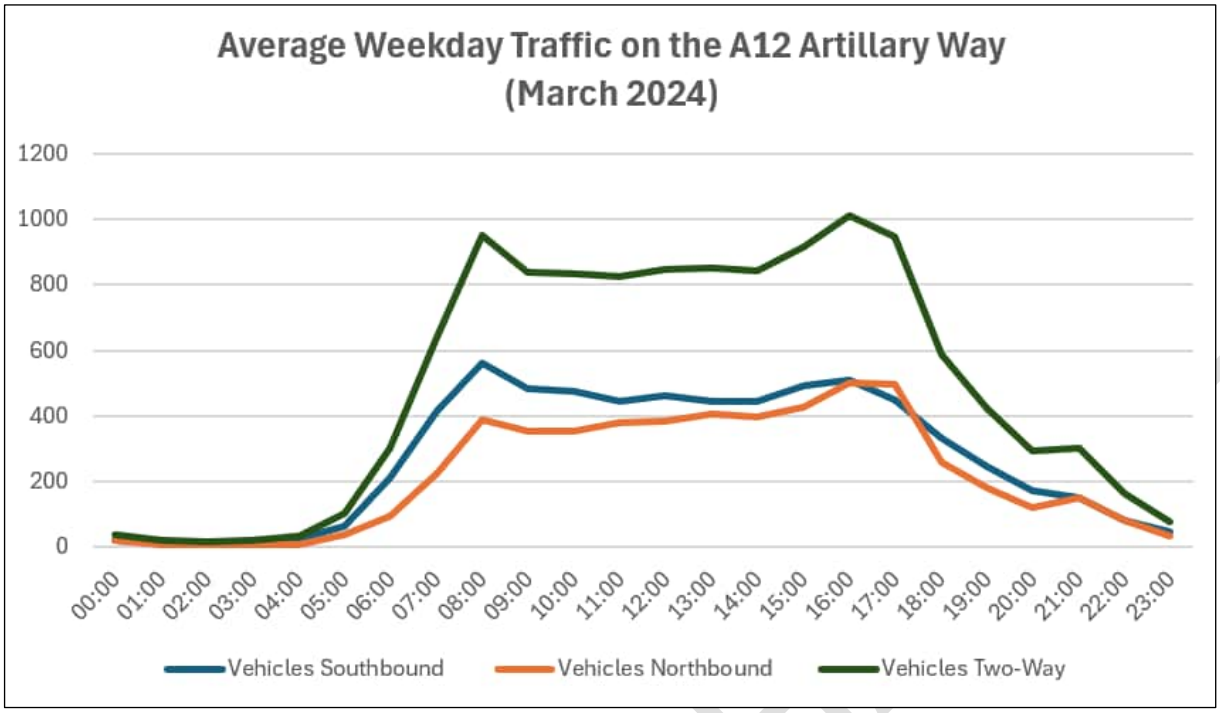
6.1. Existing Traffic Conditions

70. The existing traffic conditions have been reviewed in order to determine the weekday peak periods on the local highway network. Traffic data were provided to SLR by the Highway Management Team at SCC comprising data collected by a permanent traffic count point situated on the A12 in the vicinity of the application site. Count Point 97 is positioned along the carriageway of Artillery Way, approximately 80m south of the roundabout junction between the A12 Artillery Way and Jubilee Way and therefore provides an accurate indication of traffic levels in the proximity of the site.

71. A summary is provided at Figure 5 in the form of a graph that provides northbound, southbound and a two-way traffic flow.

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Figure 5 Local Network Traffic Profile



72. The morning and evening peak periods are between 08:00 and 09:00 and 16:00 and 17:00; however, the traffic flows are of a similar magnitude (between 10% and 15% lower) between the morning and evening peak hours and between 17:00 and 18:00.

6.2. Other

73. It was highlighted during discussions with SCC that there are currently a number of cars that park on-street in and around the port area which the PTP should be aware of and seek to avoid exacerbating. As set out in Section 10.8, a car parking permit system will be adopted. All employees will be required to park in designated areas and display their parking permit to prevent unauthorised parking. Employees not parking their vehicle in designated areas or not displaying their permit will be subject to an enforcement action (see Section 11.3).

7. SUSTAINABLE TRANSPORT AUDIT

74. This section considers the existing travel opportunities for those workers commuting to the port by means other than the private car. Each mode of transport has been assessed in terms of the facility location and its surrounding transport conditions, with an appraisal of the suitability of each mode.

7.1. Pedestrian Infrastructure

75. This pedestrian assessment has considered the accessibility of the port to local amenities and facilities by foot and the quality of the surrounding pedestrian environment. Pedestrian access will be gained via the existing port access off Hamilton Road. Pedestrian amenity in the immediate vicinity of the port access is of a high standard. Footways are present on both sides of the carriageway and street lighting is installed along the northern footway.

76. Pedestrian crossing facilities exist at several points along Waveney Road/Battery Green Road, and provision of street lighting is abundant, affording pedestrians a high degree of safety when travelling within the area at any time of day. Figure 3 provides a northbound view of A47 Waveney Road/Battery Green Road at the signalised port access junction to the south of Hamilton Road which would be on route to the train station.

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Figure 3 Photograph of the A47 Waveney Road/Battery Green Road



77. The Chartered Institution of Highways and Transportation (CIHT) document entitled 'Guidelines for Providing for Journeys on Foot' considers 2km as a 'preferred maximum' distance for commuting on foot. Walk time isochrones which detail the areas covered within 400m, 800m, 1,200m, 1,600m and 2km (25 minutes) of the site are shown in Figure 2.

78. The Pedestrian Isochrone Plan shows that a large area of Lowestoft can be reached on foot within a 2km walk from the port. Onshore port-based staff and/or those daily commuting who live or stay within Lowestoft have the opportunity to walk to work should they not have to bring any tools or materials on a daily basis.

79. Pedestrian infrastructure linkage exists between the port access and both the bus and train stations, which are reachable from the port access on foot in less than ten and five minutes' walk respectively. A Pedestrian Amenity Plan is included as Figure 3 which shows the pedestrian connectivity between the Port and the bus and train stations. Levels of service for both bus and rail are considered in detail in Section 7.3 of this PTP.

80. There are various useful amenities which are located within walking distance of the port access, including food outlets, convenience stores and cash points, which all could reduce the need for employees to use their car during breaks.

7.2. Cycle Infrastructure

81. Cycling is generally an acceptable mode of travel for journeys up to 5km. Figure 4 illustrates a Cycle Access Plan, depicting the local cycle catchment within a 5km radius of the port access, and the location of the cycle route network.

82. Lowestoft benefits from a good level of cycle infrastructure, incorporating National Cycle Network (NCN) Route 517. The route begins at a junction with Regional Routes 30 & 31 in the south of Beccles, a small town approximately 13km due west of Lowestoft.

