East Anglia TWO Offshore Windfarm

Appendix 28.4

Landscape Assessment

Environmental Statement
Volume 3

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Glossary of Acronyms

AONB	Area of Outstanding Natural Beauty
LCT	Landscape Character Type
NNR	National Nature Reserve
SAC	Special Area of Conservation
SPA	Special Protection Area
SSSI	Site of Special Scientific Interest
ZTV	Zone of Theoretical Visibility

Glossary of Terminology

Applicant	East Anglia TWO Limited.
Construction operation and maintenance platform	A fixed offshore structure required for construction, operation, and maintenance personnel and activities.
Development area	The area comprising the onshore development area and the offshore development area (described as the 'order limits' within the Development Consent Order).
East Anglia TWO project	The proposed project consisting of up to 75 wind turbines, up to four offshore electrical platforms, up to one offshore 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.
East Anglia TWO windfarm site	The offshore area within which wind turbines and offshore platforms will be located.
National electricity grid	The high voltage electricity transmission network in England and Wales owned and maintained by National Grid Electricity Transmission
European site	Sites designated for nature conservation under the Habitats Directive and Birds Directive, as defined in regulation 8 of the Conservation of Habitats and Species Regulations 2017 and regulation 18 of the Conservation of Offshore Marine Habitats and Species Regulations 2017. These include candidate Special Areas of Conservation, Sites of Community Importance, Special Areas of Conservation and Special Protection Areas.
Evidence Plan Process (EPP)	A voluntary consultation process with specialist stakeholders to agree the approach to the EIA and the information required to support HRA.
Horizontal directional drilling (HDD)	A method of cable installation where the cable is drilled beneath a feature without the need for trenching.
Inter-array cables	Offshore cables which link the wind turbines to each other and the offshore electrical platforms.
Landfall	The area (from Mean Low Water Springs) where the offshore export cables would make contact with land, and connect to the onshore cables.
Landscape character	A distinct, recognisable and consistent pattern of elements in the landscape that makes one landscape different from another, rather than better or worse.
Landscape effects	Effects on the landscape as a resource in its own right.
Meteorological mast	An offshore structure which contains metrological instruments used for wind data acquisition
Monitoring buoys	Buoys to monitor in situ condition within the windfarm, for example wave and metocean conditions.
Marking buoys	Buoys to delineate spatial features / restrictions within the offshore development area.
Offshore cable corridor	This is the area which will contain the offshore export cables between offshore electrical platforms and landfall.

Offshore development area	The East Anglia TWO windfarm site and offshore cable corridor (up to Mean High Water Springs).
Offshore electrical infrastructure	The transmission assets required to export generated electricity to shore. This includes inter-array cables from the wind turbines to the offshore electrical platforms, offshore electrical platforms, platform link cables and export cables from the offshore electrical platforms to the landfall.
Offshore electrical platform	A fixed structure located within the windfarm area, containing electrical equipment to aggregate the power from the wind turbines and convert it into a more suitable form for export to shore.
Offshore export cables	The cables which would bring electricity from the offshore electrical platforms to the landfall. These cables will include fibre optic cables.
Offshore infrastructure	All of the offshore infrastructure including wind turbines, platforms, and cables.
Offshore platform	A collective term for the offshore construction, operation and maintenance platform and the offshore electrical platforms.
Platform link cable	Electrical cable which links one or more offshore platforms. These cables will include fibre optic cables.
Safety zones	A marine area declared for the purposes of safety around a renewable energy installation or works / construction area under the Energy Act 2004.
Scour protection	Protective materials to avoid sediment being eroded away from the base of the foundations as a result of the flow of water.
Seascape	Landscapes with views of the coast or seas, and coasts and adjacent marine environments with cultural, historical and archaeological links with each other.
Visual amenity	The overall pleasantness of the views people enjoy of their surroundings, which provides an attractive visual setting or backdrop for the enjoyment of activities of the people living, working, recreating or travelling through an area.
Visual effects	Effects on specific views and on the general visual amenity experienced by people.

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28.4 Landscape Assessment

28.1 Potential Impacts during Construction, Operation and Decommissioning

1. A preliminary assessment of the landscape receptors in the study area has been undertaken using zone of theoretical visibility (ZTV) analysis (***Figure 28.17***) and site survey, to identify which of the landscape receptors are likely to be affected by the construction and operation of the offshore infrastructure of the proposed East Anglia TWO project. This preliminary assessment is presented in ***Table A28.1*** and ***Table A28.2*** below, which identifies the landscape character types (LCTs) and landscape designations that have the potential to undergo significant effects as a result of the construction and operation of the offshore infrastructure and require to be assessed in full; and those that do not have potential to undergo potential significant effects that can be scoped out of further assessment.

Table A28.1 Landscape Character Types (LCTs)

Landscape Character Assessment/ Type		Distance from the offshore windfarm site (km)	Theoretical visibility of proposed East Anglia TWO	Actual visibility of proposed East Anglia TWO	Preliminary Assessment
South Norfolk District Landscape Character Assessment, 2006[1]					
A5.	Waveney River Valley	50	Partial area of LCT has low theoretical visibility (1-10 wind turbines).	Inland location, substantial intervening screening.	No potential for significant effects - scoped out of further assessment.
B5.	Chet Tributary Farmland	52.2	Limited area of LCT has low theoretical visibility (1-10 wind turbines).	Inland location, substantial intervening screening.	No potential for significant effects - scoped out of further assessment.
C2.	Thurlton Tributary Farmland with Parkland	42.3	Partial area of LCT has high theoretical visibility (51-60 wind turbines).	Inland location, substantial intervening screening.	No potential for significant effects - scoped out of further assessment.

[1] Potential landscape effects of the East Anglia TWO windfarm site on LCTs within Broadland and South Norfolk Districts will be scoped out of the assessment. Significant effects on the landscape character of LCTs within these districts are unlikely due to the long distance of the East Anglia TWO windfarm site from Broadland District (approximately 45km) and South Norfolk (approximately 37km); and the limited visibility to the sea and the East Anglia TWO windfarm site afforded from the landscapes in these districts, which are located further inland, low-lying and partially screened by landforms and intervening vegetation (woodland and hedgerows).

Landscape Character Assessment/ Type		Distance from the offshore windfarm site (km)	Theoretical visibility of proposed East Anglia TWO	Actual visibility of proposed East Anglia TWO	Preliminary Assessment
Broads Authority Landscape Character Assessment, 2012[2]					
0.	Arable Lands, outside of Broads	42.7	Limited area of LCT has low theoretical visibility (1-10 wind turbines).	Inland location, substantial intervening screening.	No potential for significant effects - scoped out of further assessment.
2.	Bungay/ Ditchingham to Shipmeadow	48.6	Limited area of LCT has low theoretical visibility (1-10 wind turbines).	Inland location, substantial intervening screening.	No potential for significant effects - scoped out of further assessment.
3.	Barsham, Gillingham and Beccles Marshes	46.5	Limited area of LCT has low theoretical visibility (1-10 wind turbines).	Inland location, substantial intervening screening.	No potential for significant effects - scoped out of further assessment.
4.	Aldeby to Burgh St Peter	41.6	Limited area of LCT has low theoretical visibility (1-10 wind turbines).	Inland location, substantial intervening screening.	No potential for significant effects - scoped out of further assessment.
7.	Burgh to St Peter to Haddiscoe Marshes	41.9	Widespread area of LCT has low theoretical visibility (1-10 wind turbines).	Inland location, substantial intervening screening.	No potential for significant effects - scoped out of further assessment.
9.	St Olaves to Burgh Castle	47.3	No theoretical visibility.	Inland location, substantial intervening screening.	No potential for significant effects - scoped out of further assessment.
13.	Claxton to Hardley Marshes	53.9	Limited area of LCT has low theoretical visibility (1-10 wind turbines).	Inland location, substantial intervening screening.	No potential for significant effects - scoped out of further assessment.

[2] Potential landscape effects of the East Anglia TWO windfarm site on LCTs within Broadland and South Norfolk Districts will be scoped out of the assessment. Significant effects on the landscape character of LCTs within these districts are unlikely due to the long distance of the East Anglia TWO windfarm site from Broadland District (approximately 45km) and South Norfolk (approximately 37km); and the limited visibility to the sea and the East Anglia TWO windfarm site afforded from the landscapes in these districts, which are located further inland, low-lying and partially screened by landforms and intervening vegetation (woodland and hedgerows).

Landscape Character Assessment/ Type		Distance from the offshore windfarm site (km)	Theoretical visibility of proposed East Anglia TWO	Actual visibility of proposed East Anglia TWO	Preliminary Assessment
16.	Norton Marshes to Haddiscoe dismantled railway	47.1	Partial area of LCT has moderate theoretical visibility (11-30 wind turbines).	Inland location affords substantial screening from much of LCT	No potential for significant effects - scoped out of further assessment.
17.	Chet Valley	53.7	No theoretical visibility.	Inland location, substantial intervening screening.	No potential for significant effects - scoped out of further assessment.
18.	Haddiscoe Island	48.7	Limited area of LCT has low theoretical visibility (1-10 wind turbines). Majority area of LCT has no theoretical visibility.	Inland location, substantial intervening screening.	No potential for significant effects - scoped out of further assessment.
19.	Halvergate Marshes	51.5	Widespread area of LCT has low theoretical visibility (1-10 wind turbines).	Inland location, substantial intervening screening.	No potential for significant effects - scoped out of further assessment.
20.	Breydon Water	51	Limited area of LCT has low theoretical visibility (1-10 wind turbines). Majority area of LCT has no theoretical visibility.	Inland location, substantial intervening screening.	No potential for significant effects - scoped out of further assessment.
21.	Church Farm, Burgh Castle, Marshes	49.7	No theoretical visibility.	Inland location, substantial intervening screening.	No potential for significant effects - scoped out of further assessment.
25.	Lower Bure Arable Marshlands	51.3	Widespread area of LCT has low theoretical visibility (1-10 wind turbines).	Inland location, substantial intervening screening.	No potential for significant effects - scoped out of further assessment.

Landscape Character Assessment/ Type		Distance from the offshore windfarm site (km)	Theoretical visibility of proposed East Anglia TWO	Actual visibility of proposed East Anglia TWO	Preliminary Assessment
Great Yarmouth Borough Landscape Character Assessment, 2008[3]					
A.	Rural Wooded Valleys	44.2	No theoretical visibility.	Inland location, substantial intervening screening.	No potential for significant effects - scoped out of further assessment.
C.	Broads River Valley	49.4	No theoretical visibility.	Inland location, substantial intervening screening.	No potential for significant effects - scoped out of further assessment.
E.	Dunes, Coastal Levels and Resorts	42.8	Widespread area of LCT has high theoretical visibility (51-60 wind turbines).	Coastal location affords open views with limited screening; however, it is heavily influenced by the urban/developed coastline.	No potential for significant effects - scoped out of further assessment.
G.	Settled Farmland	45.1	Partial area of LCT has moderate theoretical visibility (11-30 wind turbines).	Inland location affords substantial screening from much of LCT.	No potential for significant effects - scoped out of further assessment.
H.	Tributary Valley Farmland	43.1	Limited area of LCT has low theoretical visibility (1-10 wind turbines).	Inland location, substantial intervening screening.	No potential for significant effects - scoped out of further assessment.
U.	Urban	43.2	Partial area of LCT has high theoretical visibility (51-60 wind turbines).	Developed urban area affords substantial screening from much of LCT.	No potential for significant effects - scoped out of further assessment.

[3] Only the visual/perceptual characteristics of onshore LCTs in Great Yarmouth with seascape as a defining attribute will be relevant when considering potential effects, given that there will be no alteration to physical features as a result of offshore development.

Landscape Character Assessment/ Type		Distance from the offshore windfarm site (km)	Theoretical visibility of proposed East Anglia TWO	Actual visibility of proposed East Anglia TWO	Preliminary Assessment
Suffolk Landscape Character Assessment, 2011[4]					
1.	Ancient Estate Claylands	34.3	Widespread area of LCT has high theoretical visibility (51-60 wind turbines)	Inland location, substantial intervening screening.	No potential for significant effects - scoped out of further assessment.
3.	Ancient Plateau Claylands	38.7	Widespread area of LCT has high theoretical visibility (51-60 wind turbines)	Inland location, substantial intervening screening.	No potential for significant effects - scoped out of further assessment.
5.	Coastal Dunes and Shingle Ridges	32.5	Widespread area of LCT has high theoretical visibility (51-60 wind turbines).	Coastal location affords open views with limited screening.	Potential for significant effects that require further assessment.
6.	Coastal Levels	32.6	Widespread area of LCT has high theoretical visibility (51-60 wind turbines).	Coastal location affords open views with limited screening.	Potential for significant effects that require further assessment.
7.	Estate Sandlands	32.6	Widespread area of LCT has high theoretical visibility (51-60 wind turbines).	Coastal location affords open views with limited screening.	Potential for significant effects that require further assessment.
8.	Open Coastal Fens	33.1	Partial area of LCT has high theoretical visibility (51-60 wind turbines).	Coastal location affords open views with limited screening.	Potential for significant effects that require further assessment.
10.	Plateau Claylands	35.1	Widespread area of LCT has high theoretical visibility (51-60 wind turbines)	Inland location, substantial intervening screening.	No potential for significant effects - scoped out of further assessment.

[4] Only the visual/perceptual characteristics of onshore LCTs in the Suffolk County Council Landscape Character Assessment that have seascape as a defining attribute are likely to be relevant when considering potential effects, given that there will be no alteration to physical features as a result of offshore developments.

