



**SCOTTISHPOWER
RENEWABLES**

East Anglia ONE North Offshore Windfarm

Appendix 4.3

Suffolk Coasts and Heaths AONB Impact Appraisal

Environmental Statement Volume 3

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East Anglia ONE North East Anglia TWO Onshore Substations

Suffolk Coast and Heaths AONB Impact Appraisal

Client: RHDHV

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1. Introduction

1.1 Overview

ScottishPower Renewables (SPR) is intending to develop the proposed East Anglia ONE North and East Anglia TWO offshore windfarms (EA2 and EA1N, "the Projects") and associated onshore infrastructure. Current proposals are for each of the Projects to connect at new onshore substations in the vicinity of Sizewell and Leiston, Suffolk, within the onshore study area (Figure 3). The SPR onshore substations will also connect into a National Grid (NG) substation, which is to be consented as part of the proposed Projects.

1.2 Substation Zones

A number of potential zones have been considered for the East Anglia TWO, East Anglia ONE North and National Grid substations ('the substations'). Zones have been renamed as the site selection process has progressed:

- Zone 1 (formerly Zone E3)
- Zone 2 (formerly Zone E4)
- Zone 3 (formerly Zone E2)
- Zone 4 (formerly Zone E1)
- Zone 5 (formerly Zone W3)
- Zone 6 (formerly Zone W2)
- Zone 7 (formerly Zone W1) (known as Grove Wood, Friston)
- Zone 8 (new Zone) (known as Broom Covert, Sizewell)

Zones E1-E5 are located to the east of the onshore study area, either within or on the edge of the Suffolk Coast and Heaths AONB (herein referred to as 'the AONB'), relatively near to the landfall point between Sizewell and Thorpeness and the existing overhead transmission line that extends from Sizewell Nuclear Power Station. Land at Broom Covert, Sizewell is included as Zone 8 - Broom Covert in light of SPR's Phase 3.5 consultation on substation site selection. Zone 5, Zone 6 and 7 - Grove Wood are located further inland to the west, entirely outside the AONB but within 500m of the existing overhead transmission line.

1.3 Project Envelope

EA2 and EA1N Substations

The project envelope considered in this site selection process is as follows:

- A footprint of up to 3.61 hectares (ha) for each of the EA2 and EA1N onshore substations – in an optimised footprint shape of 190x190m for each of the two substations.
- Electrical infrastructure will be up to 18m above ground level, with harmonic filters being located externally, at zones 5, 6 and 7 - Grove Wood; or up to 21m with harmonic filters

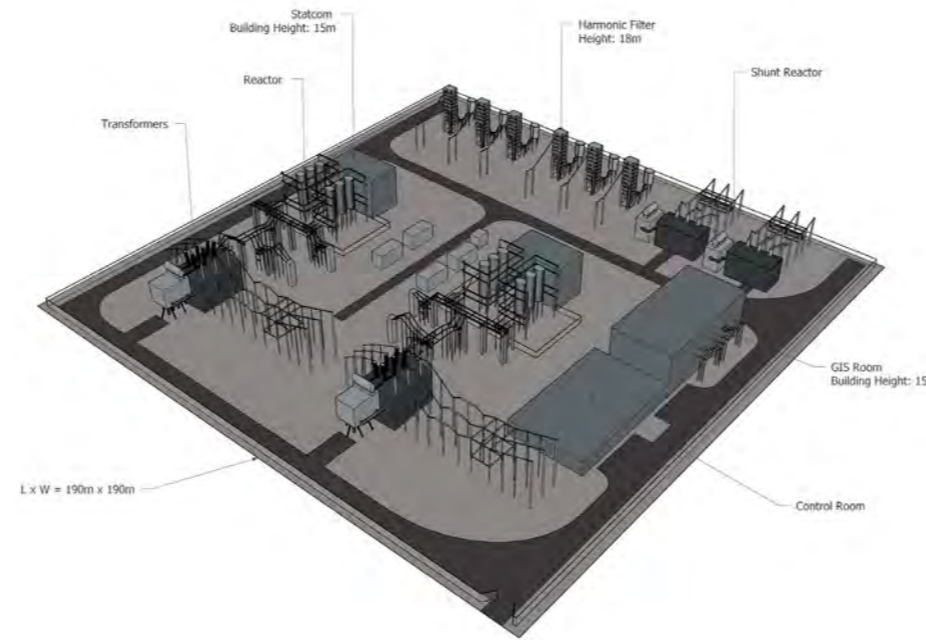


Figure. 1: Indicative Onshore Substation Model

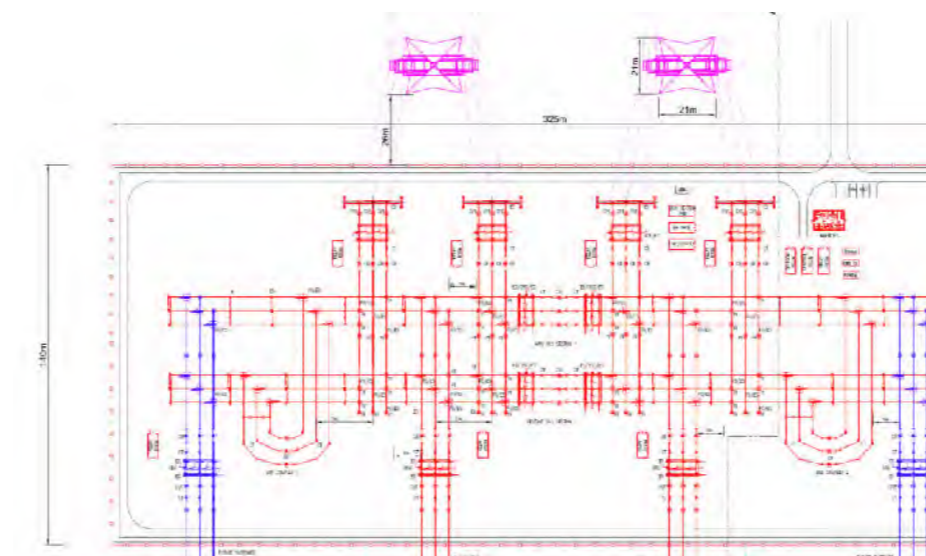
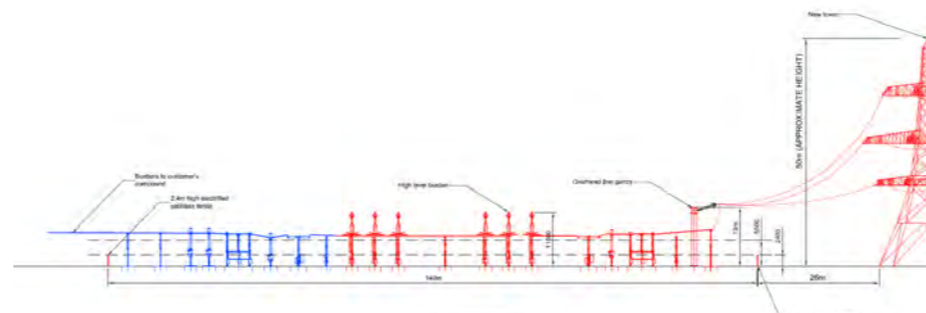