83. NCN 517 travels east through southern Beccles and Worlingham before joining with the A146. The route separates from the A146 in the vicinity of North Cove, although continuing in the same general orientation, re-joining for a short distance, then departing completely, following New Road to Muttfordwood Lane which takes the route into the south of Lowestoft.

84. Routing through the entirety of Lowestoft from south to north, NCN 517 passes within immediate proximity of both Lowestoft Port and Rail Station. Continuing through Lowestoft to the north, the NCN 517 departs the town at Corton, a suburb of Lowestoft, and continues north for approximately 10km to its terminus towards the north of Great Yarmouth.

85. NCN Route 1 is reachable from Lowestoft via NCN 517 and Regional Route 30. (which links Carlton Colville to Lowestoft Inner and Outer Harbours). NCN Route 1 comprises a long-distance cycle way routing both on and off-road between Dover and the Shetland Islands via the east coast. Numerous unclassified cycle ways cross Lowestoft, inter connecting with NCN 517, and provide substantial coverage of the area in terms of bespoke and shared cycle amenity.

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86. The Cycle Access Plan indicates that within a 5km cycle of the port, the majority of Lowestoft can be reached. Furthermore, keen cyclists in employment at the port may be considered more likely to travel greater distances as part of their daily commute.

87. On the basis of the above audit, it is considered that cycle amenity in the vicinity of the port is of a high standard and more than sufficient to support any usage potentially generated by the offshore construction phase of the EA THREE project.

7.3. Public Transport Connectivity

88. Public transport accessibility is measured with reference to the number and frequency of public services available within easy walking distance of the port.

7.3.1. Bus

89. Lowestoft is served by numerous bus services, all of which operate within the vicinity of the port, being within close proximity of the town centre. The bus stops within closest proximity of the port access are those at the Lowestoft Bus Station. The nearest standalone bus stop is that designated as “Opposite Railway Station” and identified by its Stop ID sufjtatp. This serves some bus routes which are in addition to those available from the bus station. It is located approximately 500m west of the port access, which equates to a walk time of just over 5 minutes.

90. Table 6-1 summarises the services in terms of their coverage and availability from the two locations.

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Table 6-1 Local Bus Services

Service Number	Route	Available From			
		Railway Station (Stop ID sufjtatp)	Next to Rail Station (Stop ID: sufjagdm)	Flensburgh Street (Stop ID: sufjtmjd)	Lowestoft Bus Station
BH2	Lowestoft & Worlingham to Bungay High	X			
SJL2	Lowestoft/Carlton Colville to SJL	X			
99 Coastal Clipper	Lowestoft - Southwold		X (towards Lowestoft Bus Station)		X (towards Southwold)
109 Coastal Reds	Hollow Grove – Lowestoft Town Centre		X		X (towards Hollow Grove)
1/1A	Martham - Lowestoft				X (towards Great Yarmouth & Martham)
61	Southwold - Norwich				
99	Lowestoft - Kessingland				X (towards Southwold and Kessingland)
101	Gunton - Hollow Grove				X (towards Gunton Estate)
102	Town Centre – Woods Meadow				X (towards Oulton Village)
105	Town Centre – Oulton Rock Estate				X (towards Oulton Rock Estate)
106 Coastal Reds	Town Centre – Burnt Hill			X	X (towards Oulton Broad & Burnt Hill)
122	Town Centre – Oulton Rock Estate				X (towards Oulton)
X1	Great Yarmouth - Lowestoft				X (towards Norwich via Great Yarmouth)
X2/X21	Lowestoft – Norwich		X		X (towards Norwich via Beccles & Loddon)
X22	Lowestoft – Norwich		X		X (towards Norwich via Beccles & Loddon)

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91. Particularly useful among the above listed services are the X-prefixed services, providing comprehensive links to both Norwich and Great Yarmouth from the early hours of the morning until the late evening seven days per week.

92. The X2, X21 and X22 operate between Norwich and Lowestoft with a weekday frequency of 30 minutes from 07:20 until 09:50, with a 15-20 minute frequency thereafter until 18:30. Three more services run from Norwich until 23:00. The return journey departs from Lowestoft in the first instance at 05:55hrs. Departures then occur every 10 to 35 minutes until 16:50. Three more services run at 17:40 and 19:00 with the last bus departing at 21:30.

93. The X2, X21 and X22 operate on Saturdays with a frequency of 30 minutes from 07:50 until 10:20hrs, with a 15-20 minute frequency thereafter until 18:30. Services continue at a lower frequency until 23:00. The return journey departs from Lowestoft in the first instance at 06:20. Departures then occur every 30 minutes until 07:50, after which departures are between 10-20 minutes until 16:50. Four more services run at 17:40, 19:00, 20:15 and 21:30.

94. Between Monday to Friday, the X1 service commences at 06:50 from Norwich bus station, arriving at Great Yarmouth at 07:26 and Lowestoft bus station at 08:17. Further departures from Norwich bus station are at 07:25 then every 15 to 20 minutes until 23:20. Journeys from Lowestoft bus station towards Norwich commence at 05:40 and run every 30 to 45 minutes until 18:40, after which there are services at 19:40, 20:40 and 21:40.

95. On Saturdays, the X1 service from Great Yarmouth commences at 07:30 and from Norwich bus station at 07:15. Departures continue at a frequency of 10 to 30 minutes until 23:20. Return journeys from Lowestoft bus station start at 05:40 departing every 30 to 60 minutes until 21:40.

96. The bus services as detailed above provide a comprehensive and flexible daily transport option between Norwich and Great Yarmouth which constitute the two largest settlements in proximity of Lowestoft.

7.3.2. Rail

97. Lowestoft Rail Station is located close to the port access, with a walk time of under five minutes. The station, managed by Greater Anglia, offers two main services:

- Lowestoft and Felixstowe to Ipswich; and
- Norwich to Great Yarmouth and Lowestoft.

98. The station provides frequent services on the above routes seven days per week. It would be reasonable to expect commuters from beyond the extents of Lowestoft to take advantage of the convenience of rail travel over other forms for transport to and from the vicinity of the port given the close proximity of the station.

99. The Greater Anglia website provides travel information and journey planning tools. A network route map can be found on their website[6] showing the routes for the above services.

100. The stops highlighted on the network route map are as follows:

- Lowestoft and Felixstowe to Ipswich:
  - Lowestoft – Oulton Broad South – Beccles – Brampton- Halesworth – Darsham – Saxmundham – Wickham Market – Melton – Woodbridge – Westerfield – Ipswich.
  - Felixstowe – Trimley – Derby Road – Westerfield – Ipswich.