Landscape Character Assessment/ Type		Distance from the offshore windfarm site (km)	Theoretical visibility of proposed East Anglia TWO	Actual visibility of proposed East Anglia TWO	Preliminary Assessment
11.	Plateau Estate Farmlands	39.3	Widespread area of LCT has low to high theoretical visibility (1-60 wind turbines).	Inland location, substantial intervening screening.	No potential for significant effects - scoped out of further assessment.
14.	Rolling Estate Claylands	37.5	Limited area of LCT has low theoretical visibility (1-10 wind turbines).	Inland location, substantial intervening screening.	No potential for significant effects - scoped out of further assessment.
15.	Rolling Estate Farmlands	49.1	No theoretical visibility.	Inland location, substantial intervening screening.	No potential for significant effects - scoped out of further assessment.
16.	Rolling Estate Sandlands	33.4	Widespread area of LCT has high theoretical visibility (51-60 wind turbines)	Inland location, substantial intervening screening.	No potential for significant effects - scoped out of further assessment.
17.	Rolling Valley Claylands	40.4	Limited area of LCT has low theoretical visibility (1-10 wind turbines).	Inland location, substantial intervening screening.	No potential for significant effects - scoped out of further assessment.
19.	Rolling Valley Farmlands and Furze	34	Widespread area of LCT has low theoretical visibility (1-10 wind turbines).	Inland location, substantial intervening screening.	No potential for significant effects - scoped out of further assessment.
20.	Saltmarsh and Intertidal Flats	35.5	Widespread area of LCT has either no theoretical visibility or low theoretical visibility (1-10 wind turbines), with only limited areas showing higher theoretical visibility.	Generally, extends inland and has substantial intervening screening by landforms between these low lying mars/intertidal areas the sea. Consists of extensive intertidal areas and saltmarsh, alongside the River Bultey and Ore, where character changes will not be readily experienced. Very low lying saltmarsh alongside the Butley / Ore contained by	No potential for significant effects - scoped out of further assessment.

Landscape Character Assessment/ Type		Distance from the offshore windfarm site (km)	Theoretical visibility of proposed East Anglia TWO	Actual visibility of proposed East Anglia TWO	Preliminary Assessment
				adjacent landform alongside these rivers, which generally prevent direct views of the East Anglia TWO windfarm site. Largest areas of LCT are located inland Aldeburgh, with the urban areas and vegetation of this settlement providing screening in coastward views.	
25.	Urban	32.5	Widespread area of LCT has high theoretical visibility (51-60 wind turbines).	Developed urban area affords substantial screening from much of LCT. Coastal locations afford open views with limited screening.	Potential for significant visual effects that require further assessment. Effects on urban areas assessed as part of visual effects assessment (settlements) in ***Appendix 28.5***. No potential for significant effects on urban landscape character – scoped out of further assessment.
26.	Valley Meadowlands	39.2	No theoretical visibility.	Inland location, substantial intervening screening.	No potential for significant effects - scoped out of further assessment.
27.	Valley Meadows and Fens	36.5	Limited area of LCT has low theoretical visibility (1-10 wind turbines). Majority area of LCT has no visibility.	Inland location, substantial intervening screening.	No potential for significant effects - scoped out of further assessment.
29.	Wooded Fens	32.8	Benacre Broad: Short coastal edge (of LCT consisting 450m length strip of sandy beach has theoretical	Benacre Broad: Short coastal edge of LCT consisting 450m length strip of sandy beach has visibility, but remaining areas consist of either	No potential for significant effects - scoped out of further assessment.

Landscape Character Assessment/ Type		Distance from the offshore windfarm site (km)	Theoretical visibility of proposed East Anglia TWO	Actual visibility of proposed East Anglia TWO	Preliminary Assessment
			visibility of 51-60 wind turbines, however the bodies of water and valley bottom of the broad extending to inland areas have reducing theoretical visibility, with low theoretical visibility (1-10 wind turbines) or no visibility from much of the LCT. Covehithe Broad: High theoretical visibility of 51-60 turbines over narrow coastal valley extending inland, with reduced visibility at inland edges.	extensive bodies of water, where character changes will not be readily experienced, or areas that will be substantially screened by intervening woodland on the higher ground of the surrounding wooded fen. Benacre Broad is surrounded by woodland on higher ground on all landward sides of the LCT, limiting actual visibility out along the coast and to the East Anglia TWO windfarm site apart from the small section of coastal edge adjacent to the sea. There may be some framed views out to sea, but these are not in the direction of the East Anglia TWO windfarm site. Changes to the character of the LCT as a whole are therefore considered to be limited. Covehithe Broad: Short coastal edge of LCT consisting 400m length strip of sandy beach has visibility, but remaining areas consist of either extensive bodies of water, where character changes will not be readily experienced, or areas that will be substantially screened by the landform rising at the coast between	

Landscape Character Assessment/ Type		Distance from the offshore windfarm site (km)	Theoretical visibility of proposed East Anglia TWO	Actual visibility of proposed East Anglia TWO	Preliminary Assessment
				the water bodies / marshes and the sea.	
31.	Wooded Valley Meadowlands and Fens	40.3	Limited area of LCT has low theoretical visibility (1-10 wind turbines). Majority area of LCT has no visibility.	Inland location, substantial intervening screening.	No potential for significant effects - scoped out of further assessment.

Table A28.2 Landscape Designations

Landscape Designation	Distance from the offshore windfarm site (km)	Theoretical visibility of East Anglia TWO windfarm site	Actual visibility of East Anglia TWO windfarm site	Preliminary Assessment
Suffolk				
Suffolk Coast and Heaths Area of Outstanding Natural Beauty (AONB)	32.5	Widespread area of AONB has high theoretical visibility (51-60 wind turbines). Partial areas of AONB with no theoretical visibility.	Field work has established actual visibility is limited. Coastal locations of AONB afford open views with limited screening, while inland areas afforded substantial intervening screening.	Potential for significant effects that require further assessment.
Suffolk Heritage Coast	31	Widespread area of Heritage Coast has high theoretical visibility (51-60 wind turbines). Partial areas of Heritage Coast with no theoretical visibility.	Field work has established actual visibility is limited. Coastal locations of Heritage Coast afford open views with limited screening, while river valleys/marshes extending inland afforded substantial intervening screening.	Potential for significant effects that require further assessment.
Parks & Gardens				
Somerleyton Hall	43.9	Partial area of Somerleyton Hall has high theoretical visibility (51-60 wind turbines).	Inland location, substantial intervening screening.	No potential for significant effects - scoped out of further assessment.
Belle Vue Park	38.3	Widespread area of Belle Vue Park has high theoretical visibility (51-60 wind turbines).	Extensively enclosed by mature parkland trees with the park itself. Industrial areas of Lowestoft Harbour/Ness Point influence the setting.	No potential for significant effects - scoped out of further assessment.

Landscape Designation	Distance from the offshore windfarm site (km)	Theoretical visibility of East Anglia TWO windfarm site	Actual visibility of East Anglia TWO windfarm site	Preliminary Assessment
Henham	37.7	Partial area of Henham has high theoretical visibility (51-60 wind turbines).	Inland location, substantial intervening screening.	No potential for significant effects - scoped out of further assessment.
Heveningham Hall	46.4	Limited area of Heveningham Hall has low to high theoretical visibility (1-60 wind turbines). Majority area of Heveningham Hall has no visibility.	Inland location, substantial intervening screening.	No potential for significant effects - scoped out of further assessment.
Glemham Hall	47	Limited area of Glemham Hall has low to high theoretical visibility (1-60 wind turbines). Majority area of Glemham Hall has no visibility.	Inland location, substantial intervening screening.	No potential for significant effects - scoped out of further assessment.
Campsey Ashe Park	46.7	Limited area of Campsey Ashe Park has low to high theoretical visibility (1-60 wind turbines). Majority area of Campsey Ashe Park has no visibility.	Inland location, substantial intervening screening.	No potential for significant effects - scoped out of further assessment.
Bawdsey Manor	49.0	Limited area of Bawdsey Manor has high theoretical visibility (1-60 wind turbines). Majority area of Bawdsey Manor has no visibility.	Although in a coastal location, substantial woodland screening within the grounds of Bawdsey Manor limit visibility. Manor and grounds are aligned obliquely to the south-east.	No potential for significant effects - scoped out of further assessment.
Norfolk				
The Broads National Park	39.3	Widespread area of The Broads National Park has low theoretical	Inland location, substantial intervening screening.	No potential for significant effects - scoped out of further assessment.

Landscape Designation	Distance from the offshore windfarm site (km)	Theoretical visibility of East Anglia TWO windfarm site	Actual visibility of East Anglia TWO windfarm site	Preliminary Assessment
		visibility (1-10 wind turbines) or no theoretical visibility.		

28.2 Potential Impacts during Construction, Operation and Decommissioning – Technical Assessment

2. The following tables set out a detailed technical assessment of the landscape effects of the construction and operation of the offshore infrastructure. This describes, in full technical detail, the likely significant effects of the construction and operation of the offshore infrastructure on each landscape receptor, assessing those landscape receptors that were identified in the preliminary assessment in ***Table A28.1*** and ***Table A28.2*** as having potential to be significantly affected.

28.2.1 Landscape Character Types

LCT 05: Coastal Dunes and Shingle Ridges			
Designations:	Suffolk Coast and Heaths AONB. Heritage Coast.	Viewpoints in LCT:	Viewpoints 2, 3 10, 11, 12, 13, 15, 16 and 18.
Baseline Description			

This LCT is found in narrow bands along the study area coast: short stretches to the north of Lowestoft; at Kessingland; from Southwold to the north side of Dunwich; and a long stretch from the south side of Dunwich Heath through to Bawdsey, including the substantial shingle spit of Orford Ness (***Figure 28.12***).

Key characteristics:

- Flat or gently rolling landform of shingle ridges or coastal dunes, formed by wave action and longshore drift of sand and stones. When forming beaches, shingle creates a long ridge backed by soft cliffs or saltmarsh.
- Apart from on Orford Ness there are no areas of natural transition from beach to saltmarsh because of the presence of sea defences.
- At Orford Ness a succession of shingle ridges has coalesced to form a broad, flat plain, although the long tail of the spit remains a broad ridge.
- Vast, open and uncluttered landscape, with a general lack of familiar points of reference at recognised scale.
- Arid and salty, making it very difficult for plants to colonise, however vegetated shingle, consisting of marram grass and sea kale, does make a contribution to the character.
- On the shingle beaches the intrusion of sea defence structures such as walls and groynes is readily apparent.
- In short stretches there is intensive tourist activity, beach huts and piers, however other commercial activity is not very apparent with only a small number of fishing boats now based on the beach.
- The most significant structures in this LCT are those related to military defence. A string of Martello towers were built from Aldeburgh to Felixstowe as a defence against Napoleon. These large towers are prominent features on this stretch of the coast, as can be seen at Bawdsey and Shingle Street.
- The two World Wars have left behind large numbers of structures along the coast, ranging from concrete gun batteries and pillboxes to anti-tank blocks. There is also the complex range of buildings at Orford Ness, from the early lighthouse to the Cobra Mist building and the World Service transmitter array.
- On Orford Ness, the uniqueness of the dynamic landform, remoteness/isolation and lack of familiar points of reference at a recognised scale, together with the presence of military buildings of unfamiliar and stark design, provide a distinctive bleakness and austere scenic quality, with a strong sense of place.
- Galloper and Greater Gabbard windfarms are more notable as characteristics in the seascape baseline from the southern parts of the LCT, between Orford Ness and Bawdsey, from where they are viewed at closest proximity and form development features on part of the horizon in clear visibility.

LCT 05: Coastal Dunes and Shingle Ridges	
	
Value	High

- Located within and forms part of the Suffolk Coast and Heaths AONB. In combination with adjacent coastal LCTs, contributes to the special qualities that define the nationally designated scenic qualities of the AONB.
- Majority of the LCT is also protected for its nature conservation value as a Site of Special Scientific Interest (SSSI)/Special Area of Conservation (SAC)/Special Protection Area (SPA)/National Nature Reserve (NNR) and the aesthetic aspects of these designated areas contributes to the distinct character.
- Relatively widespread coastal landscape character covering narrow band along the majority of the immediate coastal edge of the Suffolk coastline within the study area.
- The substantial shingle spit of Orford Ness is rare in terms of its scale (the 17.7km-long spit is the largest of its type on the east coast of England), its vegetated shingle habitat and its unique character and history.
- The LCT has notable recreational value as the focus for many forms of recreational and visitor activity at the coast, including informal seaside recreation, bathing and walking on the Suffolk Coastal Path.
- The scenic quality and interest of all stretches of the LCT is influenced by the simplicity of the main elements (shingle beach/sea/sky), the direct exposure to the seascape and the dynamic qualities of low-lying landscape adjacent to the powerful forces of the sea.
- Scenic qualities are varied and not always consistent between the different stretches of the LCT in the study area. In close proximity to Lowestoft, Kessingland and Aldeburgh, scenic qualities are influenced by the presence of seafront developments and activities; and lack the natural/remote qualities experienced from stretches between Southwold, Dunwich, Orford Ness and Bawsdey.
- The scenic qualities of the Sizewell to Thorpeness stretch of the LCT is particularly influenced by the presence of Sizewell Nuclear Power Station. Orford Ness is particularly influenced by a perception of remoteness and elemental, desolate, austere scenic qualities.

Sensitivity to change: *Combination of the value and susceptibility of the LCT*	
Susceptibility	Medium-high

- LCT has the potential to be influenced by the construction and operation of the offshore infrastructure due to its coastal location and exposure to the sea, however the potential change will not occur in the immediately associated nearshore seascape and is instead separated by large areas of open sea.