Figure. 2: Indicative NG Substation Design Parameters



internally within a building at zones E1 to E5;

National Grid (NGET) Substation

In addition to the EA2 and EA1N substations that utilise the design parameters indicated in Figure 1, a National Grid substation is also required which has a footprint of 325m x 140m and a height of up to 13m (Figure 3).

1.4 Previous Site Selection Work

Previous site selection work undertaken has included the following:

- A Red / Amber / Green (RAG) Assessment, which included consideration of landscape capacity and sensitivity criteria for zones Zone 4-Zone 2 and Zone 5, 6 and 7 - Grove Wood;
- A Substation Location Options Review (Landscape and Visual considering Zones Zone 4 and Zone 3);
- Visualisations produced showing substation development in Zones 4 and 3; and
- An updated RAG Assessment which included consideration of Zone 8 - Broom Covert.

Key elements of this work are discussed further and in turn below.

RAG Assessment

The RAG assessment identified that, in terms of high-level landscape criteria, Zones 5, 6 and 7 - Grove Wood to the west had a higher proportion of 'Green' scores (and less 'red' scores) compared to Zones 1 - 4 to the east. This was largely due to the potential for Zones 1-4, located within or on the edge of the AONB, to affect the special qualities of the AONB; whereas Zones 5 - 7 Grove Wood, were identified as being unlikely to affect its special qualities since they are located at some distance outside its boundary.

Although the landscape appraisal within the RAG assessment identified less potential impacts on landscape and visual criteria arising from zones to the west (Zones 5 - 7 Grove Wood), the RAG assessment considered a number of other environmental and technical criteria; and on balance identified the preferred Zone as Zone 4, due to it being outside the AONB, yet having proximity to the potential landfall zone, no requirement to cable route across Aldeburgh Road and potential to screen visual impacts due to its position next to existing woodland. Other sites shown to be scoring well (fewer than three red scores) in the RAG assessment were Zones 3 and 5.

Substation Location Options Review

Following the identification of Zone 4 as the preferred Zone in the RAG assessment, it was agreed with consultees that a further, more detailed assessment, should consider the potential for locating the substations in the vicinity of this zone. The Substation Location Options Review (Landscape and Visual) focused on the potential capacity for siting the EA1N,

> Introduction

EA2 and NG substations in Zones 3 and 4. The review highlighted a preference for co-locating substations (rather than dispersing them) and the potential to use the optimal areas of Zone 3 and Zone 4 in combination, to create a development pattern that has a parallel alignment of substations adjacent to the transmission line and next to the deviation towers (on the edge of the AONB in Zone 3).

The review considered that, if they were to be sited in this area, it was preferable that the substations were accommodated in those parts of Zones 3 and 4 which lie entirely outwith the AONB, in order to avoid direct effects on the special qualities of the AONB designation, while also highlighting the potential effects on the setting of the AONB in locations on its periphery. The review did identify potential areas within the edges of the AONB (such as Zone 3) where there may be a capacity to accommodate substation development, as these areas are well screened behind existing woodland belts and the power line, are of agricultural character and would have less visual effects on surrounding communities. However, siting the substations within the AONB in this manner would have direct effects on the character of the AONB and on views experienced from the network of paths that lead into the AONB in this area.

It was acknowledged that the site selection has a duty to have regard to the AONB designation, it's nationally protected landscape status and if possible, avoid or minimise significant effects on its 'special qualities'.

The review highlighted that siting substations of this scale within the AONB (or outside the boundaries of an AONB but which may have impacts within it) carries a considerable consenting risk, particularly if the wider site selection process is able to identify areas outside the AONB where the substations could be successfully accommodated without effects on the special qualities of the AONB or its immediate setting. It was also noted that the project would need to demonstrate 'exceptional circumstances' and 'public interest' as set out in paragraph 5.9.10 of Overarching National Policy Statement for Energy (EN1) (discussed further in Section 2) if the substations are to be sited within the AONB (or outside the boundaries but which may have impacts within in).

1.5 AONB Appraisal - Purpose and Approach

Following on from the findings of the 'Substation Location Options Review' which raised concerns with regard to the potential for locating the substations in or around Zones 3 and 4, due to their location either within or in close proximity to the AONB, it was agreed with consultees that further appraisal should be undertaken which looked again at each of the zones considered in the RAG assessment. In addition, it was requested by consultees, including the local authorities, that an additional zone, referred to in this appraisal as Zone 8 - Broom Covert, be considered by SPR. This zone, known as Broom Covert, Sizewell, had also been considered in an updated RAG assessment, as reported in the SPR Phase 3.5 Consultation Information, is located to the south-west of Sizewell B Nuclear Power Station and to the immediate west and north-west of the Galloper Windfarm onshore substation.