101. Timetables for these routes are available on the Greater Anglia website[7].

[6] https://www.greateranglia.co.uk/travel-information/journey-planning/network-map
[7] https://www.greateranglia.co.uk/media/12651/download?inline

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102. On weekdays, trains currently run from Ipswich to Lowestoft at 07:34, 09:17, 10:16 then every hour until 15:54. After this time trains depart at 17:17, 18:13, 19:17, 20:17 and 21:17 with the final departure at 22:16. Heading in the opposite direction from Lowestoft to Ipswich, trains depart at 05:24, 06:14, 06:40, 07:28, 09:07, 10:07, 11:06 then every hour until 17:02. After this time trains depart every hour from 18:07 until 21:07.

103. On Saturdays trains run between Lowestoft and Ipswich every hour from 06:06 to 21:06. Trains from Ipswich to Lowestoft also depart once every hour between 07:16 and 22:15.

104. On weekdays, trains currently run from Felixstowe to Lowestoft at 08:54 then every hour from 09:28 to 21:28 with the last departure at 23:01. Heading in the opposite direction from Lowestoft to Felixstowe, trains depart at 05:04, 06:04, 07:14, 08:25, 08:57 then every hour from 09:58 to 11:58. After which departures are every 16 minutes past the hour and 58 minutes past the hour from 12:16 to 15:58. Trains then run every hour from 15:58 to 20:58 with the last departure at 22:28.

Norwich to Great Yarmouth and Lowestoft:

- Norwich – Brundall Gardens – Brundall – Lingwood – Acle – Great Yarmouth
- Norwich – Brundall Gardens – Brundall – Buckenham – Cantley – Reedham – Haddiscoe – Somerleyton – Oulton Broad North – Lowestoft.

105. Timetables for this route are available on the Greater Anglia website[8]

106. On weekdays, trains currently run from Norwich to Lowestoft at 05:36, 06:23, 06:45, 07:55, 08:55, then every 5 minutes past the hour and 58 minutes past the hour until 14:58. After this the next trains depart from Norwich at 15:50, 16:58, 17:50, 19:02, 20:05, 21:05, 22:05, with the last train at 22:40. Heading in the opposite direction from Lowestoft to Norwich, trains depart at a frequency of once every hour.

107. On Saturdays, trains currently depart from Lowestoft towards Norwich at a frequency of once every hour between 06:39 and 23:30. Services from Norwich to Lowestoft begin at 05:40 departing every 44 to 70 minutes until 12:05. Trains then run twice every hours until 15:55 with the following departure at 15:55. After this time trains depart at a 16:56, 17:50, then every hour from 20:05 with the last departure at 22:41.

7.4. Identified Sustainable Transport Issues

108. No major barriers/issues have been identified within relevant proximity of the port which may adversely affect construction workers' access to sustainable transport modes.

7.5. Transport Infrastructure Improvements

109. The Gull Wing Bridge is due to open in 2024 and will reduce traffic congestion within Lowestoft. No other imminent transport infrastructure improvements have been identified which will affect the baseline transport conditions.

7.6. Sustainable Transport Audit Summary

110. It is considered that the port is ideally located to utilize the rail infrastructure in the vicinity of Lowestoft. With the construction workforce likely to be of a specialist nature on a contract basis, and as such originating from outside the area, the convenient location of Lowestoft Rail Station relative to the site access promotes itself as the most versatile sustainable transport option.

111. As previously stated, it is unlikely that construction workers will be sourced from local employment hubs, owing to the specialist nature of the construction. However, there does exist the potential for construction workers to secure temporary accommodation within Lowestoft for the duration of the construction phase, and as such cycle links in the vicinity of the port have been thoroughly assessed. It is considered that cycle links within Lowestoft are of a high standard with NCN Route 517 and various tributary cycle routes providing largely traffic free cycling across the region.

[8] https://www.greateranglia.co.uk/media/12656/download?inline

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112. Pedestrian amenity has also been assessed, mainly in terms of accessing other sustainable transport options. Owing to the nature of the area as a tourist destination, temporary accommodation is prolific in the vicinity and walk times to the site access are favourable with a high level of pedestrian amenity in the area.

8. ADMINISTRATION

8.1. Introduction

113. EATL are responsible for the EA THREE project and implementation of the Lowestoft PTP. An appropriate budget will be provided to enable effective compliance with the PTP. This PTP forms a framework for further detailed initiatives to be drawn up between EATL and their contractors. This framework sets out the objectives and principles for achieving sustainable travel and provides details of the targets, responsibilities for implementation and monitoring and review requirements. This framework will be incorporated into agreements drawn up between EATL and their contractors, where relevant.

8.2. Site Manager

114. The Site Manager would be responsible for appointing a suitable member of staff as a Travel Plan Co-ordinator (TPC) and ensuring that the PTP is implemented. The role of the TPC is detailed within Section 8.3.

115. The Site Manager would be responsible for the following:

- providing the management support required to make strategic decisions;
- liaising with the TPC to review and revise the PTP on a regular basis;
- securing any necessary funding required to operate and evolve the PTP; and
- keeping key decision makers informed of progress with the PTP.

8.3. Travel Plan Co-ordinator

116. A TPC will be appointed to implement and administer the PTP, two months prior to the commencement of the offshore construction works. The TPC will be responsible for the development of the PTP measures and the day to day operation of the Plan. Once appointed, the TPC will act as the main contact for the PTP for both construction staff and SCC Highways Authority and will be responsible for implementing measures and monitoring the effects of implementation. The TPC will regularly attend on site progress meetings in order to influence and engage with construction staff to ensure successful implementation of the PTP.

117. The TPC position will be a senior member of staff with the ability to influence site management practices, and equally, the time to dedicate to the role.

118. The TPC will be responsible for:

- Setting up and maintaining a filing system for all correspondence relating to the PTP;
- Overseeing the day-to-day implementation of the PTP including the monitoring programme, reporting and any corrective measures required to meet the targets, which will be identified through discussion with relevant local authorities;
- Organizing the production and distribution of a staff travel survey, collection and compilation of the results and reporting to the relevant authorities;
- Updating of the baseline information within the PTP with a view to revising the PTP in a timely fashion;
- Consultation and promotion of the scheme;
- Setting targets; and
- Quarterly reporting and review during construction phase.

119. The TPC will be responsible for setting up and maintaining the staff travel database and conducting the PTP review. Any staff new to the site will be added into the database on commencement of employment and staff leaving employment will be removed. In the interests of confidentiality, the TPC alone will hold the database and be responsible for the release of information. Information contained within the database will be released to SCC on request but in the interests of security, only postcode details may be supplied.

120. The name, contact details and working hours of the appointed TPC will be provided to ESC and SCC Highways Authority prior to commencement of the works. Any changes in TPC will be notified to ESC and SCC. The TPC, on behalf of EATL, will have ultimate responsibility for compliance with this PTP, with EATL's Offshore Construction Management Team maintaining a compliance oversight.