LCT 05: Coastal Dunes and Shingle Ridges	
• LCT is exposed to the changes arising offshore from the proposed East Anglia TWO project and has highest degree of exposure of the coastal LCTs in the study area, since there is very limited concealment/screening of views out to sea and the offshore waters. • The perceptual qualities of wildness, remoteness and tranquillity are susceptible to the influence of development, due to the contrast that it would have with the landscape, however the wind turbines will also relate rationally to the visual exposure and bleakness evident along some stretches of the LCT and to the existing energy generation influences along the coast which influence its baseline character. • Highly dynamic and fragile landscape, which is susceptible to changes arising from human activity, which can damage vegetated shingle structures.	
Sensitivity	High
The Coastal Dunes and Shingle Ridges LCT is a highly-valued landscape generally, recognised through AONB designation, with special qualities focusing on the simplicity of its main elements (shingle beach/sea/sky), the natural qualities of its vegetated dune and shingle habitats; its relative remoteness/inaccessibility along some stretches and traditional seaside influences of other stretches; the unique character of Orford Ness and the dynamic qualities of the exposed landscape near the powerful forces of the sea. The landscape is highly valued for recreation and the focus of visitor activity at the coast. The LCT is also assessed as having a medium-high susceptibility to changes arising from the construction and operation of the offshore infrastructure. It has strong associations with the sea and is directly exposed to the offshore waters in which the East Anglia TWO windfarm site is located, with very limited concealment/screening between this LCT and the open sea, however the potential change occurs far away and separated by vast areas of sea. On balance, the LCT is therefore assessed as having a high sensitivity to change (combination of its high value/medium-high susceptibility).	
Magnitude of change	
Geographic extent:	Regional
Geographically, the area of the LCT that may experience change as a result of visibility of the East Anglia TWO windfarm site is confined to the narrow band of Coastal Dunes and Shingle Ridges along the study area coast. The geographic extent of potential change resulting from the construction and operation of the offshore infrastructure on this LCT is confined in terms of it occurring almost entirely along the coast, within a narrow strip adjacent to the sea, however this LCT also extends along the majority of the coastline in the study area, so there is potential for changes to occur at a regional extent. The ZTV (***Figure 28.17***) shows that there will be high theoretical visibility of 51-60 wind turbines from almost the entirety of this LCT along the coastal edge, and in general this high level of visibility will occur, although the dunes and shingle ridges do provide some visual concealment/screening at the micro-level amongst this landform.	
Size/scale of change (construction, operation and decommissioning) to perceived characteristics:	
Area A: North of Lowestoft	Low
• The character of this stretch of the LCT to the north of Lowestoft is heavily influenced by the developed coast in Lowestoft, consisting of adjacent residential urban areas and extensive commercial/industrial development at Ness Point/Lowestoft Harbour. The construction and operation of the offshore infrastructure results in a low change to the developed characteristics of this stretch of the LCT. • The East Anglia TWO windfarm site is located oblique to the main orientation of this stretch of coast, to the south-east, beyond Gunton Cliff / Lowestoft Harbour, and is located at long distance offshore from this stretch of the LCT (36.1km) resulting in a small-scale change to its existing character.	
Area B: Kessingland	Medium-low

LCT 05: Coastal Dunes and Shingle Ridges	
• The character of this stretch of the LCT near Kessingland/Kessingland Beach is influenced by urban development, with restaurants/cafes and modern housing, forming somewhat discordant features in the immediate setting and the developed coastline of Lowestoft influences the wider context of the LCT. The vegetated shingle of Kessingland Beach SSSI has a 'natural' character that contrasts with immediate urban context. Changes to landscape character resulting from the construction and operation of the offshore infrastructure occur in this context and result in a medium-low change to the landscape character of this stretch of the LCT at Kessingland. • The wind turbines within the East Anglia TWO windfarm site will add a new large-scale offshore wind farm element to the sea element of the simply composed character of shingle, sky and sea layers. The vertical height of the wind turbines will be relatively small / moderate in scale, due to the long distance of the East Anglia TWO offshore windfarm site (over 33km) and the large scale of the seascape. • The technological appearance of the wind turbines is likely to contrast with the perceived naturalness of the vegetated shingle; however, they will also relate rationally to the exposure and large scale of the landscape.	
Area C: Southwold to the north side of Orford Ness	Medium
• Scale of change to the key characteristics of the LCT likely to be increased by the lack of intervening elements between the LCT and East Anglia TWO windfarm site, such that changes in the sea are experienced readily and directly from this LCT. • The construction and operation of the offshore infrastructure will result in a partial loss of open sea skyline due to the lateral spread of wind turbines on the seaward horizon experienced from the LCT. • The construction and operation of the offshore infrastructure results in the addition of elements which may change the 'uncluttered' characteristic of the LCT, with the turbines likely to increase visual complexity in the pattern of elements and introduce a new wind turbine layer to the simple landscape composition. • The wind turbines will also introduce new focal points of reference at recognised scale and may partially alter the 'vastness' of the seaward aspect of the LCT by curtailing part of the 'limitless' aspect out to sea. • The introduction of wind turbines on the sea skyline located well outside and at distance from the LCT (over 32km) would constitute a new, but relatively moderate alteration to the perceived character, at variance to some characteristics of the LCT, such as its open, vast character, and its perceived natural qualities, but is in keeping with other characteristics such as its large scale, exposure and existing offshore wind energy generation influences.	
Area D: South side of Orford Ness	Medium-low
• Scale of change to the key characteristics of the LCT likely to be increased by the lack of intervening elements between the LCT and East Anglia TWO windfarm site, such that changes in the sea are experienced readily and directly from this LCT. • The construction and operation of the offshore infrastructure will result in a partial loss of open sea skyline due to the lateral spread of wind turbines on the seaward horizon experienced from the LCT. • Galloper and Greater Gabbard windfarms are more notable as characteristics in the baseline, from this area of the LCT, therefore changes from the existing wind energy influenced seascape are likely to be lower than areas of this LCT further north (which are less influenced by windfarms in the baseline). The East Anglia TWO windfarm would not form an entirely new type of development characteristic but will instead result in a northerly extension to this windfarm influence.	

LCT 05: Coastal Dunes and Shingle Ridges		
• The construction and operation of the offshore infrastructure results in the addition of elements that are likely to further the visual complexity in the pattern of elements and increase the wind turbine horizon to the north. • The introduction of wind turbines on the sea skyline located well outside and at distance from this stretch of the LCT (over 36km) would constitute a new, but medium-low change to the perceived character, at variance to some characteristics of the LCT, such as its open, vast character, and its perceived natural qualities, but is in keeping with other characteristics such as its large scale, exposure and existing offshore wind energy generation influences.		
Area E: Shingle Street to Bawdsey	Low	
• The increased distance of the East Anglia TWO windfarm site on this stretch of the LCT (over 45km) is such that the wind turbines have a recessive influence on character. • Although the construction and operation of the offshore infrastructure will result in a partial loss of open sea skyline, increase visual complexity and new focal points in the vast seaward aspect of the LCT, the introduction of wind turbines on the sea skyline located well outside and at long distance from this stretch of the LCT (over 45km) would constitute a minor alteration to the perceived character. • Changes are in keeping with some of the key characteristics of the LCT, such as its large scale and exposure. • Galloper and Greater Gabbard windfarms are more notable as characteristics in the baseline, from this stretch of the LCT, therefore changes from the existing wind energy influenced seascape are likely to be lower than areas of this LCT further north (which are less influenced by windfarms in the baseline). The East Anglia TWO windfarm site would not form an entirely new type of development characteristic but will instead result in a northerly extension to this windfarm influence.		
Significance of effect		
Geographic area of LCT	Significance of effect (construction and decommissioning)	Significance of effect (operation)
Area A: North of Lowestoft	**Not significant**, short-term, temporary	**Not significant**, long-term, reversible
Area B: Kessingland	**Not significant**, short-term, temporary	**Not significant**, long-term, reversible
Area C: Southwold to the north side of Orford Ness	**Significant**, short-term, temporary	**Significant**, long-term, reversible
Area D: South side of Orford Ness	**Not significant**, short-term, temporary	**Not significant**, long-term, reversible
Area E: Shingle Street to Bawdsey	**Not significant**, short-term, temporary	**Not significant**, long-term, reversible

LCT 06: Coastal Levels			
Designations:	Suffolk Coast and Heaths AONB. Heritage Coast.	Viewpoints in LCT:	Viewpoint 9 (Minsmere Nature Reserve). Viewpoints 10 and 12 on edge of LCT. Illustrative Viewpoint H (River Ore)
Baseline Description			

This LCT is found in a number of areas along the Suffolk coast in the study area, however those which are of most relevance for the assessment, from north to south, are: Marshes flanking the Hundred River from Kessingland Beach westward through the Kessingland Levels up to Henstead; Marshes flanking the River Blyth and Buss Creek from Walberswick westward up to Wolsey Bridge; Marshes of the Minsmere Level extending westward to Eastbridge in Theberton; The area of a former large mere lying to the south of the existing Meare at Thorpeness and the northern outskirts of Aldeburgh; Marshes flanking the sides of the Rivers Alde, Ore and Butley from Aldeburgh south past Orford, to East Lane in Bawdsey; Marshes flanking the Deben estuary, from Bawdsey to Ramsholt on the north side (***Figure 28.12***).

Key characteristics:

- Low-lying, flat marshland beside estuaries and the coast. Underlying the marshes are alluvial deposits of marine origin.
- Most of the marshland within this landscape has been reclaimed for farming at some time but some areas, such as the Minsmere Levels, have been allowed to revert in the 20th century as wildlife reserves.
- Marshland reclamation began in the Middle Ages, leaving a sinuous complex of dyke networks. The rate and scale of marshland reclamation increased in the 18th and 19th centuries, with former open areas of marsh divided up by straight drainage ditches into geometric layouts of new fields.
- Ancient settlement in this wet environment is limited to the edges of the marshes and to the islands within it. There are virtually no domestic buildings actually within the landscape.
- The presence of livestock on the marshes that are still grassland is an important part of the experience.
- Although tree cover is not widespread within this landscape, the small amount that is present can have a notable visual impact because the land is so flat. The woodland plantations of the Estate Sandlands often for a backdrop on the rising ground of the inland fringes of this LCT.
- Views are generally open and wide, and there is usually a profound sense of exposure, enhanced when the sea or estuaries are near. On the inland side, the rising land and woodlands tend to confine the views.

LCT 06: Coastal Levels	
	
Value	High

- Located within and forms part of the Suffolk Coast and Heaths AONB. In combination with adjacent coastal LCTs, contributes to the special qualities that define the nationally designated scenic qualities of the AONB.
- Majority of the LCT is also protected for its nature conservation value as SSSI/SAC/SPA/NNR and the aesthetic aspects of these designated areas contributes to the distinct character.
- Relatively widespread coastal LCT covering extensive areas of marshland beside the coast and along river estuaries that extend inland at several different locations along the coast.
- LCT has recognised value for recreational activity, particularly with the marshes being the location for several RSPB nature reserves at Minsmere, Havergate Island, Boyton and Hollesley Marshes. The Suffolk Coastal Path taking a route through many areas of the LCT, one of the few ways of crossing this marshy landscape.
- Relative lack of access, challenging ground conditions and exposed position by the sea results in some perceptual qualities of wildness, remoteness and tranquillity.
- Consistent, intact, well defined and distinctive attributes with scenic qualities relating to natural qualities of the marshland habitats; and dynamic qualities of low-lying exposed landscape adjacent to the powerful force of the sea and major rivers.
- Areas of the LCT have been converted to arable, which has also led to some degradation of the cultural pattern with the simplification of the dyke network.

Sensitivity to change: *Combination of the value and susceptibility of the LCT*

Susceptibility	Medium

- LCT has the potential to be influenced by the construction and operation of the offshore infrastructure due to its coastal location and potential exposure to changes occurring in the visible seascape backdrop.
- The perceptual qualities of wildness, remoteness and tranquillity are susceptible to the influence of development, due to the contrast that it would have with the landscape, however the visual containment of the LCT by the dunes/shingle landform along its eastern edge, weakens the association between this low-lying marshland landscape and the East Anglia TWO windfarm site.
- While strong associations exist between the LCT and the sea, the LCT is generally not directly exposed to the offshore waters in which the East Anglia TWO windfarm site is located and has a notable degree of concealment/screening by the extensive dunes/shingle ridges that are located between this LCT and the sea.

Sensitivity:	Medium-high

LCT 06: Coastal Levels	
The Coastal Levels LCT is a highly-valued landscape, recognised through AONB designation, with special qualities focusing on the natural qualities of its marshland habitats; its relative remoteness/inaccessibility; profound sense of exposure and the dynamic qualities of the low-lying exposed landscape near the powerful forces of the sea and major rivers. Although it is of high value, the LCT is assessed as having a medium susceptibility to changes arising from the construction and operation of the offshore infrastructure. While the LCT has strong associations with the sea, the LCT is not always directly exposed to the offshore waters in which the East Anglia TWO windfarm site is located and has a notable degree of concealment/screening by the extensive raised dunes/shingle ridges situated between this LCT and the sea. On balance, the LCT is therefore assessed as having a medium-high sensitivity to change (combination of its high value/medium susceptibility).	
Magnitude of change	
Geographic extent:	Regional
Geographically, the area of the LCT that may experience change as a result of visibility of the East Anglia TWO windfarm site tends to be restricted to the areas of the LCT that are closest to the coast, with visibility becoming limited as these marshlands extend inland along river valleys/estuaries. Although the geographic extent of potential change is restricted to areas of the LCT closest to the coast, this LCT occurs in multiple separate locations along the coastline in the study area, where the main rivers meet the coast, so there is potential for changes to occur at a regional extent. The ZTV (***Figure 28.17***) shows that there will be areas of high theoretical visibility of 51-60 wind turbines from parts of this LCT near to the coast, but that visibility becomes low (1-10 wind turbines) or negligible further inland along each of the main river valleys/estuaries. The Coastal Levels LCT 06 is located 32.6 km from the East Anglia TWO windfarm site at its closest point. The magnitude of change on each main area of this LCT is assessed as follows.	
Size/scale of change (construction, operation and decommissioning) to perceived characteristics:	
Area A: Marshes flanking the Hundred River from Kessingland Beach westward through the Kessingland Levels up to Henstead	Low
• Area A extends along the Hundred River from the coast at Kessingland Beach, forming a narrow area that lies perpendicular to the coast. The eastern end of this area of the LCT is located closest to the coast and most likely to experience change, however there is a notable degree of concealment/screening by the dunes/shingle ridges and holiday parks at Kessingland Beach between this LCT and the sea. • The sea/coast and East Anglia TWO windfarm site will be intermittently visible from the LCT, due to the long shingle ridge running along at the edge of the LCT which obscures views, such that there is limited visibility of the East Anglia TWO windfarm site. • The LCT extends several kilometres inland along the Hundred River, where coastal characteristics/experience of the sea and the potential changes resulting from the East Anglia TWO windfarm site become limited moving further inland. • The construction and operation of the offshore infrastructure will have a limited change to the key characteristics of the immediate marshland surroundings that define the landscape character.	
Area B: Marshes flanking the River Blyth and Buss Creek from Walberswick westward up to Wolsey Bridge	Havenbeach and Busscreek Marshes, inland across Reydon Marshes to Wangford: Low or negligible Southwold Harbour, mouth of the River Blyth and Sole Bay: Medium-low