The Applicant undertook further site selection appraisal to consider the potential impacts of siting the onshore substation developments in each of these potential zones (Figure 3)

in terms of their potential landscape and visual impact on the AONB. Specifically this report provides further appraisal of siting the substations within:

- Zone 4 - outside the AONB, but located on its immediate edge/setting.
- Zone 3 - partially within the AONB and partially on its immediate edge/setting.
- Zone 2 - within the AONB, but where it is identified that its character has already been subject to development of large scale energy generation and transmission infrastructure. This zone has also been considered as a benchmark acting as a proxy for Zone 1 which lies adjacent to the south, also within the AONB.
- Zone 8 - Broom Covert - within the AONB at Broom Covert, Sizewell;
- Zone 7 - Grove Wood - outside AONB to the west at distance from the AONB and which has been considered as a benchmark acting as a proxy for each of the western zones (Zones 5 - 7 Grove Wood) all of which lie outside the AONB.

The AONB impact appraisal draws upon published citations that describe the 'special qualities' of the AONB. The landscape of the AONB is described and characterised within the Suffolk Coast and Heaths AONB Management Plan (Suffolk Coast and Heaths AONB Partnership, 2013 - 2018), however the management plan does not set out citations of the special qualities of the AONB.

The Suffolk Coast and Heaths AONB Natural Beauty and Special Qualities Indicators report (November 2016), was produced by LDA Design following discussions between the Suffolk Coast and Heaths AONB Partnership, Suffolk County Council, Suffolk Coastal District Council and EDF Energy. Its purpose was to establish what constitutes the natural beauty and special qualities of the Suffolk Coast and Heaths AONB, and the Special Qualities are set out in this report.

The findings are contained in tables within the 'Special Qualities Report' in Section 2.0 (Natural Beauty Indicators) and 3.0 (Special Qualities Indicators). The 'Special Qualities' of the AONB identified in Section 3.0 of the 'Special Qualities Report' have been reviewed and it is considered that many of these concern matters not specifically relating to landscape or visual issues, such as health and well being, family heritage, food culture and tourism for example. These non-landscape related special qualities may also be relevant to a consideration of the potential impact of the substations within the AONB, but this matter is not addressed within this report.

The approach of this landscape and visual focussed appraisal has therefore 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. Each substation zone option has been assessed against these 'natural beauty' indicators listed for 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, September 2017).

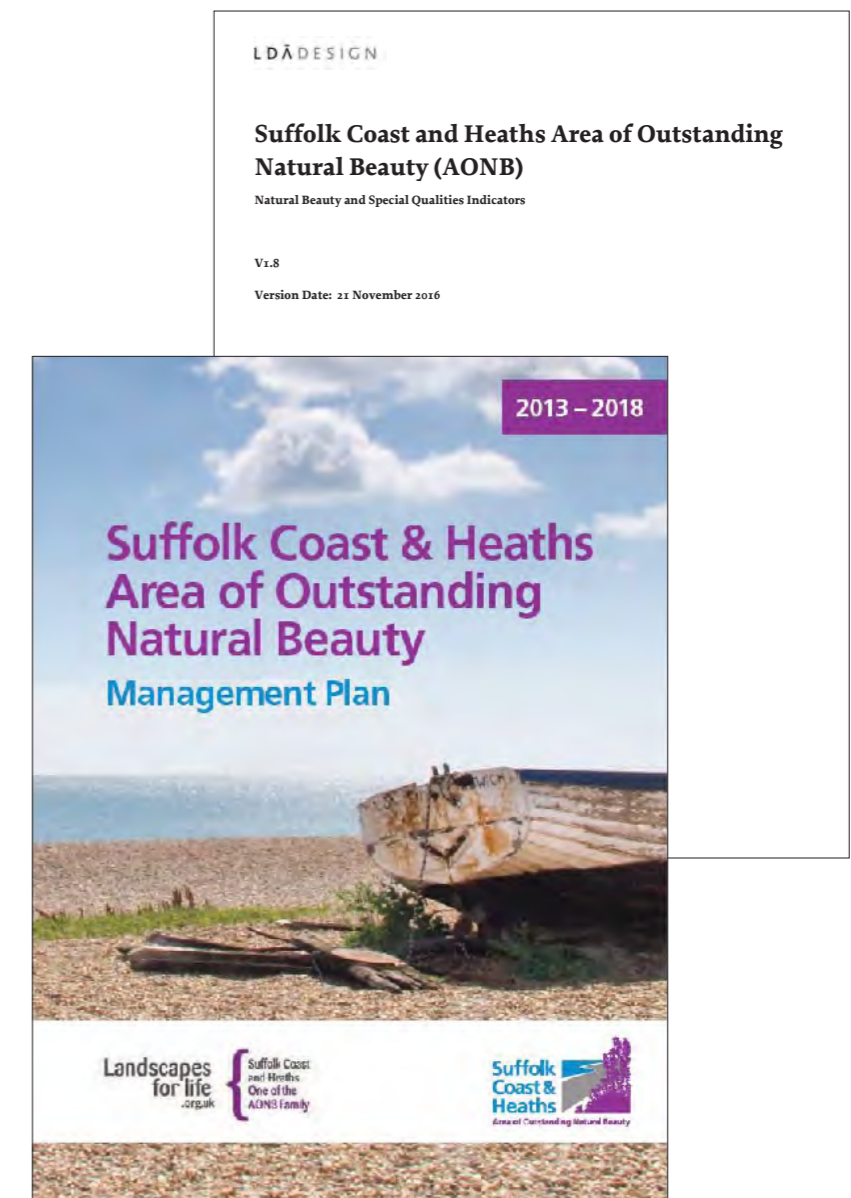
The AONB appraisal is presented in Sections 3-7 of this report, utilising the table of natural beauty indicators from the Special Qualities Report, with an additional matrix appraisal for each of substation zones 1 to 4 and Zones 7 - Grove Wood, and 8 - Broom Covert, considering:

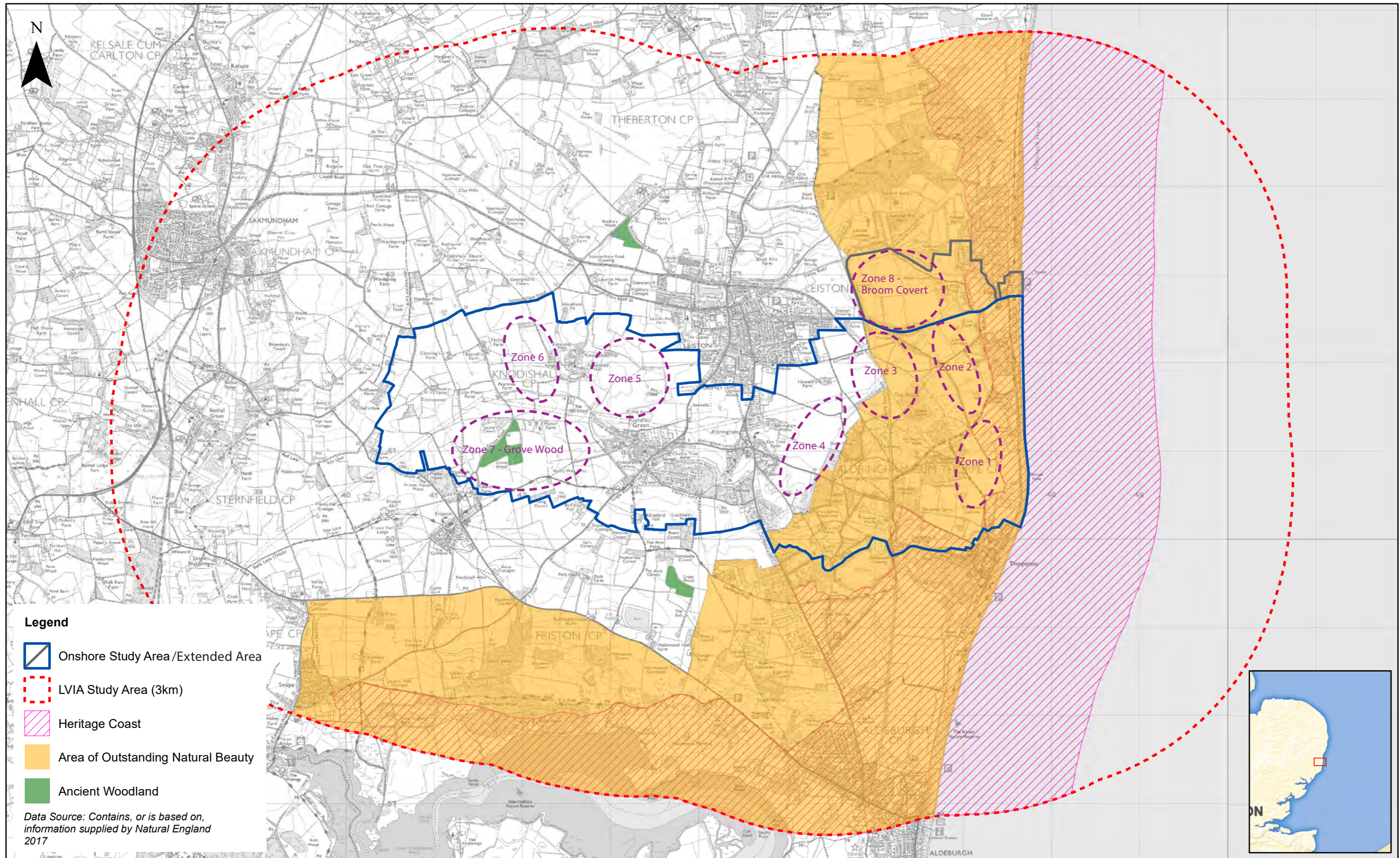
- For sites within the AONB - the degree to which the AONB indicator is present in the

baseline of the substation zone (prevalent/notable/limited/ not present); For sites outside the AONB - the degree to which the AONB indicator in the separate AONB landscape can be perceived in the baseline of the substation zone (prevalent/notable/limited/not present), which indicates the potential for development in the zone to impact upon the AONB, notwithstanding that it lies outside of its boundaries;

- An assessment of the magnitude of change to the special qualities of the AONB resulting from substation development in each substation zone (high/medium/low/none);
- An assessment of the potential effect on AONB special qualities resulting from development in each substation zone (significant/not significant).

Conclusions are then drawn, in Section 8 of this report, with reference to the appraisal of each zone.





- Legend**
- Onshore Study Area/Extended Area
 - LVIA Study Area (3km)
 - Heritage Coast
 - Area of Outstanding Natural Beauty
 - Ancient Woodland

Data Source: Contains, or is based on, information supplied by Natural England 2017



2	03/12/2018	FH			
1	26/09/2017	CL	Second Issue (OPEN)	Prepared:	TD
0	04/09/2017	CL	First Issue (OPEN)	Checked:	SM
Rev	Date	By	Comment	Approved:	SM

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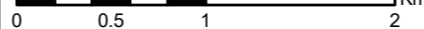


Figure. 3: Potential Substation Zones and AONB

Drg No	EA2-DB-0056	Coordinate System: BNG Datum: OSGB36
Rev	2	
Date	26/09/17	
Figure		

2. Legislation and Policy Context

2.1 Introduction

The landscape and visual effects arising from the potential development of the substations within the alternative zones would be required to be judged under the specific planning policy context which applies to each zone.

The principal difference between the zones in policy terms and from a landscape and visual perspective, is the location of the eastern zones within or adjacent to the AONB, whilst the western zones site lies outside the AONB.

The differences in the policy context are discussed where applicable further below.

2.2 Primary Legislation

The Planning Act 2008 (as amended by the Marine and Coastal Access Act 2009; the Localism Act 2011; the Growth and Infrastructure Act 2013; the Infrastructure Act 2015; the Housing and Planning Act 2016 and the Wales Act 2017) form the primary legislation which established the legal framework for determining applications for Nationally Significant Infrastructure Projects. This sets out that the matters of relevance to the siting of a substation associated with an offshore windfarm to which the Secretary of State must have regard, which can be summarised as follows:

- Any relevant 'National Policy Statement';
- Any relevant 'Local Impact Report';
- Any other matters which the Secretary of State thinks are both important and relevant to their decision.