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121. The TPC will be responsible for setting up and launching the PTP in accordance with the schedule set out in Table 7-1.

Table 7-1 PTP Administration Schedule:

Timescale	Action
Two months before construction starts	Appoint TPC Exchange contact details with relevant officers (ESC and SCC) Collect details of local accommodation Arrange private staff transport provision Research travel information
One month before construction starts	Obtain up-to-date public transport timetables and literature Review walking and cycling facilities Prepare and issue Welcome Packs for all construction staff Set-up a car sharing register and establish car share syndicates Ensure sufficient cycle parking and associated facilities are available at site. Produce a PTP notice board specific to the site with useful information regarding travel choice and including information such as details of car share schemes, cycle routes, bus and train times, etc. Implement mechanisms for providing guaranteed lift home.
Four weeks after construction starts	Begin spot checks to monitor number of staff using the private staff transport service (if in place) and average car occupancy
Every month after construction starts	Monitor travel patterns through data acquired from private staff transport bus drivers, car occupancy and car park utilisation. Undertake PTP audit and modify where appropriate Liaise with relevant officers (ESC and SCC) and other groups where appropriate Issue a Welcome Pack and undertake site induction for new starters Maintain and update the information stored in the car sharing register Monitor cycling provision
Every three months after construction starts	Produce monitoring and review report (see Section 11)

8.4. Monitoring by the Highways Authority

122. The TPC will liaise with SCC Highways Authority regarding monitoring and enforcement of the PTP measures by them.

123. The contact details for the SCC with respect to Travel Plans at the time of writing this PTP are the general team email (Highways.DevelopmentControl@suffolk.gov.uk).

8.5. Funding

124. Appropriate funding will be allocated by EATL at the start of the PTP process to cover the costs involved in administering the PTP. The funding will cover all costs relating to the TPC, implementation of measures and initiatives, marketing of the PTP and monitoring. Funding will also cover the costs of the SCC reviewing officer, via the Planning Performance Agreement.

125. An initial figure of £2000 will be budgeted which excludes the construction of the bike hub, lockers and showers which form part of a wider scope of works. The details of this will be updated in the revised PTP provided prior to the commencement of works at Lowestoft.

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8.6. Updating

126. The PTP will evolve over time. Although fundamental objectives will not change, over time it may be possible to define and alter specific targets. The on-going monitoring programme, and in particular the quarterly reviews, will provide updated information that will allow the scheme to be revised, refined and improved.

9. TARGETS

9.1. General

127. The PTP measures comprise a series of initiatives designed with reference to the baseline data and are intended to encourage modal shift within the commuting habits of the construction workforce, primarily away from single occupancy car use, and car use in general.

128. To meet the objectives of the PTP, as set out in Section 1.5, it is essential that a series of targets are set. The targets must relate directly to the objectives and be set with reference to the baseline data collected pertaining to sustainable transport. The adoption of a target-based approach to Travel Planning facilitates effective monitoring and review as the PTP progresses and serves to focus the efforts of those individuals responsible for its implementation.

9.2. SMART Targets

129. Targets should be Site-specific, Measurable, Achievable, Realistic and Time-related (SMART). They may be phased year on year, and will fall into two categories: 'Action Targets' e.g. appoint a travel co-ordinator by (date); and 'Aim Targets', e.g. achieve (percentage) reduction of single car use by (date).

130. Targets will be measurable through the use of indicators, which represent the results of monitoring. Indicators may also be used to highlight the progress of the PTP without necessarily having a linked target.

9.2.1. Action Targets

131. Action Targets considered within the PTP are set out at Section 10 of this PTP. The TPC will be responsible for implementing measures throughout the offshore construction works, which will be reviewed monthly, by the TPC, following the results of monitoring to identify if any changes are required, for example to the private staff transport service in order to maximise its use by workers.

132. The initial Action Target would be to ensure that all new staff receive a Welcome Pack. Details of what is to be included in these packs are provided in Section 10.1.1 of this PTP. Further action targets may include providing additional cycle parking, subject to demand.

9.2.2. Aim Targets

133. Examples of SMART Aim Targets relative to the EA THREE project include:

- Modal Shift Targets, measured annually, such as increase the level of public transport users by 20%; and
- Reduction of Single Occupancy Car Journeys by 15%, this figure is taken from the DfT document "The Essential Guide to Travel Planning'.

134. Other PTP targets aimed at achieving the overall 15% reduction in single occupancy vehicles will be discussed and agreed with SCC, following the appointment of the successful construction contractors and confirmation of the construction methodology details.

135. The TPC will be responsible for collating and reporting the data associated with these. Details of the data to be collected, the monitoring plan and reporting schedule are provided in Section 11 of this PTP.

136. Periodic revision of objectives/targets will be undertaken throughout the life of the PTP in order to keep them relevant, realistic and to further promote modal shift toward sustainable transportation.

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10. TRAVEL MEASURES

137. Scheme measures comprise a series of initiatives designed with reference to the baseline data and are intended to encourage a modal shift within the commuting habits of the constructing workforce, primarily away from single occupancy car use, and car use in general.

138. Implementation of this PTP will require consultation with the offshore construction workers as the project progresses to establish which measures are the most effective, prove difficult to implement or are unpopular. This will be the responsibility of the TPC.

139. The staff forecast indicates at Table 5-1 that based on a typical day's operation and staff origin assumptions, the PTP would typically be targeting approximately 33 locally based staff and 35 staff who live elsewhere but are staying in hotels or other accommodation. Review of traffic survey data has demonstrated that the average weekday traffic profile on the local highway network has two defined peak periods occurring during the hours beginning at 08:00 and 16:00hrs, which could be taken into consideration whilst formulating site specific measures and initiatives.

140. The following sections in this PTP outline the measures to be promoted by the TPC. They are set out under the following general headings:

- Travel awareness;
- Travel database;
- Public transport;
- Private Staff Transport service;
- Walking;
- Cycling;
- Car sharing scheme;
- Car parking management;
- Welfare and catering facilities; and
- Guaranteed lift home.

10.1. Travel Awareness

141. Good accurate information on the range of services and travel initiatives available is a critical element of a successful Travel Plan. The success of the Lowestoft PTP will also be dependent on the forthright contribution of relevant information from employees with regards to their travel habits and preferences.

142. The TPC will make new employees and sub-contractors aware of the existence of the PTP by providing them with an information leaflet summarising the PTP as part of a Welcome Pack, which will be issued to all employees on appointment of their position. Any parking management policies will be explained to members of staff during the recruitment process.