LCT 06: Coastal Levels	
• Negligible change to the existing landscape character of the LCT in the area between Southwold and Reydon, where there is a notable degree of concealment/screening by the urban areas of Southwold between this part of the LCT and the sea. • Low change to the character of Havenbeach Marshes, where the ZTV shows that there will be limited visibility due to the concealment/screening by the intervening dunes/shingle beach landform between the marshes and the sea. • The LCT extends approximately 9km inland along the River Blyth and River Wang. Rising land and woodlands in adjacent landscapes around the marshes tend to confine views. Coastal characteristics/experience of the sea and the potential changes resulting from the construction and operation of the offshore infrastructure become limited moving further inland across Reydon Marshes, Hen Reedbeds NNR and Priory Marshes. • The south-eastern end of this area of the LCT, around Southwold Harbour and the mouth of the River Blyth, and the small portion of the LCT near Sole Bay to the north of Southwold, are located closest to the coast and most likely to experience changes resulting from the construction and operation of the offshore infrastructure. In these localised areas, the construction and operation of the offshore infrastructure will result in some changes to the open, wide, exposed characteristics near the sea, resulting from a partial loss of open sea skyline on the seaward backdrop and the addition of distant vertical elements, which may change the wide/horizontal emphasis of the LCT. The introduction of wind turbines on the sea skyline located well outside and at distance from the LCT (over 32km) would constitute a new, but medium-low alteration to the perceived character, at variance to some characteristics of the LCT but relating rationally to the sense of exposure.	
Area C: Marshes of the Minsmere Level extending westward to Eastbridge in Theberton	The Scrape: Negligible Island Mere and North Levels: Low
• The Scrape: negligible change to the existing landscape character of the LCT in the area around 'the Scrape' due to negligible/no visibility of the East Anglia TWO windfarm site from this low-lying area. Views are concealed/screened by intervening dunes/shingle landform rising between this LCT and the sea. • Island Mere and North Levels: minor alteration to the pattern of landscape elements/perception of landscape pattern, with some visibility of the East Anglia TWO windfarm site located at long distance outside the LCT (over 34km). The East Anglia TWO windfarm site is likely to result in change through the introduction of a distant array of wind turbines beyond the horizon formed by dunes/shingle ridges in the eastern, coastal backdrop to the marshland/coastal levels. The introduction of wind turbines in the coastal backdrop located well outside and at long distance from the LCT would constitute a new, but relatively minor alteration to the perceived character, at variance to the relatively undeveloped, flat, open and exposed character of the LCT, but removed from and in the background to the main elements that define character.	
Area D: The area of a former large meare lying to the south of the existing Meare at Thorpeness and the northern outskirts of Aldeburgh	Inland areas of LCT: Low Coastal portion/edges of LCT: Medium-low
• Low change to the existing landscape character of the inland areas of the LCT due to the limited visibility of the East Anglia TWO windfarm site from these areas set back from the coast. Views are largely concealed/screened by a combination of the intervening dune/shingle landform between these areas of the LCT and the sea; the extensive areas of woodland around the Meare at Thorpeness and lining Thorpe Road; and intervening built-up areas of Thorpeness. • Medium-low change to character of the coastal portion/edges of the LCT. Although the beach and shoreline are not visible from this LCT, due to intervening dune/shingle landforms, there are long distance and panoramic views out to the seaward horizon available which form a key component of the character of this area. Due in part to the height and lateral spread of the turbines, the construction and operation of the East Anglia TWO windfarm site will have some influence the	

LCT 06: Coastal Levels		
character of the coastal portions of this area of the LCT, however the introduction of wind turbines on the sea skyline located well outside and at distance from the LCT (over 32km) would constitute a medium-low alteration to the perceived character.		
Area E: Marshes flanking the sides of the Rivers Alde, Ore and Butley from Aldeburgh south past Orford, to East Lane in Bawdsey	Inland areas of LCT, Alde Mudflats, Butley River, Hollesley and Boyton areas: Low Sudbourne Marshes, Sudbourne Beach and Kings Marshes: Medium-low	
• Low change to the existing landscape character of the inland areas of the LCT, estuaries such as around Alde Mudflats and the Butley River, and from areas to the south around Hollesley and Boyton due to the limited visibility of the East Anglia TWO windfarm site from these areas. Direct views of the sea and the East Anglia TWO windfarm site are largely concealed/screened by intervening landform/vegetation and the extensive dune/shingle landform of Orford Ness, which lies between these areas of the LCT and the sea, such that the beach and shoreline are not visible. • Medium-low change to character of the closest areas of the LCT, such as Sudbourne Marshes, Sudbourne Beach and Kings Marshes. Although the beach and shoreline are not visible from this area of the LCT, due to intervening dune/shingle landforms, there are some long distance and panoramic views out to the seaward horizon available which form a key component of the character of this area. Due in part to the height and lateral spread of the turbines, the construction and operation of the East Anglia TWO windfarm site will intermittently be visible and influence the character of some of the coastal portions of this area of the LCT. • The construction and operation of the offshore infrastructure will result in some changes to the open, wide, exposed characteristics near the sea, resulting from a partial loss of open sea skyline on the seaward backdrop and the addition of distant vertical elements, intermittently appearing above the intervening shingle landform, which may change the wide/horizontal emphasis of the LCT. The introduction of wind turbines on the sea skyline located well outside and at distance from the LCT (over 36km) would constitute a new, but medium-low alteration to the perceived character, at variance to some characteristics of the LCT but relating rationally to the sense of exposure.		
Area F: Marshes flanking the Deben estuary, from Bawdsey to Ramsholt on the north side	Negligible	
• Negligible change to the existing landscape character of this area of the LCT due to negligible/no visibility of the East Anglia TWO windfarm site from this low-lying area. Views are concealed/screened by intervening landform rising between this LCT and the sea.		
Significance of effect		
Geographic area of LCT	Significance of effect (construction and decommissioning)	Significance of effect (operation)
Area A: Marshes flanking the Hundred River from Kessingland Beach westward through the Kessingland Levels up to Henstead	**Not significant**, short-term, temporary	**Not significant**, long-term, reversible
Area B: Marshes flanking the River Blyth and Buss Creek from Walberswick westward up to Wolsey Bridge		

LCT 06: Coastal Levels		
Havenbeach and Busscreek Marshes, inland across Reydon Marshes to Wangford	**Not significant**, short-term, temporary	**Not significant**, long-term, reversible
Southwold Harbour, mouth of the River Blyth and Sole Bay	**Not significant,** short-term, temporary	**Not significant,** long-term, reversible
Area C: Marshes of the Minsmere Level extending westward to Eastbridge in Theberton	**Not significant**, short-term, temporary	**Not significant**, long-term, reversible
Area D: The area of a former large mere lying to the south of the existing Meare at Thorpeness and the northern outskirts of Aldeburgh		
Inland areas of LCT	**Not significant**, short-term, temporary	**Not significant**, long-term, reversible
Coastal portion/edges of LCT	**Not significant, short-term, temporary**	**Not significant, long-term, reversible**
Area E: Marshes flanking the sides of the Rivers Alde, Ore and Butley from Aldeburgh south past Orford, to East Lane in Bawdsey		
Inland areas of LCT, Alde Mudflats, Butley River, Hollesley and Boyton areas	**Not significant**, short-term, temporary	**Not significant**, long-term, reversible
Sudbourne Marshes, Sudbourne Beach and Kings Marshes	**Not significant, short-term, temporary**	**Not significant, long-term, reversible**
Area F: Marshes flanking the Deben estuary, from Bawdsey to Ramsholt on the north side	**Not significant**, short-term, temporary	**Not significant**, long-term, reversible

LCT 07: Estate Sandlands			
Designations:	Suffolk Coast and Heaths AONB. Heritage Coast.	Viewpoints in LCT:	Viewpoint 8 (Dunwich Heath) Viewpoint 9 (Minsmere) Viewpoint 11 (Coastal Path)

Baseline Description

This LCT is found in a slightly interrupted series along the coast, taking in a large part of the area known as the Sandlings. The landscape includes a series of almost contiguous areas stretching eastward from Rushmere to Martlesham and Waldringfield, from Sutton on the east side of the Deben northwards to Leiston, from Westleton and Dunwich to Southwold and Reydon, and from Covehithe to Benacre (***Figure 28.12***).

Key characteristics:

- Consists of flat or very gently rolling plateaux of freely-draining sandy soils, overlying drift deposits.
- The dry mineral soils of this LCT and general absence of watercourses gave rise to extensive areas of heathland or acid grassland that, historically, were used sheep grazing. The sheep-grazed heaths were known as 'sheepwalks', the term surviving at 'The Walks' in Aldringham and Westleton Walks.
- Historically, the low land prices and sparse population gave opportunities for formation of parks and estates, with an abundance of game shooting amongst the gentry. Large estates are still a feature of the LCT.
- After WWI, the newly-established Forestry Commission bought land for forestry plantations, which now form a distinctive, dark wooded backdrop to the surrounding arable land and heaths.
- Where there was late enclosure, the field pattern is one of straight-sided, relatively large geometric units.
- Irrigation changed the agricultural potential of the land and irrigated vegetable crops are now characteristic.
- The settlement is sparse, consisting mainly of isolated lodges and post-enclosure farmsteads.
- The relative sparseness of settlement and the flat nature of the land made it easy to establish a number of WWII airfields, some of which remain active as RAF bases.
- Some specialised settlements or activities have also been developed in the Sandlings: including Thorpeness, developed from 1910 onwards as probably the country's first holiday village.
- Communication lines are prominent. The A12 and A14 figure strongly in the south-east, while the railway line from Ipswich to Felixstowe runs alongside one of the areas.
- Generally, a landscape without ancient woodland, but there are isolated and notable exceptions. The creation of farmland from former heaths resulted in widespread planting of tree belts and plantations.
- The area around Sizewell and Leiston is influenced by Sizewell Nuclear Power Station, which forms a distinct feature in the backdrop, with a double row of high-voltage transmission lines extending west.
- Despite the presence of so much forestry, the views in this landscape are often long and there can be a sense of isolation, although there is little variation in the views.
- The coastal edges of the LCT are defined by low cliffs, such as Covehithe and Sizewell Cliffs, which contrast to gently rolling Sandlings heaths and farmland and provide opportunities for long

LCT 07: Estate Sandlands	
distance and panoramic views out to sea and along the coast. Striking expressions of geology on faces of crumbling coastal cliffs.	
	
Value	Medium-high
Forms much of the inland areas of the Suffolk Coast and Heaths AONB, generally away from the immediate coastal edges of the AONB with the exception of Coverhithe Cliffs, Easton Bavents and Sizewell Cliffs. In combination with adjacent coastal LCTs, contributes to the special qualities that define the nationally designated scenic qualities of the AONB. Parts of the LCT, particularly heaths and Sandlings Forests, are protected for their nature conservation value as SSSI/SAC/SPA The aesthetic aspects of these designated areas contributes to the distinct character. Relatively widespread landscape character covering extensive areas on the inland side of the majority of the Suffolk coastline within the study area and dissected by river valleys/marshland extending from to the coast. The LCT has some recreational value as the focus in particular for recreational walking on the network of public rights of way across the heaths, which link to the Suffolk Coastal Path crossing this LCT. The scenic quality and interest of the LCT is influenced by extensive areas of heathland/acid grassland within the backdrop of extensive coniferous forestry (Sandlings Forests), which often distinguish the change into the Suffolk Coast and Heaths AONB from the inland agricultural landscapes. Scenic qualities are varied and not always consistent between the different areas of the LCT in the study area. The scenic qualities of the Southwold and Reydon area (Area B) are influenced by adjacent urban development; the Leiston/Aldringham area (Area D) is particularly influenced by the presence of Sizewell Nuclear Power Station, high-voltage transmission lines and intensive farming; while the extensive Rendlesham and Tunstall Forests dominate the character to the south of the study area.	
Sensitivity to change: *Combination of the value and susceptibility of the LCT*	
Susceptibility:	Locally medium at coast, but generally low over most of the inland areas of LCT
• LCT has the potential to be influenced by the construction and operation of the offshore infrastructure in localised areas where it extends to the coast, with potential exposure to changes occurring in the visible seascape backdrop. • The sense of isolation and perceived remoteness/natural qualities evident in some parts of the LCT are susceptible to the influence of development, due to the contrast that it would have with the landscape, however the visual containment of the LCT by extensive plantation forestry, tree	

LCT 07: Estate Sandlands	
belts and hedges, weakens the association between this landscape and the East Anglia TWO windfarm site. • In some localised areas of this LCT where it extends near to the coast, such as Dunwich Heath/Cliffs and areas between Sizewell and Thorpeness, there are strong associations with the sea and the character will be exposed to the seascape in which the East Anglia TWO windfarm site is located. • The majority of the LCT, however, has weak and limited associations with the sea, where it covers extensive inland areas away from the coast and is often influenced primarily by the presence of plantation forestry or agricultural landscapes with no exposure to the seascape in which the East Anglia TWO windfarm site is located.	
Sensitivity:	Locally medium-high at the coast, but generally low over most of the inland LCT
The Estate Sandlands LCT is assessed as having a medium-high value, with its value recognised in some of areas through AONB and natural heritage designations (such as SSSI/SPA), but with other areas not being designated and having been subject to changes in the inherent character through extensive plantation forestry, suburbanisation and/or modern energy generation and transmission infrastructure. The main scenic qualities of the LCT are influenced by areas of heathland/acid grassland within the backdrop of extensive coniferous forestry (Sandlings Forests). The scenic qualities are varied and not always consistent between the different areas of the LCT in the study area. While it is of medium-high value, the LCT is assessed as generally having, from inland areas, a low susceptibility to changes arising from the construction and operation of the offshore infrastructure. The majority of the LCT has limited association with the sea, where it covers extensive inland areas away from the coast and is often influenced primarily by the presence of plantation forestry or agricultural landscapes with no exposure to the seascape in which the East Anglia TWO windfarm site is located. In some localised areas of this LCT, where it extends near to the coast, such as the Covehithe area, Dunwich Heath/Cliffs and areas between Sizewell and Thorpeness, there are stronger associations with the sea and the character will be more exposed to the seascape and is assessed as having a medium susceptibility to change. On balance, the LCT is assessed as having a generally low sensitivity over most of the inland areas of the LCT, with a locally medium-high sensitivity where it forms the coastal edge (such as at Covehithe, Dunwich Cliffs, Sizewell Cliffs, Easton Bavents and Thorpeness).	
Magnitude of change:	
Geographic extent:	Regional
Geographically, the area of the LCT that may experience change as a result of visibility of the construction and operation of the offshore infrastructure tends to be restricted to the areas of the LCT that are closest to the coast, with visibility becoming limited as the Estate Sandlands extend inland. Although the geographic extent of potential change is restricted to areas of the LCT closest to the coast, this LCT occurs in multiple separate locations along the coastline in the study area, so there is potential for changes to occur at a regional extent. The ZTV (***Figure 28.17***) shows that there will be areas of high theoretical visibility of 51-60 wind turbines from parts of this LCT near to the coast, but that the extent of visibility becomes much more intermittent further inland, with areas of low or no visibility. The Estate Sandlands LCT 07 is located 32.6 km from the East Anglia TWO windfarm site at its closest point. The magnitude of change on each main area of this LCT is assessed as follows.	
Size/scale of change (construction, operation and decommissioning) to perceived characteristics:	
Area A: Covehithe to Benacre and Easton Bavents	Medium
• The LCT extends to meet the sea at Covehithe Cliffs, on either side of Benacre Broad, and at Easton Bavents where the coastal edges of the LCT are influenced by the open sea and exposed to changes resulting from the construction and operation of the offshore infrastructure.	