National Policy Statements (NPS)

National Policy Statements (NPS) provide the primary basis on which the Planning Inspectorate is required to make its recommendations in relation to these projects to the Secretary of State.

Overarching National Policy Statement for Energy (EN1)

This NPS sets out national policy for energy infrastructure. When combined with the relevant technology-specific energy NPS, this document provides the primary basis for recommendations by the Planning Inspectorate to the Secretary of State. EN1 includes elements of relevance to a consideration of landscape and visual matters at any site, along with specific sections which concern nationally designated landscapes, such as the AONB in which zones Zones 1 - 3 and Zone 8 - Broom Covert, are located. These are discussed separately below: Elements of EN1 relevance to the Zones within the AONB: NPS EN1 clearly states at paragraph 5.9.9 within a section titled 'Development proposed within nationally designated landscapes', that:

'National Parks, the Broads and AONBs have been confirmed by the Government as having the highest status of protection in relation to landscape and scenic beauty. Each of these designated areas has specific statutory purposes which help ensure their continued protection

and which the IPC [now the Secretary of State] should have regard to in its decisions'.

In the case of AONBs, the Countryside and Rights of Way Act 2000 (CROW Act) confirms that the statutory purpose of an AONB is 'conserving and enhancing the natural beauty of the area'.

Paragraph 5.9.9 goes on to state that:

'The conservation of the natural beauty of the landscape and countryside should be given substantial weight by the IPC [now the Secretary of State] in deciding on applications for development consent in these areas'.

As they are located within an AONB, it is therefore this context of 'substantial weight' which EN1 [the primary basis on which decisions are required to be made] requires any identified landscape or visual effects of Zones 1 - 3 and Zone 8 - Broom Covert, to be judged.

At Paragraph 5.9.10, the matter of 'exceptional circumstances' is then discussed. This states as follows:

'Nevertheless, the IPC [now the Secretary of State] may grant development consent in these areas in exceptional circumstances. The development should be demonstrated to be in the public interest and consideration of such applications should include an assessment of:

- the need for the development, including in terms of national considerations, and the impact of consenting or not consenting it upon the local economy;
- the cost of, and scope for, developing elsewhere outside the designated area or meeting the need for it in some other way, taking account of the policy on alternatives set out in Section 4.4; and
- any detrimental effect on the environment, the landscape and recreational opportunities, and the extent to which that could be moderated'

Elements of EN1 relevance to the Zones outside the AONB:

In a section titled 'Developments in other areas' EN1 sets out at paragraph 5.9.14 that 'Outside nationally designated areas, there are local landscapes that may be highly valued locally and protected by local designation. Where a local development document in England or a local development plan in Wales has policies based on landscape character assessment, these should be paid particular attention. However, local landscape designations should not be used in themselves to refuse consent, as this may unduly restrict acceptable development'.

It goes on to recognise at paragraph 5.9.15 that 'The scale of such projects means that they will often be visible within many miles of the site of the proposed infrastructure', but confirms that notwithstanding this 'The IPC [now the Secretary of State] should judge whether any adverse impact on the landscape would be so damaging that it is not offset by the benefits (including need) of the project.'

Paragraph 5.9.17 then sets out that 'The Secretary of State should consider whether the project has been designed carefully, taking account of environmental effects on the landscape and siting, operational and other relevant constraints, to minimise harm to the landscape, including by reasonable mitigation'.

A subsequent section of EN1 addressing 'Visual Impact' goes on to reiterate the likelihood of such infrastructure having notable visual effects, stating at paragraph 5.9.18 that 'All proposed energy infrastructure is likely to have visual effects for many receptors around proposed sites'.

The Secretary of State will have to judge whether the visual effects on sensitive receptors, such as local residents, and other receptors, such as visitors to the local area, outweigh the benefits of the project'.

A further section concerns 'Mitigation' and states at paragraph 5.9.22 'Within a defined site, adverse landscape and visual effects may be minimised through appropriate siting of infrastructure within that site, design including colours and materials, and landscaping schemes, depending on the size and type of the proposed project. Materials and designs of buildings should always be given careful consideration'. This confirms that the need to minimise landscape and visual harm, referred to in paragraph 5.9.17, can be met through appropriate siting, design and mitigation planting solutions.

2.3 Local Impact Report

As part of the 2008 Act process, the relevant local authorities will be invited to submit a Local Impact Report (LIR) giving details of the likely impact of the proposed development on the authority's area.

The sole definition of an LIR is given in s60(3) of the Act as 'a report in writing giving details of the likely impact of the proposed development on the authority's area (or any part of that area)'. The content of the LIR is a matter for the local authority concerned, as long as it falls within this statutory definition. However, 'Advice note one: Local Impact Reports' prepared by the Planning Inspectorate gives an indication of the topics which are likely to be considered and these include:

- 'Relevant development plan policies, supplementary planning guidance or documents';
- 'Local area characteristics such as urban and landscape qualities';
- 'Designated sites'; and
- 'Relevant development proposals under consideration or granted permission but not commenced or completed'.

It is therefore relevant to consider the relevant planning policy context relating to the two sites set out in the relevant Local Plan documents covering the Suffolk Coastal Local Authority area.

Suffolk Coastal Local Plan

The Suffolk Coastal Local Plan is the local plan for the Suffolk Coastal district and comprises a number of local planning documents.

A number of policies from the 'Suffolk Coastal Local Plan' (incorporating the First and Second Alterations) remain as part of the Development Plan for Suffolk Coastal District, and in addition the 'Site Allocations and Area Specific Policies Development Plan Document' was adopted by the Council on 26th January 2017.

However, it is those which form part of the 'Core Strategy and Development Management Policies' document which are relevant to a consideration of landscape and visual matters at the eastern and western zones considered in this appraisal. This is discussed further below.

Core Strategy and Development Management Policies Document:

The Core Strategy and Development Management Policies set out the vision and strategy for development in the district to 2027. This document forms part of the formal Development Plan for the district and is used in the determination of planning applications.