143. The TPC will be the primary point of contact for those who require information regarding the PTP. Each member of staff can liaise directly with the TPC on a one-to-one basis in order discuss their specific travel requirements and understand how they can travel to/from work in a sustainable manner. However, it should be also clearly communicated that it is the responsibility of the TPC to provide regular and relevant feedback regarding the PTP, and to ensure that the PTP is flexible enough to accommodate such feedback.

144. To ensure lines of communication are maintained during the lifetime of the PTP, an information board will be provided within the offices, including up to date contact details for the site TPC. Throughout the life of the PTP, its measures and actions will form part of a marketing strategy based around the display of posters, leaflets and timetables.

145. Details concerning the frequency, venue, and date of PTP meetings, both before and after commencement of construction, shall be included within the PTP and/or otherwise made available to all concerned at the first appropriate juncture.

146. The TPC will have responsibility for all liaison with outside bodies including the planning and highway authorities and those local authority officers with responsibility for cycling and public transport.

147. The TPC will ensure that any amendments to the PTP or any relevant information are passed on to members of staff in the form of leaflets.

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148. All port-based staff will be made aware of the PTP on the commencement of their employment. Details of the scheme, its objectives in enhancing the environment and the role of individuals in achieving its objectives will be explained. Information and promotional material will be available in a range of formats and will be issued to each employee and displayed prominently in staff rest areas. Employees who wish to raise specific transport-related matters will be invited to discuss them with the TPC. Promotional material will also be made available to visitors.

10.1.1. Welcome Pack

149. A Welcome Pack will be produced and provided to each member of construction workforce. The pack would accompany typical introductory materials prior to commencement of an employment period. The pack will introduce the PTP and include information relating to the implemented measures and initiatives. Information will include details of sustainable transport provision (including bus and rail timetables) and promotional material highlighting the benefits to the environment and personal health and wellbeing. The pack will also detail all site specific transport arrangements and include a survey form which should be completed in order to create a confidential PTP database.

150. It is the TPC's responsibility to keep the welcome pack up to date and develop the content to keep it relevant, incorporating any new elements that may benefit the overall objectives of the PTP, reacting to changes to the transport conditions.

151. The Welcome Pack will include, though not exclusively, the following:

- A map showing the location of the CMMP office and permitted accesses in relation to the local area, highlighting the nearby bus stops and associated times of bus services using these stops.
- Details of services that stop at the railway station and bus station, highlighting the private staff transport service, including relevant timetable information;
- Information relating to traffic-related environmental concerns, congestion problems and car sharing to raise awareness;
- Details of local accommodation available;
- Details of car sharing scheme;
- Details of private staff transport service collection points and frequencies;
- Details and maps of local cycle and walking routes
- Details of provisions made for cyclists;
- Rules for car parking; and
- Details of the "guaranteed ride home scheme".

10.1.2. PTP Notice Board

152. A PTP noticeboard will be provided within the communal area of the CMMP office. This may be within the foyer/reception or within the break-out area. It will provide a concise summary of the information contained within the PTP Welcome Pack. The noticeboard will provide contact details for the TPC and any upcoming promotional events. The information will be kept up to date and relevant by the TPC.

10.2. Travel Database

153. The TPC will collate data on a monthly basis, having been recorded by drivers of private staff transport service and through spot checks of vehicle occupancy, to calculate the proportions of staff travelling by private staff transport service and average car occupancy. The information recorded will be put into a database to monitor the monthly figures and identify any trends that may lead to targets being missed.

154. Information contained within the database will inform the review process which will be carried out in conjunction with ESC and SCC Highways Authority.

10.3. Public Transport

155. The TPC will encourage the use of public transport as a mode of travel to work by implementing the following initiatives:

- Provide up-to-date public transport information, including route maps and timetables and journey times, with the Staff Welcome Pack and on staff notice-boards;
- Provide details of local taxi companies;
- Provide regular private staff transport collection and drop-off at Lowestoft rail station;
- Provide secure lockers to allow tools and equipment to remain on-site;

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- Liaise regularly with local public transport operators to ensure that information remains valid;
- Liaise with local public transport operators to attempt to negotiate a discount for site workers; and
- Provide details of the websites and telephone advice services to enable staff to obtain details on their individual journey requirements, including the Transport Direct journey planner and Traveline (Tel 0871 200 2233).

156. The following measures may also be considered in order to encourage public transport use:

- Negotiated discounts for employees from bus or rail companies;
- Interest-free loans to help employees purchase public transport season tickets; and
- Vouchers to purchase public transport season tickets, or taster tickets.

10.4. Private Staff Transport Service

157. All of the necessary off-shore specialist staff are unlikely to live within the local area. These construction phase staff will stay during the week within rented or hotel accommodation in and around Lowestoft. A minibus service will be considered, if there is sufficient demand, to provide a pickup round 'on request' from local hotels and other accommodation where staff are staying. The minibus would also be used pick up staff from agreed car parking arrangements outside of Lowestoft. The minibus pick-up locations will be further developed when details of locations of accommodation of workers are available.

158. Details of these collection points will be provided within the Welcome Packs for all staff. The locations will be reviewed, based on demand, and could result in wider coverage in order to meet demand.

159. This will reduce the number of vehicle movements travelling on the local road network.

10.5. Walking

160. Clear, up to date route maps will be provided to each employee as part of the Welcome Pack and displayed on the PTP noticeboard. The maps will show pedestrian friendly routes to residential areas, hotels and public transport hubs. Promotional material highlighting the benefits of walking to work will be provided to all staff. The promotional material will be included within the staff welcome packs and displayed on the PTP noticeboard.

161. The following measures will be considered in order to encourage staff to walk to work where possible:

- provision of free personal alarms and umbrellas (on request) for walkers; and
- promotional events to encourage behaviour change such as Walk to Work Week.

10.6. Cycling

162. The TPC will encourage cycling as an alternative mode of travel to work by implementing the following initiatives:

- Provide easily located, secure and covered cycle parking. All staff will be made aware of this provision;
- Provide changing facilities (including showers), secure lockers to allow tools and equipment to remain on-site; and clothes drying facilities for walkers and cyclists;
- Provide a communal toolbox, to include puncture repair kit, cycle tools, oil, etc;
- Promote the availability of cycling information, including clear up-to-date route maps and useful tips and guidance, from, for example, the Sustrans website (https://www.sustrans.org.uk/). The maps will show cycle friendly routes to residential areas, hotels and public transport hubs. The maps will be included within the staff Welcome Packs and displayed on the PTP noticeboard;
- Provide promotional material highlighting the benefits of cycling to work. The promotional material will be included within the staff Welcome Packs and displayed on the PTP noticeboard.
- Provision of free cycle safety equipment for employees, such as high-vis vests and cycle lights;
- Interest-free loans (Cycle to Work Scheme) or vouchers to purchase bikes, or other cycle equipment;
- Promotional events to encourage behaviour change, such as Bike to Work Week.
- Promote the implementation of a Bicycle Users Group or cycle training schemes to help encourage less confident or new cyclists;
- Investigate the potential for staff to hire bikes on a short-term basis for those staying locally; and
- Establish contact with the senior cycling officer at ESC to ensure that up-to-date information is available regarding cycle routes and other facilities for cyclists in the vicinity of the site.