LCT 07: Estate Sandlands	
• The construction and operation of the offshore infrastructure will introduce new elements that will change the perception of the seascape in the setting of the low coastal cliffs on the edges of this area of the LCT. • The long distance and panoramic views out to sea and along the coast from the cliffs on the coastal edges of this area of the LCT will be altered through a partial loss of open sea skyline occupied by the East Anglia TWO windfarm site and the addition of elements which will change the simple landscape composition and result in some changes to the sense of isolation at the coastal edges of the LCT. • The introduction of wind turbines on the sea skyline located well outside and at distance from the LCT (over 32km) would constitute a new, but relatively moderate alteration to the perceived character, at variance to some characteristics of the coastal edges of the LCT such as its natural qualities, remoteness/isolation and panoramic views, but is in keeping with other characteristics such as its large scale and exposure.	
Area B: Southwold Common	Negligible
• Negligible change to the existing landscape character of this area of the LCT due to the limited visibility of the East Anglia TWO windfarm site from this area. Views from Southwold Common to the East Anglia TWO windfarm site are entirely concealed/screened by the intervening urban area of Southwold (Illustrative Viewpoint A).	
Area C: Walberswick to Westleton and Dunwich	Areas between Walberswick and Westleton: Low Localised area at Dunwich Heath/Cliffs: Medium
• Walberswick and Westlon: Low change to the existing landscape character of this area of the LCT due to the limited visibility of the East Anglia TWO windfarm site from this area. Views of the East Anglia TWO windfarm site are almost entirely concealed/screened by the intervening plantation forests (Dunwich Forest), tree belts and hedgerows in the landscape. This limited visibility/views out to sea is also the case from areas within Dunwich Forest itself and from sections of The Suffolk Coast Path located to the east of Dunwich Forest. • Dunwich Heath/Cliffs: localised area with a medium change to existing landscape character around Dunwich Heath, Dunwich and Minsmere Cliffs where this area of the LCT extends to meet the sea and its coastal edges are influenced by the open sea and exposed to changes resulting from the East Anglia TWO windfarm site. The long distance and panoramic views out to sea will be altered through the loss of the open seascape occupied by the construction and operation of the East Anglia TWO windfarm site, particularly in the vicinity of Dunwich Heath where a portion the LCT extends down to the beach. The construction and operation of the offshore infrastructure will introduce new elements that will change the perception of the seascape in the setting of the low coastal cliffs on the edges of this area of the LCT. The long distance and panoramic views out to sea and along the coast from the cliffs on the coastal edges of this area of the LCT will be altered through a partial loss of open sea skyline occupied by the East Anglia TWO windfarm site and the addition of elements which will change the simple landscape composition and result in some changes to the sense of isolation at the coastal edges of the LCT. The introduction of wind turbines on the sea skyline located well outside and at distance from the LCT (over 33km) would constitute a medium alteration to the perceived character, at variance to some characteristics of the coastal edges of the LCT, but is in keeping with other characteristics such as its large scale, exposure and existing energy generation influences in the offshore waters (Galloper/Greater Gabbard) and along the coast to the south (Sizewell Power Station).	
Area D: Leiston and Aldringham to Snape, Thorpeness and Aldeborough	Areas between Leiston, Aldringham, Friston, Snape and Aldeburgh: Negligible Localised area at Sizewell Cliffs to Thorpe Ness: Medium-low

LCT 07: Estate Sandlands		
• Inland areas of LCT between Leiston, Aldringham, Friston, Snape and Aldeburgh: Negligible change to the existing landscape character of this area of the LCT due to the limited visibility of the East Anglia TWO windfarm site from this area. Views of the East Anglia TWO windfarm site are almost entirely screened by intervening plantation forests, tree belts and hedgerows. • Localised area at Sizewell Cliffs to Thorpe Ness: localised area with a medium-low change to existing landscape character around Sizewell Cliffs to Thorpe Ness where this area of the LCT extends to meet the sea and its coastal edges are influenced by the open sea and exposed to changes resulting from the construction and operation of the offshore infrastructure. The construction and operation of the offshore infrastructure will introduce new elements that will change the perception of the seascape in the setting of the low coastal cliffs on the edges of this area of the LCT. The long distance and panoramic views out to sea and along the coast from the cliffs on the coastal edges of this area of the LCT will be altered through a partial loss of open sea skyline occupied by the East Anglia TWO windfarm site and the addition of elements which will change the simple landscape composition and result in some changes to the sense of isolation at the coastal edges of the LCT. The introduction of wind turbines on the sea skyline located well outside and at distance from the LCT (over 34km) would constitute a medium-low alteration to the perceived character, at variance to some characteristics of the coastal edges of the LCT, but is in keeping with other characteristics such as its large scale, exposure and existing energy generation influences in the offshore waters (Galloper/Greater Gabbard) and along the coast to the north (Sizewell Power Station).		
Area E: Hollesley, Rendlesham and Tunstall Forests to Sudbourne	Negligible	
• Negligible change to the existing landscape character of this area of the LCT due to the limited visibility of the East Anglia TWO windfarm site from this area and its distance inland away from the coast. Views of the East Anglia TWO windfarm site are almost entirely concealed/screened by the intervening plantation forests (Tunstall and Rendlesham Forests), tree belts and hedgerows in the landscape.		
Significance of effect		
Geographic area of LCT	Significance of effect (construction and decommissioning)	Significance of effect (operation)
Area A: Covehithe to Benacre and Easton Bavents	**Significant**, short-term, reversible	**Significant**, long-term, reversible
Area B: Southwold Common	**Not significant**, short-term, reversible	**Not significant**, long-term, reversible
Area C: Walberswick to Westleton and Dunwich		
Areas between Walberswick and Westlon:	**Not significant**, short-term, reversible	**Not significant**, long-term, reversible
Localised area at Dunwich Heath/Cliffs:	**Significant**, short-term, reversible	**Significant**, long-term, reversible
Area D: Leiston and Aldringham to Snape, Thorpeness and Aldeborough	**Not significant**, short-term, reversible	**Not significant**, long-term, reversible

LCT 07: Estate Sandlands		
Area E: Hollesley, Rendlesham and Tunstall Forests to Sudbourne	**Not significant**, short-term, reversible	**Not significant**, long-term, reversible

LCT 08: Open Coastal Fens			
Designations:	Suffolk Coast and Heaths AONB. Heritage Coast.	Viewpoints in LCT:	Viewpoint 6 (Walberswick) Viewpoint 7 (Dunwich)

Baseline Description

The one example of this LCT in the study area is located on the coast between Walberswick and Dunwich and includes Dingle, Reedland, Westwood, Corporation and Oldtown Marshes, as well as the Dunwich River valley (***Figure 28.12***).

Key characteristics:

- Flat valley floors and coastal flats with deep peat deposits that overlie river and marine alluvium.
- Heavily affected by marine erosion and the movement of coastal sediments.
- Dunwich River exits at the mouth of the Blyth, but coastal erosion has moved the course westward, leaving fragments of the old course in the coastal marshes and flats.
- The marshes in the area have a mixture of sinuous and straight drains and dykes, suggesting drainage works and attempts to reclaim the land over an extended period of time.
- The current landscape is dominated by grazing of cattle on low intensity wet grassland, dissected by a network of dykes, with scrub and reedbeds in the north of the LCT, managed for habitat conservation.
- Due to the wet ground conditions, there is an absence of permanent settlements.
- Dingle and Reedland marshes, with low vegetation, are mostly treeless although the landscape is framed on the landward side by wet alder woodland that grades into dry woodland.
- Although a flat open and simple landscape, it is contained by woodland and rising ground that surrounds it and by the dunes/shingle landform on its eastern, coastal side. Views are therefore generally limited to within the LCT.
- The open landscape provides an impression of depth and distance, with the occasional thin horizontal strip of sea visible having a limited role as an element in the landscape, despite its perceptual association.

LCT 08: Open Coastal Fens	
	
Value	High
• Relatively rare/scarce landscape character, with only one example of this LCT in Suffolk - the area between Walberswick and Dunwich. • Located within and forms part of the Suffolk Coast and Heaths AONB. In combination with adjacent coastal LCTs, contributes to the special qualities that define the nationally designated scenic qualities of the AONB. • Majority of the LCT is also protected for its nature conservation value as SSSI/SAC/SPA/NNR and the aesthetic aspects of these designated areas contributes to the distinct character. • LCT has some value for recreational activity as the Suffolk Coastal Path takes a route through the LCT, one of the few ways of crossing this marshy landscape. • Relative lack of access, challenging ground conditions and exposed position by the sea results in some perceptual qualities of wildness, remoteness and tranquillity. • Consistent, intact, well defined and distinctive attributes with scenic qualities relating to natural qualities of the saltmarsh, dune habitats and reedbeds; and dynamic qualities of low-lying exposed landscape adjacent to the powerful force of the sea and Dunwich River.	
Sensitivity to change: *Combination of the value and susceptibility of the LCT*	
Susceptibility:	Medium
• LCT has the potential to be influenced by the construction and operation of the offshore infrastructure due to its coastal location. • The perceptual qualities of wildness, remoteness and tranquillity are susceptible to the influence of development, due to the contrast that it would have with the landscape, however the visual containment of the LCT by the dunes/shingle landform along its eastern edge, weakens the association between this low-lying landscape and the East Anglia TWO windfarm site. • While strong associations exist between the LCT and the sea, the LCT is not directly exposed to the offshore waters in which the East Anglia TWO windfarm site is located and has a notable degree of concealment/screening by the dunes/shingle ridges between this LCT and the sea.	
Sensitivity:	Medium-high
The Open Coastal Fens LCT is a highly-valued landscape, recognised through AONB designation, with special qualities focusing on the natural qualities of its saltmarshes and reedbed habitats; its relative remoteness/inaccessibility; and the dynamic qualities of the low-lying exposed landscape near the powerful forces of the sea. Although it is of high value, the LCT is assessed as having a medium susceptibility to changes arising from the construction and operation of the offshore infrastructure.	

LCT 08: Open Coastal Fens	
While the LCT has strong associations with the sea, the LCT is not directly exposed to the offshore waters in which the East Anglia TWO windfarm site is located and has a notable degree of concealment/screening by the dunes/shingle ridges between this LCT and the sea, which limit the potential association between the LCT and the potential changes arising. On balance, the LCT is therefore assessed as having a medium-high sensitivity to change (combination of its high value/medium susceptibility).	
Magnitude of change:	
Geographic extent:	Local
Geographically, the area of the LCT that may experience change as a result of visibility of the construction and operation of the offshore infrastructure is contained to Corporation Marshes between Walberswick and Dingle Great Hill; and potentially from Dingle Marshes. The ZTV (***Figures 28.17***) shows that there will be limited theoretical visibility from Westwood Marshes and views from this area are screened by Dunwich Forest. The ZTV also shows no visibility from Reedland Marshes, where the intervening dunes/shingle ridges screen views. The Open Coastal Fens LCT 08 is located 33.1 km from the East Anglia TWO windfarm site at its closest point. The magnitude of change on each main area of this LCT is assessed as follows.	
Size/scale of change (construction, operation and decommissioning) to perceived characteristics:	
Area A: Corporation and Oldtown Marshes:	Medium-low
• The sea/coast and the East Anglia TWO windfarm site will be intermittently visible from the LCT, due to the long dune and shingle ridge running along at the edge of the LCT which obscures views. The marshes are set inland and at lower elevation from this more elevated dune and shingle ridge, such that the beach and shoreline are generally not visible from this LCT and the sense of separation/seclusion from the seascape to the east. • There are some locations where long distance and panoramic views to seaward horizon are available, which form a component of the character (particularly in the vicinity of Cooperation and Oldtown Marshes) and there is potential for changes to these aspects of character. • The construction and operation of the offshore infrastructure is likely to result in change through the introduction of a distant array of wind turbines beyond the immediate horizon formed by dunes/shingle ridges in the eastern, coastal backdrop to the marshland/open fens. • The introduction of wind turbines in the coastal backdrop located well outside and at distance from the LCT (over 33km), removed from the association of the sea (which is often not visible), would constitute a new, but relatively minor alteration to the perceived character, at variance to the relatively undeveloped, flat, open and uncluttered character of the LCT, but removed from and in the background to the main elements that define character. • The construction and operation of the offshore infrastructure will have a limited change to the key characteristics of the immediate marshland/fen surroundings that define the landscape character. • The technological appearance of the wind turbines is likely to contrast with the perceived natural qualities associated with the habitats of the LCT, however their appearance will relate rationally to the visual exposure and large scale. • There will be some aesthetic sensibility between modern wind turbines and the derelict Westwood Marshes Windmill, as a representation of the historic exploitation of the exposure of the landscape.	
Area B: Westwood Marshes:	Low – the construction and operation of the offshore infrastructure will have a low change to the key characteristics of this area due to the low theoretical visibility of the East Anglia TWO windfarm site from this low lying marshland that is

LCT 08: Open Coastal Fens		
	largely screened by a combination of the intervening Dunwich Forest and the long dune and shingle ridge running between this area of the LCT and the coastline, which obscures views of the sea.	
Area C: Dingle and Reedland Marshes:	Low – the construction and operation of the offshore infrastructure will have a low change to the key characteristics of this area due to the screening of the East Anglia TWO windfarm site from this low lying marshland provided by the long dune ad shingle ridge running between this area of the LCT and the coastline, which obscures views of the sea.	
Significance of effect:		
Geographic area of LCT	Significance of effect (construction and decommissioning)	Significance of effect (operation)
Area A: Corporation and Dingle Marshes:	**Not significant**, short-term, temporary	**Not significant**, long-term, reversible
Area B: Westwood Marshes:	**Not significant**, short-term, temporary	**Not significant**, long-term, reversible
Area C: Reedland Marshes:	**Not significant**, short-term, temporary	**Not significant**, long-term, reversible

28.2.2 Landscape Designations

Suffolk Coast and Heaths AONB (including Suffolk Heritage Coast)

3. The Suffolk Coast and Heaths AONB (the AONB) is located approximately 32.5km from the East Anglia TWO windfarm site (***Figure 28.13***) at its closest point. It covers approximately 403km^2 stretching from Kessingland in the north to the River Stour in the south. The unique character of the AONB is a product of its underlying geology, shaped by the effects of the sea and the interaction of people with the landscape. It is a mainly flat or gently rolling landscape, often open but with few commanding viewpoints. In many places, and especially near the coast, habitats and landscape features lie in an intimate mosaic, providing great diversity in a small area.