Elements of the Core Strategy of relevance to the Eastern and Western Zones:

Rather than one overarching AONB Policy, there are a number of Policies in the Core Strategy concerning development in the Suffolk Coast and Heaths AONB (SP8 - Tourism, SP14 - Biodiversity & Geodiversity, SP15 - Landscape & Townscape, DM17 - Touring Caravan, Camper Vans and Camping Sites, DM18 - Static Holiday Caravans, Cabins and Chalets, DM21 - Design: Aesthetics, DM29 - Telecommunications).

Of most relevance to the proposed development sites are SP15 - Landscape & Townscape and DM21 - Design: Aesthetics, which address development both within and outside the AONB.

SP15 sets out that it is the policy of the Council 'to protect and enhance the various landscape character areas within the district either through opportunities linked to development or through other strategies'. It also refers to 'the protected landscape of the AONB' amongst a list of areas which are 'considered to be particularly significant'.

DM21 sets out that proposals that 'seriously detract from the character of their surroundings will not be permitted'.

There is therefore a clear hierarchy established in the currently adopted Local Plan which confirms that the AONB location of Zones 1 - 3 and Zone 8 - Broom Covert, is an area of particular significance, beyond that of the western zones, notwithstanding an overall aim to protect and enhance the character of all landscapes within the district.

It is noted however that a Local Plan Review which will replace the Core Strategy, the Site Allocations and Area Specific Policies and the Felixstowe Peninsula Area Action Plan, is being carried out through an aligned/joint Local Plan with the Ipswich Policy Area local planning authorities (Ipswich Borough, Mid Suffolk, Babergh and Suffolk Coastal). It is currently proposed that this review will be adopted by February 2020.

AONB Management Plan

Another document which either the LPA or the Secretary of State may wish to take into consideration during their review of the application, (if Zones 1 - 3 and Zone 8 - Broom Covert, were to be taken forward) is the AONB Management Plan. The currently adopted version of the Management Plan is the 2013-18 version, with a 2018-23 draft version at post consultation stage. This August 2018 document sets out on pages 34 and 35 that:

"The Suffolk Coast is being actively promoted as an Energy Coast, with proposals for a new nuclear build at Sizewell, offshore wind farms and interconnector's connecting the UK with mainland Europe. These developments will bring national benefits but will need to be mindful of the nationally designated landscapes, and the concerns of local residents and existing businesses, many of which rely on the outstanding landscapes in which they operate"

"Where existing development, be that housing or business, is expanded the impacts of incremental developments need to be considered against the purposes of the AONB. This

could include negative impacts on tranquillity, such as increased traffic movements, lighting etc and need to be judged against the cumulative impacts on the designated landscapes. A similar impact is possible from developments within the setting of the AONB".

Whilst not yet adopted, this document demonstrates a clear direction of travel with regard to how new energy development will need to be fully considerate of the AONB and in particular raised an important issue with respect to potential cumulative effects.

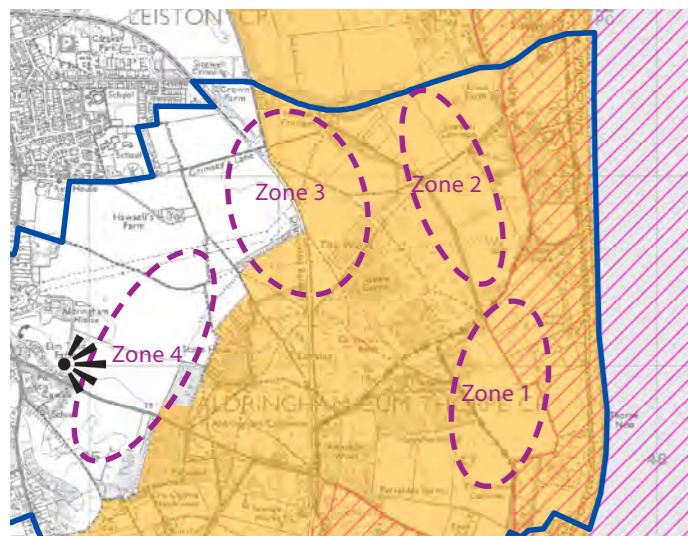
The post consultation stage Management Plan also reiterates that information relating to the natural beauty and special qualities of the AONB are set out on the AONB Management Plan website, which in turn links to the 'Natural Beauty and Special Qualities Indicators' Report prepared by LDA Design. This Report is the basis used for the appraisal set out in this report.

3. Zone 4

3.1 Existing Character

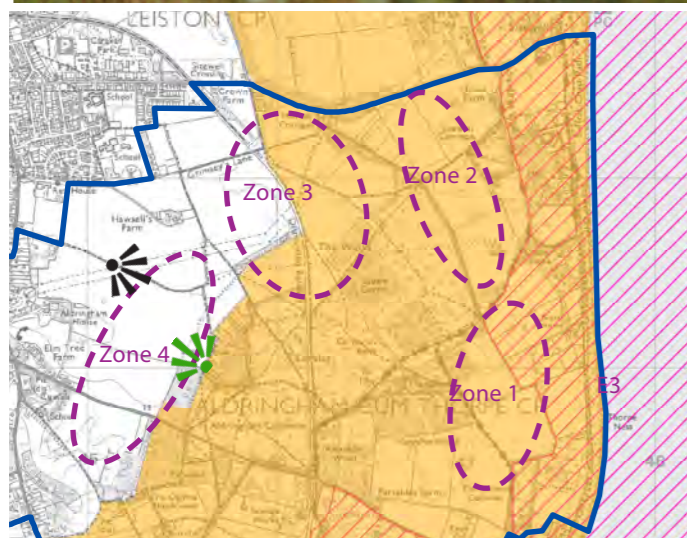


Figure. 4: Zone 4 Character Photographs





Zone 4 Character Photographs (continued)



Zone 4 - AONB Impact Appraisal (continued)