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163. The following measures will be considered in order to encourage cycle use:

- Negotiate discounts with cycle retailers for employees; and
- Provision of a pool of bikes which would be available for workers to use travelling to and from the port; with appropriate equipment (including locks, helmets and lights):

10.7. Car Sharing Scheme

164. Car sharing is likely to have the potential to significantly reduce the number of single occupancy trips to the site. The majority of construction workers will work in teams and therefore, if they require temporary accommodation in the area, are likely to reside in the same location. This will naturally lead to car sharing as frequently occurs on any construction project. However, for those who do not benefit from the above circumstances, the TPC will set up a car sharing scheme / register. Staff will be consulted by the TPC to allow potential car sharers to register an interest and provide details of their journey to and from work. The TPC will then identify suitable matches for staff that may be able to share their journeys to and from work.

165. A travel survey will find compatible employees and identify car sharing opportunities and the PTP will consider providing dedicated car parking bays for car sharers, which would not be available to singular occupied vehicles.

166. In order to reassure staff, the TPC will provide a guaranteed ride home in emergency situations or when a car share arrangement falls through. Staff will also be made aware of the Lift Share scheme (www.liftshare.com).

167. Information on the car sharing scheme will be included within the staff Welcome Packs and displayed on the PTP noticeboard.

168. Where possible, consideration of shift start and finish times will take into account traffic peak times, these may be made flexible in order to allow employees using all modes of transport to avoid busy periods on the road.

10.8. Car Parking Management

169. Car parking demand would be generated by the following different user groups, which roughly split as:

- onshore personnel full time in Lowestoft;
- visiting onshore personnel not based in Lowestoft full time;
- offshore personnel; and
- external visitors/guests.

170. A key mechanism to ensure compliance with the PTP will be to restrict parking spaces in order to manage and promote sustainable transport use. Total parking provision for employees would be in line with the employee vehicle trips (i.e. one space per arrival). The TPC will assess their workforce and would optimise the number of single occupancy, car share and minibus spaces to accord with the benchmark targets. A permit system will be adopted to allocate these spaces and the car parking spaces. All employees will be required to park in designated areas and display their parking permit to prevent unauthorised parking. Employees not parking their vehicle in designated areas or not displaying their permit will be subject to an enforcement action (see Section 11.3).

171. Car parking could be allocated to the staff that need them most, such as construction staff who have no choice but to travel by car as they are travelling from a long distance and/or have materials/tools that need bringing to the site. It is expected that car parking would be limited for offshore personnel, as they are likely to be at sea for days at a time, and non-local staff as they will be staying in local accommodation within walking/cycling distance or could be picked up by staff minibus.

172. Electric charging points for electric vehicles will be provided on site in accordance with the Suffolk Guidance for Parking, Technical Guidance, 2019.

173. Single occupancy parking would only be permitted if authorised by pre-booking.

174. The demand and supply of the car parking area will also be monitored on a monthly basis. Any additional parking requirements would be identified in advance by prior notification and provision made where possible.

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10.9. Welfare and Catering Facilities

175. To avoid the need for employees to drive off site during the working day for lunch, welfare facilities will be provided at the port during periods of use, this will include an area for employees to prepare and eat lunch.

10.10. Guaranteed Lift Home

176. The TPC will set up and manage a system to ensure that anyone who did not travel in their own car has a guaranteed lift home in the event of an unforeseen problem e.g. picking up a sick child from school. This aims to encourage the use of car sharing, minibuses, cycling, walking, and public transport by giving users the security of knowing they can return home quickly in an emergency.

11. MONITORING AND ENFORCEMENT

11.1. Monitoring

177. Every 3 months during the construction phase, the TPC will undertake a comprehensive review of the performance of the PTP. The objective will be to measure the success of the scheme against its targets, and to identify the potential for refinements. It will also allow for the update of staffing numbers and the likely shift patterns, tides and location of staff.

178. The TPC will compile a report outlining the results, together with the results of ongoing monitoring throughout the preceding period, as detailed in Section 11.2. The report will comment on the overall success of the PTP and will set out initiatives for the following 6 months.

179. The TPC will monitor travel on a monthly basis throughout the construction period and will report to ESC and SCC every three months (within 4 weeks of the end of that reporting period, as overseen by EATL's Onsite Consents Compliance Manager).

180. The monitoring of the PTP is important for the following reasons:

- It will demonstrate to ESC and SCC that the aims and objectives of the PTP are being achieved;
- It justifies the commitment of the TPC and of other resources;
- It maintains support for the PTP by reporting successes; and
- It identifies any measures that are not working or problems with the approach of the PTP.

11.1.1. Staff Surveys

181. The major element of the review will involve the issuing of a staff travel survey. The initial PTP Welcome Packs will contain links to an online Travel Survey (for example, 'Smart Survey' (www.smartsurvey.co.uk) which enables easy collation, analysis and summary).

182. Thereafter a survey will be undertaken in advance of each 6-monthly review. The reviews should take place at the same times during each year during a neutral month in order to avoid any seasonal variations. The surveys should remain consistent to facilitate accurate comparisons and clear conclusions. The surveys will be incentivised with a suitable transport related voucher to encourage participation.

183. The results of the surveys and on-site records will provide up-to-date modal-split information for comparison with the original data set compiled at the introduction of the PTP. The surveys will be used to monitor the number of staff using the minibus, car share syndicates, car park utilisation and the average car occupancy, while spot checks will identify any deficiencies in cycle parking provision. Cycling trips would be monitored simultaneously with car park occupancy and those entering the site would be cross referenced to their journey origin in order to discourage parking locally and then cycling into site. The results will then be compared with the modal share targets identified in Section 9 of this PTP. In addition, feedback would be sought from the workforce during site briefings to gain an understanding of travel habits and to seek suggestions for improving the PTP.

184. On arrival to site each day, workers will be required to sign in. Provision will be made on the sign in sheet for workers to record their mode of transport taken that day. This will provide a large amount of important data for the TPC to review and evaluate which measures of the PTP are successful and where amendments may need to be made.

185. The local highway network will regularly be observed by the TPC to check for evidence of overspill parking. Minibus pick up points will also be checked to ensure personnel are using the designated parking areas.

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186. The TPC will develop the monitoring programme in conjunction with SCC Highways Authority to ensure that the monitoring procedures are appropriate. The TPC will maintain a monitoring table of progress to key PTP targets based on the results of the monitoring travel surveys.