4. The AONB comprises mainly farmland. Other main components of the landscape are forestry plantations, low-lying freshwater marshes, intertidal estuaries, heathland, the coast, small villages and iconic coastal market towns. The area is probably best known for the particularly distinctive features of the coast and lowland heath which give the AONB its name. Where it joins the sea, the AONB consists of predominantly shingle beaches, often extensive in nature, and backed in places by sandy cliffs. The coastline is interrupted by five river estuaries (Blyth, Alde/Ore, Deben, Orwell and Stour) with extensive wildlife-rich intertidal areas of mudflat and saltmarsh. In some places, old estuary mouths have become blocked, creating large areas of brackish or freshwater marshland of significant wildlife value. Centuries old river walls were created to reclaim intertidal areas from the estuaries. These areas claimed from the sea are now important for agriculture.

5. The area's heathland, known locally as the Sandlings and now much fragmented, follows the line of the coast. Large areas that were once Sandlings heath have been converted to farmland, planted as coniferous forests or developed for housing or military airfields, particularly during the 20th century. The AONB remains a lightly populated, undeveloped area, popular for outdoor recreation and tourism. The area is valued for its tranquillity, the quality of the environment and culture and for its wildlife.

6. The AONB is considered, in overall terms, to have a high landscape value, although there are pockets of the AONB landscape where the baseline conditions are such that the value of particular features or aesthetic dimensions are reduced. On the whole, it is of high value, recognised through its national scenic designation as an AONB and much of the AONB coast is designated as of European importance for its habitat and for the birds and other species associated with it. Some of these are further recognised internationally as 'wetlands of international importance' (Ramsar sites). The AONB landscape acts as a major tourist destination contributing significantly to the local economy,

especially Southwold, Aldeburgh and Thorpeness. The natural landscape with varied coastal habitats and rare birds are valued as an attraction for walkers and wildlife enthusiasts, especially birdwatchers. Amenity value for tourism and leisure activities, especially the extensive network of coastal nature reserves, coastal paths and lowland heaths with open access. The scenic qualities of the AONB have, in part, been influenced by the presence of modern energy generation and transmission infrastructure, particularly Sizewell A and B Nuclear Power Station, which forms a distinctive feature on the coast and in the backdrop to views across the nearby Sandlings Forest and Heaths. The AONB has recognised cultural heritage value through Heritage Coast designation (see below), distinctive built heritage in the landscape such as Martello towers and Cold War buildings on Orford Ness, also add a sense of history to the landscape.

7. The scenic qualities and interest are particularly defined by the coast and views out to sea; shingle features of the coast, some vegetated, notably Orford Ness; prominence of short sections of crumbling soft cliffs, such as at Dunwich and Covehithe; bodies of water (broads/saline lagoons) Shingle Street, Benacre and Easton Broads; and seascape setting of the coastal areas of the AONB. There are pockets of relative wildness associated with coast, in this largely farmed and settled landscape. A number of coastal locations within the AONB provide opportunities to experience attributes of relative wildness, including Orford Ness, Minsmere, Dunwich Heath and the marshlands/estuaries, where the character of the landscape and views afforded out to sea and along the coast are highly valued. The seascape setting of the coastal areas of the AONB contributes to the perception of wildness attributes and relative tranquillity. The nearshore waters and inland waterways are valued sailing/boating areas, especially the Orwell and Deben estuaries with extensive moorings and boatyards.

8. The Suffolk Heritage Coast is largely contained within the AONB (***Figure 28.13***). It runs from Kessingland to Felixstowe and incorporates the Blyth, Alde/Ore and lower Deben estuaries. The purpose of Heritage Coast designation is similar to that of an AONB. As its geographic area is largely within the AONB and its protection policies are now incorporated into the AONB Management Plan, the effects on the Suffolk Heritage Coast designation are considered as integral to this assessment of the AONB. The Suffolk Heritage Coast represents that part of the AONB most likely to experience significant effects arising from the East Anglia TWO offshore windfarm.

9. The main LCTs that make up the AONB are:

- Coastal Dunes and Shingle Ridges (LCT 05).
- Coastal Levels (LCT 06).
- Open Coastal (LCT 08) and Wooded Fens (LCT 29).

- Estate Sandlands (LCT 07).
- Estate Farmlands (LCT 11 and 15).
- Rolling Estate Sandlands (LCT 16).
- Saltmarsh and Intertidal Flats (LCT 20).
- Valley Meadowlands (LCT 26).

10. Several of these LCTs (LCTs 11, 15, 16, 20, 26 and 29) have been identified in the preliminary assessment in ***Table 28.3.1***, as having no potential to be significantly affected by the construction and operation of the offshore infrastructure, due to their inland locations, long distance and/or substantial amount of intervening screening between these areas and the East Anglia TWO windfarm site. The potential for significant effects on these areas of the AONB is scoped out of further assessment, with no significant effects assessed on areas of the AONB within LCTs 11, 15, 16, 20, 26 and 29.

11. The LCTs that define the coastal areas of the AONB, where it joins the sea and has a seascape setting, are those which are susceptible to the influence of the construction and operation of the offshore infrastructure. These are identified as the Coastal Dunes and Shingle Ridges (LCT 05); Coastal Levels (LCT 06); Estate Sandlands (LCT07) and Open Coastal Fens (LCT 08). The effects of the East Anglia TWO windfarm site on the character of these LCTs, within the coastal areas of the AONB, is assessed in full in the technical assessment in this appendix. Although the inherent sensitivity of the AONB is high, there is some variation in the sensitivity of these different LCTs within the AONB to the specific nature of a proposed development, since the assessment of susceptibility is tailored to the proposed East Anglia TWO project. Full narrative assessment of sensitivity to change of LCTs within the AONB is contained within technical assessment of LCTs in ***section 28.2.1***of this of this appendix.

12. The assessment of effects on the AONB is informed by these assessments of the LCTs that define its coastal character; but is also based upon published citations that describe the ‘special qualities’ of the AONB. The landscape of the AONB is described and characterised within the AONB Management Plan (Suffolk Coast and Heaths AONB Partnership 2013 - 2018), however the management plan does not set out detailed citations of the special qualities of the AONB.

13. Special qualities are set out in the AONB Natural Beauty and Special Qualities Indicators report (November 2016), produced by LDA Design following discussions between the 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 AONB. The findings of

these discussions are contained in tables within the 'Special Qualities Report' in Section 2.0 (Natural Beauty Indicators) and 3.0 (Special Qualities Indicators).

14. The 'Special Qualities' of the AONB identified in Section 3.0 of this document are considered somewhat intangible for the purpose of assessment of seascape, landscape and visual effects, often considering factors which are related to, but are not specifically 'landscape' quality criteria, such as health and well-being, family heritage, food culture and tourism.

15. The approach of the assessment of the effects on landscape character of the AONB undertaken in the SLVIA, has been to base the assessment on the more tangible and clearly landscape focused 'natural beauty' indicators, identified in Section 2.0 of the 'Special Qualities Report', as indicators of the landscape qualities of the AONB. This is consistent with other recent assessments of AONB qualities, such as that undertaken by Natural England for the AONB Boundary Variation Project (Natural England 2017). These natural beauty indictors define the landscape qualities of the AONB, which inform its special qualities.

16. The assessment presented here, utilises the table of natural beauty indicators from the AONB special qualities report and assesses:

- The magnitude of change to the AONB special qualities indicator resulting from the East Anglia TWO windfarm site; and
- The significance of effect on the AONB special qualities indicator resulting from the East Anglia TWO windfarm site (significant / not significant), determined by combining the sensitivity of the AONB and magnitude of change to the AONB special qualities indicator.

17. The effects of the construction and operation of the offshore infrastructure are assessed in ***Table A28.3***, on each special quality indicator as a whole, with reference to specific geographic areas informed by the LCT assessment in ***section 28.2.1***.

Table A28.3 AONB Special Quality Indicator Assessment

Baseline Description of Special Qualities (Factors and Indicators of Natural Beauty extracted from AONB Special Qualities Report)	Magnitude of Change on Special Quality	Significance of Effect on Special Quality (during construction)	Significance of Effect on Special Quality (during operation)
Landscape Quality			
Intactness of the landscape in visual, functional and ecological perspectives. 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.	**Medium**. The construction and operation of the offshore infrastructure will not result in any direct changes to the current pattern of elements that create the close-knit relationship of semi-natural and cultural landscapes. The only influence that the East Anglia TWO windfarm site will have will be to introduce a further element into the seascape setting of the coastal areas of the AONB, adding to the juxtaposition of different elements perceived from the coastal edges of the AONB through its visibility from localised areas. These changes are mainly restricted to the coastal edges of the Coastal Dunes and Estate Sandlands LCT (05), especially between Southwold and the north side of Orford Ness (LCT Area 5C); and to the short sections of Estate Sandlands LCT (07) where it forms the coast at Covehithe and Dunwich Heath. In terms of this special quality, the East Anglia TWO offshore windfarm site does not affect the immediate setting of the AONB, but will be seen on and beyond the horizon, as a 'horizon development' to a large open seascape, rather than being viewed 'within' its seascape/landscape. **None**. There will be no change as a result of the construction and operation of the offshore infrastructure on areas of heath and acid grassland, or their national biodiversity value.	**Significant**, short-term and temporary	**Significant**, long-term and reversible

Baseline Description of Special Qualities (Factors and Indicators of Natural Beauty extracted from AONB Special Qualities Report)	Magnitude of Change on Special Quality	Significance of Effect on Special Quality (during construction)	Significance of Effect on Special Quality (during operation)
	Effects on cultural landscape/heritage assets considered in ***Chapter 24 Onshore Archaeology and Cultural Heritage***.		
The condition of the landscape's features and elements. 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.	**Low.** The construction and operation of the offshore infrastructure will have a relatively low influence on the strong overall character of the AONB, with its varied and distinctive landscapes continuing to define its overall character. It is not the overall character or physical features of the coastal edges of the AONB that will be changed, but instead it is specific aesthetic/perceptual aspects of its character at the coast that will experience change, where there are interactions between these aesthetic/perceptual aspects of the sea and the East Anglia TWO windfarm site. The effects arise as a result of change on particular characteristics, not wholesale change, since there are other elements, features and aesthetic/perceptual aspects that continue to contribute to the character and distinctiveness of the AONB that will not be changed or effected in the same way.	**Not significant**, short-term and temporary	**Not significant**, long-term and reversible
The influence of incongruous features or elements (whether man-made or natural) on the perceived natural beauty of the area. 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	**Medium-low**. The East Anglia TWO windfarm site will add a further large-scale energy generation element influencing the coast and its seascape setting, in addition to other long-established elements such as Sizewell Nuclear Power Station and more recent Greater Gabbard and Galloper offshore windfarms, from some stretches of the coastline.	**Not significant**, short-term and temporary	**Not significant**, long-term and reversible

Baseline Description of Special Qualities (Factors and Indicators of Natural Beauty extracted from AONB Special Qualities Report)	Magnitude of Change on Special Quality	Significance of Effect on Special Quality (during construction)	Significance of Effect on Special Quality (during operation)
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 Offshore Windfarms are visible from some stretches of the coastline. These create a cluttered horizon and, like the large-scale elements onshore, also divide opinion.	Galloper and Greater Gabbard windfarms are more notable as characteristics in the baseline from the southern areas of the AONB, approximately between Aldeburgh and Felixstowe, and Orford Ness. The construction and operation of the offshore infrastructure will add to the existing influence of offshore wind energy development in the perceived character of these areas AONB and add to what is described as the cluttered horizon. Changes occurring in the context of the existing wind energy influenced seascape are likely to be relatively lower than on areas of the AONB further north, which are less influenced by windfarms in the baseline, as the East Anglia TWO windfarm would not form an entirely new type of development characteristic, but will instead result in a northerly extension to this windfarm influence in very good/excellent visibility. From areas of the AONB coast near Sizewell, the changes resulting from the East Anglia TWO windfarm site will be experienced in the context of more prominent energy infrastructure influences at Sizewell Nuclear Power Station and its offshore intake and outfall structures in foreground. The concrete hulk of Sizewell A and white dome of Sizewell B are a key landmark and exert a strong influence on the local character of the AONB in this area. The scale of the buildings dominates the local landscape such that other landscape features including the East Anglia TWO offshore windfarm will feel smaller and less notable.		