Below text from Section 2.0 of the AONB 'Special Qualities' Report				Below text AONB appraisal undertaken by OPEN		
Factor	Example Sub-Factor	Example Indicator	Suffolk Coast and Heaths AONB Indicator	Zone 4 (outside, but on the edge of AONB)		
				Degree to which AONB Indicator is present in the baseline in substation zone (prevalent/notable/limited/not present)	Assessment of potential magnitude of change to special qualities of AONB resulting from development in substation zone (high/medium/low/none)	Potential effect on AONB special qualities resulting from development in substation zone (significant / not significant)
Relative tranquillity	Contributors to tranquillity	Presence and / or perceptions of natural landscape, birdsong, peace and quiet, natural-looking woodland, stars at night, stream, sea, natural sounds and similar influences	Areas of semi natural habitat, where there is a general absence of development and apparent human activity, contribute to a sense of relative tranquillity. Further enhanced by sounds (bird calls, the wind through reeds in estuaries, waves on shingle) and relatively dark skies.	Notable. The zone is influenced by the perceptions of a natural looking landscape of farmland and forests; which give some sense of tranquillity, however this is reduced by the apparent human activity which has shaped the arable land and plantation woodlands; and the extent of settlement, transport and infrastructure development which reduces the relative tranquillity.	Medium-high. Potential changes of medium to high magnitude to perceived tranquillity of rural landscape in the setting of the AONB, arising from the construction and operation of large scale electrical infrastructure within the zone.	Significant - during construction period, resulting from high changes to relatively tranquil baseline in adjacent areas of AONB, arising from construction traffic and noise. Not significant during operational period when construction traffic and noise is no longer present in the landscape.
	Detractors from tranquillity	Presence and/or perceptions of traffic noise, large numbers of people, urban development, overhead light pollution, low flying aircraft, power lines and similar influences	Some local detractors from tranquillity include the seasonal influx of visitors to coastal towns, low flying aircraft noise and urban development on fringes of the AONB	Limited. Some detractors from tranquillity are present, particularly the busy B1353 Thorpe Road. Although urban development and overhead transmission lines are present in the landscape, they scarcely detract from tranquillity, except at a very localised level in close proximity.	Medium-high. Potential changes of medium to high magnitude to perceived tranquillity of rural landscape in the setting of the AONB, arising from the construction and operation of large scale electrical infrastructure within the zone.	Significant - during construction period, resulting from high changes to relatively tranquil baseline in adjacent areas of AONB, arising from construction traffic and noise. Not significant during operational period when construction traffic and noise is no longer present in the landscape.
Natural heritage features	Geological and geomorphological features	Visible expression of geology in distinctive sense of place and other aspects of scenic quality	Boundary of the AONB is broadly geological marking the border between the inland boulder clay and the coastal fringe. Visible and striking expressions of geology and sedimentation on faces of crumbling coastal cliffs. Use of flint, local crag and Aldeburgh brick for building are indicators of local geology.	Notable. Boundary of the AONB is located to the immediate east of the zone and is marked by sudden land-use change from arable farmland (outwith AONB) to Sandlings Forests (within AONB). 'Striking impressions of geology' are not present in the zone, nor are these coastal features visible.	Medium. Substation development within the zone has the potential to change the visible expression of the current land use relationship/transition that is evident on this edge of the AONB.	Significant. Boundary of the AONB is visibly expressed in change from farmland to Sandlings Forest, with this scenic quality likely to be affected by the prominence of substation development in the foreground of the forests, particularly experienced by visitors to the AONB at this 'gateway' to Thorpe on the B1353.
		Presence of striking or memorable geomorphological 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 cusped foreland shingle spit of Orford Ness and river estuaries such as the estuary of the River Alde.	Limited. No striking or memorable geo-morphological features are present within the zone, however the landform drops gradually to the south to provide a vantage over the Hundred River Valley.	None. Substation development within this zone will not change the appearance or qualities of striking geo-morphological features within the AONB that are cited in this indicator.	Not significant. Substation development within this zone will not affect the appearance or qualities of striking geo-morphological features within the AONB that are cited in this indicator.
	Wildlife and habitats	Presence of wildlife and / or habitats that make a particular contribution to distinctive sense of place and other aspects of scenic quality	Varied, nationally and internationally protected sites such as SSSI, SPA and SAC, semi natural habitats designated for their nature conservation interest and range of species supported (including shingle beaches, intertidal and offshore areas, reedbeds, grazing marshes and Sandlings heaths). Intricate mosaic, highly dynamic and sensitive regimes (due to periodic flooding) along with rapid transitions add to biodiversity interest, distinctive landscape character and scenic quality.	Notable. Wildlife and habitats of the Suffolk Coast and Heaths SPA provide a distinctive backdrop and contribute to the sense of place, with sudden transition from farmland to forestry, however these habitats are not present within the zone itself.	None. There will be no change to the physical condition/quality of designated habitats within the AONB. Some changes to landscape character are likely to result on the setting on this edge of the AONB.	Not significant. Designated habitats within the AONB will be subject to no physical effects as a result of development outside the AONB.
		Presence of individual species that contribute to sense of place, relative wildness or tranquillity	Varied protected species across major habitat types, for example breeding and wading birds in estuaries and reedbeds; rare communities of salt tolerant plants on the coast; and birds and invertebrates on the Sandlings heaths.	Limited. The intensively farmed arable land within the zone if not designated or valued for habitat or protected species, however sense of place/tranquillity is influenced by the broader habitat mosaic of the Sandlings Forests and the bird life it supports.	None. There will be no change to the protected species within the AONB as a result of development outside the AONB in this zone.	Not significant. There will be no effects on protected species within the AONB as a result of development outside the AONB in this zone.
Cultural heritage	Built environment, archaeology and designed landscapes	Presence of settlements, buildings or other structures that make a particular contribution to distinctive sense of place and other aspects of scenic quality	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.	Limited. The built environment/cultural heritage features in the AONB have limited influence on the zone, being outside the AONB boundary. Locally, Aldringham Green (restored mineral workings) influences character and includes a SAM. Adjacent miners cottages and Aldringham House contribute to sense of place. B1353 through zone leads to Thorpe at 'end of the road' coastal location. Very few significant built heritage assets in zone.	Medium-low. There will be no change to the built environment/cultural heritage features in the AONB. The main change will be on the character of the B1353 gateway route into the 'end of the road' village of Thorpe - the village itself having notable cultural heritage value as a designed holiday village.	Not significant. There will be no effects on the built environment/cultural heritage features in the AONB. Development within the zone would affect the character of the B1353 gateway into the AONB leading to the village of Thorpe, but would not directly affect the village of Thorpe itself, which is separated from the zone by extensive coniferous woodland.
		Presence of visible archaeological remains, parkland or designed landscapes that provide striking features in the landscape	Archaeological and historic sites and features include prehistoric and later burial monuments (including the Anglo-Saxon burial ground at Sutton Hoo); early medieval churches (many of which pre-date the Domesday survey); historic field and settlement patterns; and evidence of land reclamation dating back to the 12 th 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 Thorpe Model Village.	Limited. There are no parklands or designed landscapes within the zone. The B1353 passing through the zone leads to Thorpe at 'end of the road' coastal location.	Low. There will be no direct changes to parklands or designed landscapes within the AONB. Development within the zone would change the character of the B1353 gateway into the AONB leading to the village of Thorpe, but would not directly affect the village of Thorpe itself, which is separated from the zone by extensive coniferous woodland.	Not significant. There will be no direct effects to parklands or designed landscapes within the AONB. Development within the zone would affect the character of the B1353 gateway into the AONB leading to the village of Thorpe, but would not directly affect the village of Thorpe itself, which is separated from the zone by extensive coniferous woodland.
	Historic influence on the landscape	Visible presence of historic landscape types or specific landscape elements or features that provide evidence of time depth or historic influence on the landscape	Field patterns reflect process of land management and enclosure stretching back many centuries. Evidence of reclamation of former intertidal areas to form freshwater grazing marsh dating back to the 12 th century. Prehistoric and later burial monuments (such as at Sutton Hoo), early medieval churches/religious houses and castles. There is also more recent military and infrastructure elements particularly on the coast (e.g. Martello towers, former military installations at Orford Ness), WWII airfields, radar installations and pillboxes that form part of the long history of "Suffolk's Defended Shore". 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.	Limited. Field patterns reflect process of arable land management and enclosure, stretching back over time, but otherwise, historic influences are not a strong visible presence of the landscape within the zone. Historic elements concentrated along the AONB coast have no influence on the character of zone due to visual separation.	Low. Although there is potential for change to the enclosed arable fields on the inland edge of the AONB, the qualities of the visible historic landscape experienced primarily around the coastal landscapes within the AONB cited in this indicator will not be subject to change.	Not significant. Although there is potential for some effects on the enclosed arable fields on the inland edge of the AONB, the qualities of the visible historic landscape experienced primarily around the coastal landscapes within the AONB cited in this indicator will not be affected.
		More latterly the Sizewell nuclear complex highlights evidence of time depth across the landscape. Both the nuclear complex and the nearby infrastructure associated with offshore energy generation are part of a developing story of the Suffolk's Energy Coast. There are often strong associations between these features and areas of more remote coastal landscape character. Power stations are still cited by some as visual detractors in the landscape, despite the test of time.	Notable. Overhead transmission line crosses the zone and is visually prominent. Sizewell Power Station 'dome' is visible (but not prominent) in northern backdrop, with overhead lines extending from it. These electrical/energy installations have a notable influence on the perceived natural/scenic quality of the area.	High. Potential addition of further electrical infrastructure influences in the landscape near to existing overhead transmission line, will increase prominence of man-made features and effect scenic quality on this edge of the AONB. Associations with other substations, power stations and pylons may extend perceived link to energy coast further inland.	Significant. Notable presence of existing electrical transmission infrastructure will be subject to high magnitude of change arising from addition of further large scale substation development on the edge/setting of AONB.	
	Perceptions of a harmonious balance between natural and cultural elements in the landscape that stretch back over time	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.	Limited/notable. Presence of smaller settlements such as Aldringham and scattered cottages/farmsteads with vernacular building materials and small scale, displays a balance between natural and built elements.	High. Potential for the scale of proposed substations to result in high change to the balance between natural and built elements, and have stark contrasts in scale with existing cottages/building materials.	Significant. Potential for the scale of proposed substations to have significant effects on the existing relationship between natural and built elements, with the 'modern' prevailing and having stark contrasts in scale with existing cottages/building materials.	
	Characteristic land management practices	Existence of characteristic land management practices, industries or crafts which contribute to natural beauty	Landscape character and diversity of habitat types dependent on wide range of land management practices, several of which date back many centuries. Examples include pasturing; grazing on coastal marshes; forestry; extensive grazing to maintain heathland; reed cutting; and ditch/marshland and hydrological management. Small scale fishing industry results in boats, nets, pots and storage buildings on some stretches of coastline.	Limited. Characteristic land management practices have largely been lost to intensive arable farming within the zone.	None. no potential for changes to occur due to lack of characteristic land management practices in the baseline landscape of the zone.	Not significant. no effects likely to occur due to lack of characteristic land management practices in the baseline landscape of the zone.