187. This PTP is a dynamic, living document that will be updated as required following review of monitoring and survey outputs, to ensure that the aims and objectives represent the up-to-date situation in respect of travel and access. Through monitoring, should it become apparent that the aims of the PTP are not being achieved through the measures identified in this document, then additional measures will be identified, discussed with SCC Highways Authority and implemented where possible.

11.2. Reporting

188. The TPC will produce a Quarterly Monitoring Report. A typical structure for the Quarterly Monitoring Report would be as follows:

- Introduction and Background – this will provide detail with regards to the types of works being undertaken and number of construction workers and will include the TPC Contact Details;
- Results of Surveys and Monitoring – the TPC will collate the results of surveys, staff briefings and monitoring that have been undertaken. Where appropriate, the results of the surveys undertaken will be compared to the targets defined in the PTP;
- Breaches, Complaints and Corrective Actions– setting out details of any identified PTP breaches and complaints received (if any) and corrective or follow up actions (complaints and corrective actions to be reported by email within 48 hours, summarised in the Quarterly Monitoring Report and discussed as necessary at the Implementation Meetings (generally bi-monthly, increasing to monthly at times of peak activity). Information on near misses will also be included in this section;
- Achievements – this will include the work undertaken over the previous period with evidence and examples;
- Specific Measures – this will detail how all measures from the PTP have been implemented;
- Summary – this will detail whether the PTP is on track to meet its targets and if not, why not; and
- Future Plan – this will detail any amendments to the PTP for the next period. This will include any specific outcomes or desired results and the details of any additional measures that are to be included in the PTP to ensure compliance with the targets set out in Section 9. Where needed, such measures will be discussed and agreed with SCC and ESC.
- Appendices.

189. The Quarterly Monitoring Reports will provide an evidence base to identify the need to undertake corrective action. The Quarterly Monitoring Reports shall be issued by the TPC to ESC and SCC within 4 weeks of the end of that reporting period. The system for their review and discussion will be agreed with ESC and SCC during the development of the PTP by the TPC, prior to commencement on site. ESC and SCC would, in any case, be informed of any complaints within 48 hours.

11.3. Enforcement

11.3.1. Introduction

190. The consequences of not meeting the PTP targets would be an increase in employee traffic on the highway network, potentially leading to increases in driver delay and other environmental effects. It is therefore essential that the TPC can quickly react to any breaches and implement corrective processes. This section therefore provides a summary of the mechanisms that would ensure that the PTP is effectively enforced.

11.3.2. Potential Breaches

191. To ensure that the aims of the PTP can be effectively enforced it is important to define what would constitute a breach. The PTP therefore considers that the following would constitute a breach of the PTP whereby corrective measures would be required:

1. Construction workers overspill parking on the public highway; and
2. Construction workers parking without a parking permit.

11.3.3. Corrective Process

192. On receipt of a report of a potential breach, the TPC would investigate the circumstances and compile a report for ESC and SCC within seven working days. The report would outline the outcome of the investigation and what corrective action (if necessary) had been implemented. If the breach is found to be material, the following three stage correction process will be followed:

- Stage one – SCC confirms a breach and requests the TPC to review the data and concerns. SCC and the TPC would then agree the extent of the breach of controls and agree action. This is likely to be a contractor warning at this stage;

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- Stage two – If a further material breach is identified the contractor would be given a further warning and required to involve individuals / subcontractors / suppliers to produce an action plan to outline how the issue would be rectified and any additional mitigation measures proposed. The action plan would identify a strategy with a duration of not more than seven working days to correct the breach.
- Stage three – Should further breaches still occur, the contractor would be required to remove the offender from site and the contractor/supplier would receive a formal warning. Any continued breaches by individuals of the supplier/contractor may be dealt with by the formal dispute procedures of the contract.

193. Failure to follow the performance standards (including the correction process) or continued breaches would be addressed by contractual measures between EATL and the contractor.

194. Individual employee breaches will be addressed through UK employment law whereby the three-stage process outlined above will form the basis for disciplinary proceedings.

195. Further corrective actions would be discussed and agreed with ESC and SCC as necessary and appropriate. For example, if it is agreed that notwithstanding implementation of the corrective process above targets cannot be met for the existing works programme, alternative options will be investigated, for example the re-programming of the works.

12. ACTION PLAN

196. An Action Plan has been devised in order to provide an indication of the likely direction of the PTP. Table 12-1 provides a Preliminary Action Plan.

Table 12-1 Preliminary Action Plan

Action	Comment
Produce Staff Welcome Packs	Review Welcome Packs with SCC at least one month before construction starts. To contain information about public transport, on-site facilities and accommodation options.
Develop PTP with updated staffing information	Develop the content of the PTP based on details provided by the appointed successful contractors. Targets to be included for numbers of staff travelling using different transport modes.
Receive initial staff travel surveys	Undertake within 1 month of site occupation.
Produce first PTP Review	As required, based on survey results and any scheme changes.
Create staff car sharing database	Identify potential matches for opportunity to car share. Within 1 month of commencement of offshore works.
Regular review and update of the PTP	Regularly review the transport conditions and staff travel patterns for opportunities to improve the PTP.
Undertake further staff travel surveys	Undertake on a 6 monthly basis
Produce Quarterly Review during construction	Based on survey results and any scheme changes.

202. The above key actions will be developed throughout the evolution of the PTP and the construction phase.

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13. REFERENCES

Suffolk County Council, (September 2022) *Suffolk Travel Plan Guidance*, https://thewaytogosuffolk.org.uk/wp-content/uploads/2022/09/2022-09-13-Suffolk-Travel-Plan-Guidance-Third-Edition.pdf

Suffolk County Council, *Suffolk Guidance for Parking*, Suffolk Guidance for Parking - 31 October 2023

Department for Levelling Up, Housing and Communities, *Travel Plans, Transport Assessments and Statements (2014):* Travel Plans, Transport Assessments and Statements - GOV.UK (www.gov.uk)

Department for Levelling Up, Housing and Communities, *National Planning Policy Framework (2023):* National Planning Policy Framework (publishing.service.gov.uk)

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Lowestoft CMMP Location

Rev	Date	By	Comment
A	14/12/2023	QF	First Issue

Original A3 Plot Scale 1:50,000

0 1,000 2,000 Metres

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EA THREE Lowestoft Port Travel Plan

FIGURE 1 Lowestoft CMMP Location Plan

Drg No	404.5356.00006.00115.0
Rev	0
Date	14/12/2023
Layout	N/A

Document Path: P:\05356 - GoBe Consultants Ltd\00006 East Anglia Three\Tech\GIS\Dwgs\Wking\EA3\2023 12 Lowestoft EA3\404.5356.00006.00115.0 Site Location.mxd