Baseline Description of Special Qualities (Factors and Indicators of Natural Beauty extracted from AONB Special Qualities Report)	Magnitude of Change on Special Quality	Significance of Effect on Special Quality (during construction)	Significance of Effect on Special Quality (during operation)
Scenic Quality			
A distinctive 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 of elements in a relatively small area.	**Medium**. The construction and operation of the offshore infrastructure will not result in any direct changes to the current pattern of elements that create the unique character of semi-natural and cultural landscapes. The only influence that the East Anglia TWO windfarm site will have is to introduce a further element into the seascape setting of the coastal areas of the AONB, adding to the juxtaposition of different elements perceived from the coastal edges of the AONB within localised areas. These changes are mainly restricted to the coastal edges of the Coastal Dunes and Estate Sandlands LCT (05), especially between Southwold and the north side of Orford Ness (LCT Area 5C); and to the short sections of Estate Sandlands LCT (07) where it forms the coast at Covehithe and Dunwich Heath. In terms of this scenic quality, the East Anglia TWO offshore windfarm site does not affect the immediate setting of the AONB, but will be seen on and beyond the horizon, as a 'horizon development' to a large open seascape, rather than being viewed 'within' its seascape/landscape. Effects on cultural landscape/heritage assets considered in ***Chapter 24 Onshore Archaeology and Cultural Heritage***.	**Significant**, short-term and temporary	**Significant**, long-term and reversible

Baseline Description of Special Qualities (Factors and Indicators of Natural Beauty extracted from AONB Special Qualities Report)	Magnitude of Change on Special Quality	Significance of Effect on Special Quality (during construction)	Significance of Effect on Special Quality (during operation)
Striking landform. 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.	**Medium**. The construction and operation of the offshore infrastructure will result in a partial loss of open sea skyline in long distance and panoramic views out to sea and along the Heritage Coast, from elevated vantage points, due to the lateral spread of wind turbines on the seaward horizon experienced from the AONB coastline. Addition of elements which may change the long distance and panoramic views including out to sea and along the Heritage Coast. In terms of this scenic quality, the East Anglia TWO offshore windfarm site does not affect the immediate setting of the AONB, but will be seen on and beyond the horizon, as a 'horizon development' to a large open seascape, rather than being viewed 'within' its seascape/landscape.	**Significant**, short-term and temporary	**Significant**, long-term and reversible
Striking landform. Coastal cliffs, shingle spits, estuaries and beaches are striking landform features.	**Low**. The East Anglia TWO windfarm site will not result in any direct or physical changes to these landform features that will continue to fundamentally define the landform of the coastal areas of the AONB in their current and dynamic form. It will introduce further wind energy development influence in the offshore backdrop to the coastal cliffs, shingle spits, estuaries and beaches that define the coastal landform of the AONB in localised views from the coast.	**Not significant**, short-term and temporary	**Not significant**, long-term and reversible
Visual interest in patterns of land cover. Varied habitats and land cover in intricate mosaic corresponding to natural geography (landform, geology,	**None**. The construction and operation of the offshore infrastructure will result in no changes to the varied	**Not significant**, short-term and temporary	**Not significant**, long-term and reversible

Baseline Description of Special Qualities (Factors and Indicators of Natural Beauty extracted from AONB Special Qualities Report)	Magnitude of Change on Special Quality	Significance of Effect on Special Quality (during construction)	Significance of Effect on Special Quality (during operation)
soils & climate) and displaying seasonal differences, either as a result of natural processes or past and current farming and land management regimes.	habitats and land cover of the AONB, or the seasonal differences that they display.		
Appeal to the senses. 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.	**Medium-low**. Some changes to the juxtaposition of colours and textures in coastal areas, with the introduction of modern white/grey wind turbines in the seascape backdrop, contrasting to the natural colours/textures of sand dunes, shingle beaches, reedbeds, mud flats and heathland at the coast. The technological appearance of the wind turbines in views from localised areas of the coast is likely to contrast with the perceived naturalness of the vegetated shingle habitat/reedbeds/marshes/low cliffs that define the character of the coast, however they will also relate rationally to the exposure, large scale and austere character of parts of the coastal landscape.	**Not significant**, short-term and temporary	**Not significant**, long-term and reversible
Appeal to the senses. Large open vistas across heaths and along the coast, out to sea and from sea to coastline, with memorable views and eye-catching features or landmarks. Landmarks include historic structures such as churches, Martello towers and lighthouses, the House in the Clouds (Thorpeness) as well as more modern structures including Sizewell A and B and the former military structures and masts at Orford Ness.	**Medium**. The construction and operation of the offshore infrastructure will introduce a further visible element in sea view component of the large open vistas across heaths and along the coast out to sea from localised areas of the coast. The East Anglia TWO windfarm site may contrast or compete with other landmarks along the coast and out to sea as a focal point, however due to the relatively low elevation of the heaths, simple form of the coastline and its long distance offshore, the East Anglia TWO windfarm site will be seen on and beyond the horizon, as a 'horizon development' with reduced potential to compete with landmarks within the AONB. The open sea skyline of the large vistas would remain unaffected across the	**Significant**, short-term and temporary	**Significant**, long-term and reversible

Baseline Description of Special Qualities (Factors and Indicators of Natural Beauty extracted from AONB Special Qualities Report)	Magnitude of Change on Special Quality	Significance of Effect on Special Quality (during construction)	Significance of Effect on Special Quality (during operation)
	majority of the field of view out to sea and the large scale of the open sea vistas are more likely to be able accommodate windfarm development than smaller scale, complex seascapes. In terms of this scenic quality, the East Anglia TWO offshore windfarm site does not affect the immediate setting of the AONB, but will be seen on and beyond the horizon, as a 'horizon development' to a large open seascape, rather than being viewed 'within' its seascape/landscape.		
Appeal to the senses. 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). Presence of individual species that contribute to perceived wildness.	**Medium-low**. The wind turbines within the East Anglia TWO windfarm site will add a new large-scale offshore wind farm element to the sea element of the simply composed character of sea and big 'Suffolk skies', however the vertical height of the wind turbines relative to the vast skies will be small / moderate in scale, due to their long distance offshore (over 32km) and the large scale of the seascape. Night time lighting of the wind turbines will introduce further lighting in the relatively dark night skies, however will be viewed at long distance offshore, in the context of existing wind turbine lighting from parts of the AONB (Galloper, Greater Gabbard and London Array lights are evident) and other lighting of cardinal buoys and vessels in the waters off the AONB coastline. Although forming further development and increasing the presence of apparent human activity, the construction and operation of the offshore infrastructure will result in no audible changes to the existing sounds of tranquil areas of the AONB. The quality of light/space of the	**Not significant**, short-term and temporary	**Not significant**, long-term and reversible

Baseline Description of Special Qualities (Factors and Indicators of Natural Beauty extracted from AONB Special Qualities Report)	Magnitude of Change on Special Quality	Significance of Effect on Special Quality (during construction)	Significance of Effect on Special Quality (during operation)
	AONB will continue to be fundamentally defined by the existing sensory stimuli.		
Relative Wildness			
A sense of remoteness. 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.	**Medium-low**. The construction and operation of the offshore infrastructure will not introduce major transport infrastructure along the coast and will therefore not directly affect the fundamental arrangement or experience of the AONB that is gained due to access via minor roads extending to the coast between the main estuaries that have contributed to a relatively undeveloped character. The construction and operation of the offshore infrastructure will introduce further development influence on the relatively undeveloped character of parts of the Suffolk coast, particularly the immediate edges of the Coastal Dunes and Shingle Ridges LCT (05) between Southwold and the north side of Orford Ness; and the Estate Sandlands LCT (07) near Covehithe and Dunwich Heath, although occurring at long distance offshore as a 'horizon' development in the distant seascape setting of the AONB, rather than its immediate setting. The distance of the East Anglia TWO windfarm offshore outside the AONB offshore, and not within its immediate setting, will reduce the perception of introducing new human artefacts/structures and hereby minimise the change to the perception of undeveloped character. The construction and operation of the offshore infrastructure will also, from certain parts of the AONB	**Not significant**, short-term and temporary	**Not significant**, long-term and reversible

Baseline Description of Special Qualities (Factors and Indicators of Natural Beauty extracted from AONB Special Qualities Report)	Magnitude of Change on Special Quality	Significance of Effect on Special Quality (during construction)	Significance of Effect on Special Quality (during operation)
	coastline, occur in the context of existing energy generation influences, including the existing Galloper and Greater Gabbard offshore windfarms, experienced most readily from the coastline between Aldeburgh and Bawdsey; and the existing Sizewell A and B developments experienced in the areas near Sizewell. The changes identified do not affect the strength of the wildness perceived within the AONB to the degree the qualities are substantially eroded and are considered to be not significant. The geographic extent of changes in this perceived wildness quality is also very limited to isolated pockets of landscape, with the vast majority of the AONB landscape experiencing negligible changes to the wildness attributes perceived.		
A sense of remoteness. Pockets of relative wildness associated with coast, estuary and forests in this largely farmed and settled landscape.	**Medium-low**. No physical attributes contributing to wildness special qualities will be changed as a result of the construction and operation of the offshore infrastructure. The location of the East Anglia TWO windfarm site outside the AONB may only impact on perceived experience of these wildness attributes. The introduction of further modern, man-made structures and increase in evidence of apparent human activity may change the perceived wildness attributes from pockets of coastal AONB landscapes which have perception of relative wildness associated with coast. While on the one hand wind energy development influence may contrast with this perception of wildness, wind turbines may also relate legibly to the coastal exposure and inclement conditions experienced, particularly from the	**Not significant**, short-term and temporary	**Not significant**, long-term and reversible

Baseline Description of Special Qualities (Factors and Indicators of Natural Beauty extracted from AONB Special Qualities Report)	Magnitude of Change on Special Quality	Significance of Effect on Special Quality (during construction)	Significance of Effect on Special Quality (during operation)
	immediate coastal edges of the Coastal Dunes and Shingle Ridges LCT forming the AONB coastline, which is most exposed to these conditions. Although the perceptual qualities of relative wildness experienced in pockets of the open coastal fens and estuaries/marshlands near the coast are susceptible to the influence of development, the visual containment of these low lying estuaries and fens of the AONB by the intervening raised dunes and shingle landforms along their eastern edge, reduces their association and the resulting changes arising from the East Anglia TWO windfarm site. The introduction of wind turbines in the coastal backdrop located well outside and at distance (over 32km), removed from the association of the sea (which is often not visible), would constitute a new, but relatively minor alteration to perceived wildness of the coast, estuaries and forests, at variance to the relatively undeveloped, flat, open and simple character of the LCT, but removed from and in the background to the main elements that define character. The east Suffolk coastline is an area that has been transformed by the impact of people and has a long-established inter-relationship between people using and interacting with the sea/maritime environment. The changes identified do not affect the strength of the wildness perceived within the AONB to the degree the qualities are substantially eroded and are considered to be not significant. The geographic extent of changes in this perceived wildness quality is also very limited to isolated pockets of landscape, with the vast majority of		

Baseline Description of Special Qualities (Factors and Indicators of Natural Beauty extracted from AONB Special Qualities Report)	Magnitude of Change on Special Quality	Significance of Effect on Special Quality (during construction)	Significance of Effect on Special Quality (during operation)
	the AONB landscape experiencing negligible changes to the wildness attributes perceived.		
A relative lack of human influence. Semi-natural habitats evident, notably on the Sandlings heaths, marshes, reedbeds, estuaries and along the coastline.	**Low**. The construction and operation of the offshore infrastructure will have no direct effects on the semi-natural habitats evident along the coastline (Sandlings heaths, marshes, reedbeds, estuaries). No physical attributes contributing to wildness special qualities will be changed as a result of the construction and operation of the offshore infrastructure. The location of the East Anglia TWO windfarm site outside the AONB may only impact on perceived experience of these wildness attributes. The technological appearance of the wind turbines may contrast with the perceived naturalness of these habitats, evident in the least developed parts of the AONB coastline, but also represent the visual aesthetic of green/sustainable energy which may be perceived as having positive visual associations with the natural environment. The changes identified do not affect the strength of the wildness perceived within the AONB to the degree the qualities are substantially eroded and are considered to be not significant. The geographic extent of changes in this perceived wildness quality is also very limited to isolated pockets of landscape, with the vast majority of the AONB landscape experiencing negligible changes to the wildness attributes perceived.	**Not significant**, short-term and temporary	**Not significant**, long-term and reversible

Baseline Description of Special Qualities (Factors and Indicators of Natural Beauty extracted from AONB Special Qualities Report)	Magnitude of Change on Special Quality	Significance of Effect on Special Quality (during construction)	Significance of Effect on Special Quality (during operation)
A relative lack of human influence. 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 Offshore Windfarms are visible from stretches of the coastline.	**Medium-low**. No physical attributes contributing to wildness special qualities will be changed as a result of the construction and operation of the offshore infrastructure. The location of the East Anglia TWO windfarm site outside the AONB may only impact on perceived experience of these wildness attributes. The construction and operation of the offshore infrastructure will not occur directly upon the undeveloped coastline of the AONB, with no direct changes to the semi-natural habitat of the AONB, or the built heritage assets that contribute to character. The construction and operation of the offshore infrastructure will introduce further development influence in the offshore waters that form the seascape setting to the AONB, as viewed from the relatively undeveloped character of parts of the Suffolk coast, particularly the immediate edges of the Coastal Dunes and Shingle Ridges LCT (05) between Southwold and the north side of Orford Ness; and the Estate Sandlands LCT (07) near Covehithe and Dunwich Heath, although occurring at long distance offshore as a 'horizon' development in the distant seascape setting of the AONB, rather than its immediate setting. The distance of the East Anglia TWO windfarm offshore outside the AONB offshore, and not within its immediate setting, will reduce the perception of introducing new human artefacts/structures and hereby minimise the change to the perception of this wildness quality. From certain parts of the coastline, the changes arising from the construction and operation of the offshore	**Not significant**, short-term and temporary	**Not significant**, long-term and reversible

Baseline Description of Special Qualities (Factors and Indicators of Natural Beauty extracted from AONB Special Qualities Report)	Magnitude of Change on Special Quality	Significance of Effect on Special Quality (during construction)	Significance of Effect on Special Quality (during operation)
	infrastructure occur in the context of existing energy generation developments, which already influence the perceived wildness of the AONB, including operational offshore windfarms (Greater Gabbard and Galloper) which influences the seascape setting of the southern parts of the AONB coastline, between Aldeburgh and Bawdsey, and the Sizewell A and B Nuclear Power Station which have a strong influence on negating perceived wildness in the area near Sizewell. The concrete hulk of Sizewell A and white dome of Sizewell B are a key landmark and exert a strong influence on the local character of the AONB in this area. The scale of the buildings dominates the local landscape such that other landscape features including the East Anglia TWO offshore windfarm will feel smaller and less notable. In this context, the construction and operation of the offshore infrastructure represents an increase in energy development influence and an increase in an existing development characteristic of the AONB coastline, rather than an entirely new influence.		
A sense of openness and exposure. Big 'Suffolk skies' and expansive views offshore emphasise sense of openness and exposure on open and exposed coastline and on the Sandlings heaths.	**Low -** On big 'Suffolk skies' **Medium -** On views offshore. The construction and operation of the offshore infrastructure will introduce a further visible element in sea view component of the expansive views offshore from the heaths and along the open coast out to sea. The East Anglia TWO windfarm site may compete with the sense of openness, as an element that may	**Not significant, short-term and temporary on big 'Suffolk skies'** **Significant**, short-term and temporary on	**Not significant, long-term and reversible on big 'Suffolk skies'** **Significant**, long-term and reversible on

Baseline Description of Special Qualities (Factors and Indicators of Natural Beauty extracted from AONB Special Qualities Report)	Magnitude of Change on Special Quality	Significance of Effect on Special Quality (during construction)	Significance of Effect on Special Quality (during operation)
	appear to define the limit of the view on the horizon, however due to the relatively low elevation of the heaths, simple form of the coastline and its long distance offshore, the East Anglia TWO windfarm site will be seen on and beyond the horizon, as a 'horizon development' with reduced potential to change the openness and exposure experience within the AONB. It's location on the distant skyline ensures that it would not alter the perception of big 'Suffolk skies'. Fundamentally, the openness and exposure experienced from the coastline and the Sandlings heaths would continue to be experienced in the presence of the East Anglia TWO offshore windfarm site, even though it forms a visible element in views. The large scale of the expansive views offshore are more likely to be able accommodate windfarm development than smaller scale, complex seascapes. The vertical height of the wind turbines relative to the vast skies will be relatively moderate in scale, due to their long distance offshore (over 32km) and the large scale of the seascape and will relate rationally to the sense of openness and exposure along the AONB coastline. Changes to this quality occur from the AONB, rather than on it, with changes to the vistas across the coast and heaths derived from the views experienced from within the AONB out to sea or along the coast. The changes identified affect the specific special quality relating to expansive views offshore from the localised coastal areas of the AONB, to the degree that is considered to be significant. The geographic	expansive views offshore	expansive views offshore

Baseline Description of Special Qualities (Factors and Indicators of Natural Beauty extracted from AONB Special Qualities Report)	Magnitude of Change on Special Quality	Significance of Effect on Special Quality (during construction)	Significance of Effect on Special Quality (during operation)
	extent of these changes in this quality is however very concentrated to the immediate coastal edge with open sea views, with the vast majority of the AONB landscape experiencing negligible changes to the wildness attributes perceived.		
A sense of enclosure and isolation. Forestry plantations create sense of enclosure and isolation contrasting to open and more exposed areas along the coast and on the Sandlings heaths.	**Negligible**. The construction and operation of the offshore infrastructure will not result in any direct changes to the forestry plantations within the AONB that create the sense of enclosure and isolation along the coast and on the Sandlings heaths. No physical attributes contributing to wildness special qualities will be changed as a result of the construction and operation of the offshore infrastructure. The location of the East Anglia TWO windfarm site outside the AONB may only impact on perceived experience of these wildness attributes. The East Anglia TWO offshore windfarm site will generally not be visible at all from the enclosed forested landscapes of the AONB, due to the dense forest cover, and will result in negligible change to the qualities of enclosure and isolation of these forest landscapes. Changes resulting from the construction and operation of the offshore infrastructure on the more open and exposed areas of the coast and heaths are assessed in the above special quality.	**Not significant**, short-term and temporary	**Not significant**, long-term and reversible
A sense of passing of time and a return to nature. Significant areas of semi natural landscape and seascape notably along the coastline, offshore and within	**Medium-low**. The construction and operation of the offshore infrastructure will not result in any direct	**Not significant**, short-term and temporary	**Not significant**, long-term and reversible

Baseline Description of Special Qualities (Factors and Indicators of Natural Beauty extracted from AONB Special Qualities Report)	Magnitude of Change on Special Quality	Significance of Effect on Special Quality (during construction)	Significance of Effect on Special Quality (during operation)
undeveloped estuaries where there is little evidence of apparent human activity despite the sea walls and coastal marshes.	changes to the pattern of elements within the semi-natural landscapes and estuaries of the AONB. No physical attributes contributing to wildness special qualities will be changed as a result of the construction and operation of the offshore infrastructure. The location of the East Anglia TWO windfarm site outside the AONB may only impact on perceived experience of these wildness attributes. Many of the coastal marshes and landscapes along the coast have been subject to modification and human intervention over time, with the draining of marshes for grazing and introduction of sea walls. The limited amount of settlement also belies the previous extent of occupation of parts of the coast, the former settlements/ports of Sizewell and Dunwich having been lost to the sea. The introduction of the East Anglia TWO offshore windfarm site will, however, increase the evidence of apparent human activity as a modern intervention in the distant, but not immediate, seascape setting of the semi-natural landscapes of the AONB. The distance of the East Anglia TWO windfarm offshore outside the AONB offshore, and not within its immediate setting, will reduce the perception of introducing new human artefacts/structures and hereby minimise the change to the perception of this wildness quality. The technological appearance of the wind turbines may contrast with the perceived naturalness of these landscapes, evident in the least developed pockets of the AONB coastline, but also represent the visual		

Baseline Description of Special Qualities (Factors and Indicators of Natural Beauty extracted from AONB Special Qualities Report)	Magnitude of Change on Special Quality	Significance of Effect on Special Quality (during construction)	Significance of Effect on Special Quality (during operation)
	aesthetic of green/sustainable energy which may be perceived as having positive visual associations with the conservation of the natural environment. The changes identified do not affect the strength of the wildness perceived within the AONB to the degree the qualities are substantially eroded and are considered to be not significant. The geographic extent of changes in this perceived wildness quality is also very limited to isolated pockets of landscape, with the vast majority of the AONB landscape experiencing negligible changes to the wildness attributes perceived.		
Relative Tranquillity			
Contributors to tranquillity. Areas of semi natural habitat, where there is a general absence of development and apparent human activity, contribute to a sense of relative tranquillity. Presence of individual species that contribute to perceived tranquillity. Further enhanced by sounds (bird calls, the wind through reeds in estuaries, waves on shingle) and relatively dark skies.	**Medium-low**. Although forming further development and increasing the presence of apparent human activity, the construction and operation of the offshore infrastructure will result in no audible changes to the existing sounds of tranquil areas of the AONB. The appearance of the East Anglia TWO windfarm site relates rationally to the sounds of the wind and exposure along the AONB coastline. The introduction of the East Anglia TWO offshore windfarm site will increase the evidence of apparent development and human activity, as a modern intervention in the distant, but not immediate, seascape setting of the coastal landscapes of the AONB. The construction and operation of the offshore infrastructure will not directly change the physical	**Not significant**, short-term and temporary	**Not significant**, long-term and reversible

Baseline Description of Special Qualities (Factors and Indicators of Natural Beauty extracted from AONB Special Qualities Report)	Magnitude of Change on Special Quality	Significance of Effect on Special Quality (during construction)	Significance of Effect on Special Quality (during operation)
	pattern of elements within areas of semi-natural habitat, but instead introduces development influence in the offshore waters that form the seascape setting to the AONB, as viewed from the relatively undeveloped character of parts of the Suffolk coast. The technological appearance of the wind turbines and the visual movement of the rotor blades may contrast with the perceived tranquillity of these landscapes, evident in the least developed pockets of the AONB coastline. The construction and operation of the offshore infrastructure will introduce visible man-made structures (wind turbines) which incorporate a kinetic element into an otherwise relatively undeveloped seascape, thereby affecting the potential for people to experience tranquillity in these locations. The relatively slow visual movement of the turbine rotors and long distance offshore provides some mitigation to the potential changes in perceived tranquillity, with effects likely to be infrequent due to the long distance offshore and the prevailing weather conditions that influence visibility at such distance. Night time lighting of the wind turbines will introduce further lighting in the relatively dark night skies, however will be viewed at long distance offshore, in the context of existing wind turbine lighting from parts of the AONB (Galloper, Greater Gabbard and London Array lights are evident) and other lighting of cardinal buoys and vessels in the waters and result in relatively low change to the tranquillity experienced within the AONB coastline.		

Baseline Description of Special Qualities (Factors and Indicators of Natural Beauty extracted from AONB Special Qualities Report)	Magnitude of Change on Special Quality	Significance of Effect on Special Quality (during construction)	Significance of Effect on Special Quality (during operation)
Detractors from tranquillity. 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.	**Negligible**. The construction and operation of the offshore infrastructure will result in negligible changes to areas of the AONB which have low levels of tranquillity in the baseline, such as the busy coastal towns with large numbers of seasonal tourist visitors and urban development/road traffic being prevalent; and low changes to relative tranquillity of inland areas of the AONB.	**Not significant**, short-term and temporary	**Not significant**, long-term and reversible
Natural Heritage Features			
Geological and geo-morphological features. 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.	**None**. The construction and operation of the offshore infrastructure will result in no direct changes to the characteristic expressions of geology which mark the boundary of the AONB or the striking expressions of geology and sedimentation that defines the crumbling coastal cliffs.	**Not significant**, short-term and temporary	**Not significant**, long-term and reversible
Geological and 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.	**None.** The construction and operation of the offshore infrastructure will result in no direct physical landscape changes to the low crumbling cliffs and banks of shingle beaches or the, dynamic coastline and geomorphological features of Orford Ness and the river estuaries.	**Not significant**, short-term and temporary	**Not significant**, long-term and reversible
Wildlife and habitats. Varied, nationally and internationally protected sites such as SSSI, SPA and SAC, semi-natural habitats designated	**None**. The construction and operation of the offshore infrastructure will result in no direct physical landscape	**Not significant**, short-term and temporary	**Not significant**, long-term and reversible

Baseline Description of Special Qualities (Factors and Indicators of Natural Beauty extracted from AONB Special Qualities Report)	Magnitude of Change on Special Quality	Significance of Effect on Special Quality (during construction)	Significance of Effect on Special Quality (during operation)
for their nature conservation interest and range of species supported (including shingle beaches, intertidal and offshore areas, reedbeds, grazing marshes and Sandlings heaths). .	changes to the varied, nationally and internationally protected sites such as SSSI, SPA and SAC. There will be no direct changes to the dynamic coastal regimes and resulting transitions in character. These dynamic processes will continue to fundamentally shape the coastal environment and its distinctiveness.		
Wildlife and habitats. 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.	Effects on wildlife and habitats are considered in ***Chapter 22 Onshore Ecology*** and ***Chapter 23 Onshore Ornithology.***	Not assessed	Not assessed
Cultural Heritage			
Built environment, archaeology and designed landscapes. 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 architecture (as at Aldeburgh); and use of soft hued red brick and pink render with thatch or pantiles contribute to sense of place.	Effects on built heritage assets considered in ***Chapter 24 Onshore Archaeology and Cultural Heritage***.	Not assessed	Not assessed
Built environment, archaeology and designed landscapes. Archaeological and historic sites and features include prehistoric and later burial monuments (including the	Effects on cultural heritage assets considered in ***Chapter 24 Onshore Archaeology and Cultural Heritage***.	Not assessed	Not assessed

Baseline Description of Special Qualities (Factors and Indicators of Natural Beauty extracted from AONB Special Qualities Report)	Magnitude of Change on Special Quality	Significance of Effect on Special Quality (during construction)	Significance of Effect on Special Quality (during operation)
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. 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), WW11 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.	**Low**. From areas of the AONB coast near Sizewell, the changes resulting from the East Anglia TWO windfarm site will be experienced in the context of more prominent energy infrastructure influences at Sizewell Nuclear Power Station and its offshore intake and outfall structures in foreground. The concrete hulk of Sizewell A and white dome of Sizewell B are a key landmark and exert a strong influence on the local character of the AONB in this area. The scale of the buildings dominates the local landscape such that other landscape features including the East Anglia TWO offshore windfarm will have feel smaller and less notable.	**Not significant**, short-term and temporary	**Not significant**, long-term and reversible

Baseline Description of Special Qualities (Factors and Indicators of Natural Beauty extracted from AONB Special Qualities Report)	Magnitude of Change on Special Quality	Significance of Effect on Special Quality (during construction)	Significance of Effect on Special Quality (during operation)
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.			
Historic influence on 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. 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.	Effects on cultural and built heritage assets considered in ***Chapter 24 Onshore Archaeology and Cultural Heritage***.	Not assessed	Not assessed
Characteristic land management practices. 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	**None**. The construction and operation of the offshore infrastructure will result in no direct physical landscape changes to the diverse and distinct habitat types and land management practices.	**Not significant**, short-term and temporary	**Not significant**, long-term and reversible

Baseline Description of Special Qualities (Factors and Indicators of Natural Beauty extracted from AONB Special Qualities Report)	Magnitude of Change on Special Quality	Significance of Effect on Special Quality (during construction)	Significance of Effect on Special Quality (during operation)
scale fishing industry results in boats, nets, pots and storage buildings on some stretches of coastline.			
Associations with written descriptions. Associations with numerous writers including George Crabbe, (e.g. the poem 'The Borough', 1810), P.D. James and Arthur Ransome.	Effects on cultural and built heritage assets considered in ***Chapter 24 Onshore Archaeology and Cultural Heritage***.	Not assessed	Not assessed
Associations with artistic representations. 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. 'Aldberough, 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.	Effects on cultural and built heritage assets considered in ***Chapter 24 Onshore Archaeology and Cultural Heritage***.	Not assessed	Not assessed
Associations of the landscape with people, places or events. 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.	Effects on cultural and built heritage assets considered in ***Chapter 24 Onshore Archaeology and Cultural Heritage***.	Not assessed	Not assessed