652000
654000
656000
294000
292000
Oulton
Normanston
Oulton Broad
LOWESTOFT
South Beach
Coordinate System: British National Grid
Projection: Transverse Mercator
Datum: OSGB 1936
Units: Meter

Lowestoft CMMP Location
Area Within 400 m of Site Access
Area Within 800 m of Site Access
Area Within 1200 m of Site Access
Area Within 1600 m of Site Access

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Rev	Date	By	Comment
A	14/12/2023	QF	First Issue

Original A3 Plot Scale 1:15,000

0 300 600 Metres

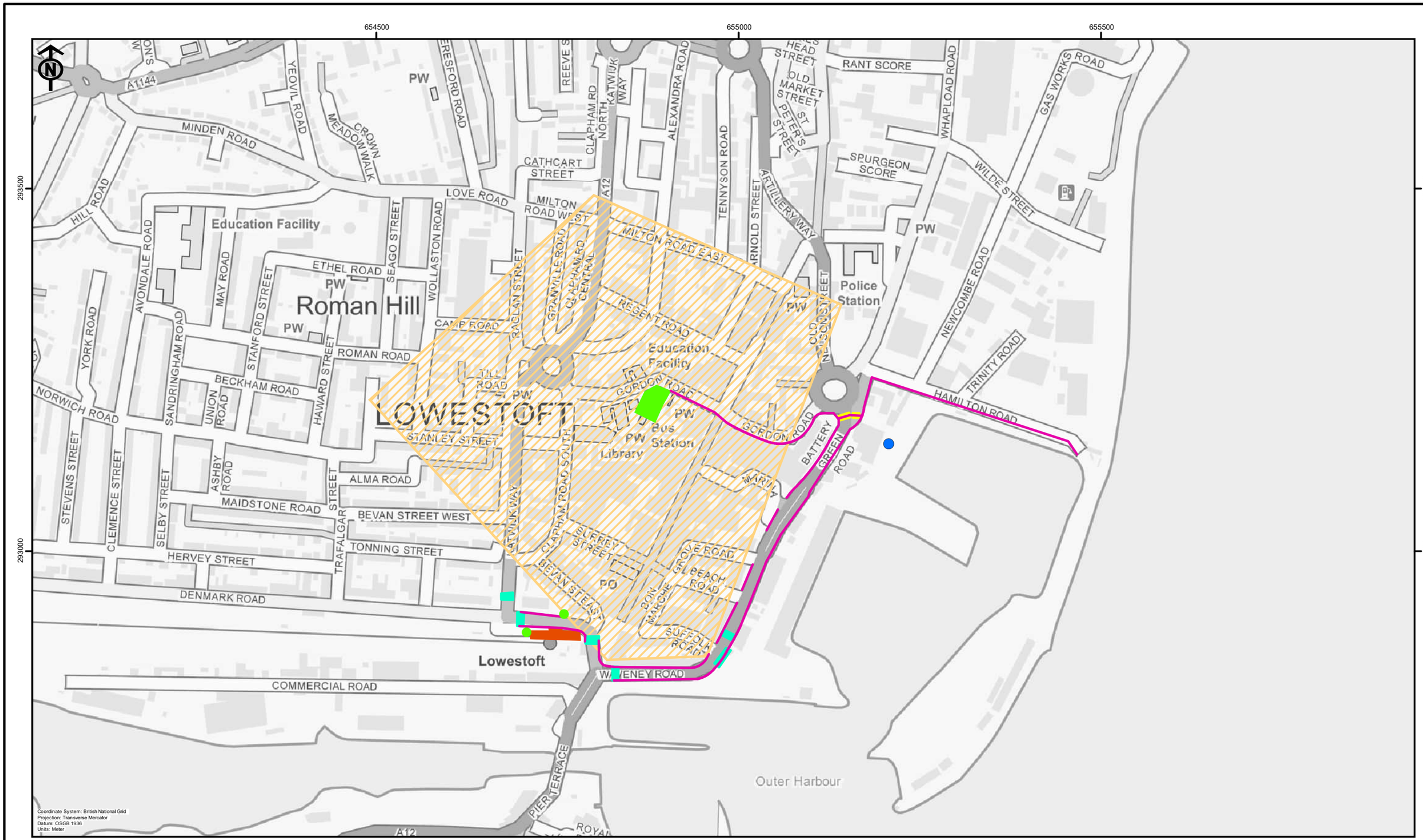
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EA THREE Lowestoft Port Travel Plan

FIGURE 2 Pedestrian Isochrone Plan

Drg No	404.5356.00006.00116.0
Rev	0
Date	14/12/2023
Layout	N/A

Document Path: P:\05356 - GoBe Consultants Ltd\00006 East Anglia Three\Tech\GIS\Dwgs\Wking\EA3\2023 12 Lowestoft EA3\404.5356.00006.00116.0 Pedestrian Isochrone Plan.mxd



- Lowestoft CMMP Location
- Footway Linking Site To Public Transport Links
- Bus Stop
- Bus Station
- Railway Station
- Signalled Pedestrian Crossing
- Uncontrolled Pedestrian Crossing
- Commercial Zone

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Rev	Date	By	Comment
A	14/12/2023	QF	First Issue

Original A3 Plot Scale 1:5,000

0 100 200 Metres

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EA THREE Lowestoft Port Travel Plan

FIGURE 3 Pedestrian Amenity Plan

Drg No	404.5356.00006.00117.0
Rev	0
Date	14/12/2023
Layout	N/A

Document Path: P:\05356 - GoBe Consultants Ltd\00006 East Anglia Three\Tech\GIS\Dwgs\Wking\EA3\2023 12 Lowestoft EA3\404.5356.00006.00117.0 Pedestrian Amenity Plan .mxd

645000 650000 655000 660000

295000 290000

Coordinate System: British National Grid
Projection: Transverse Mercator
Datum: OSGB 1936
Units: Meter

Lowestoft CMMP Location
National Cycle Route (NCN)
Regional Cycle Route (RCN)
Cycle Link Route
Area Greater Than 5000 m From Site

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Rev	Date	By	Comment
A	14/12/2023	QF	First Issue

Original A3 Plot Scale 1:50,000

0 1,000 2,000 Metres

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EA THREE Lowestoft Port Travel Plan

FIGURE 4 Cycle Accessibility Plan

Drg No	404.5356.00006.00118.0
Rev	0
Date	14/12/2023
Layout	N/A

Document Path: P:\05356 - GoBe Consultants Ltd\00006 East Anglia Three\Tech\GIS\Dwgs\Wking\EA3\2023 12 Lowestoft EA3\404.5356.00006.00118.0 Cycle Accessibility Plan.mxd