4. Zone 3

4.1 Existing Character

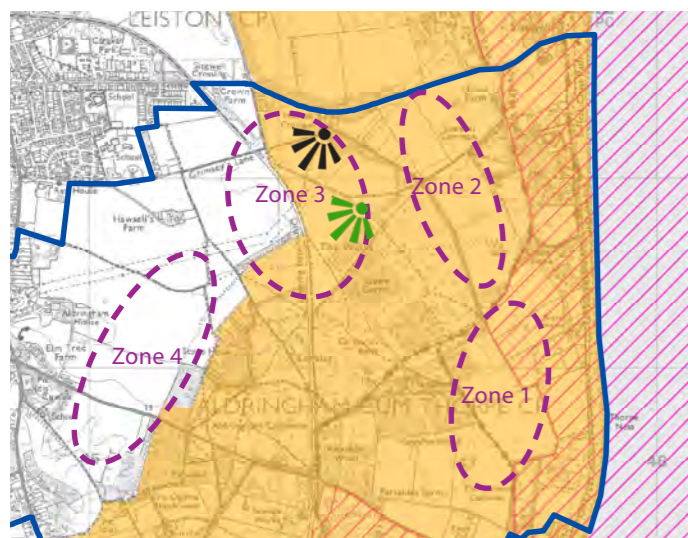
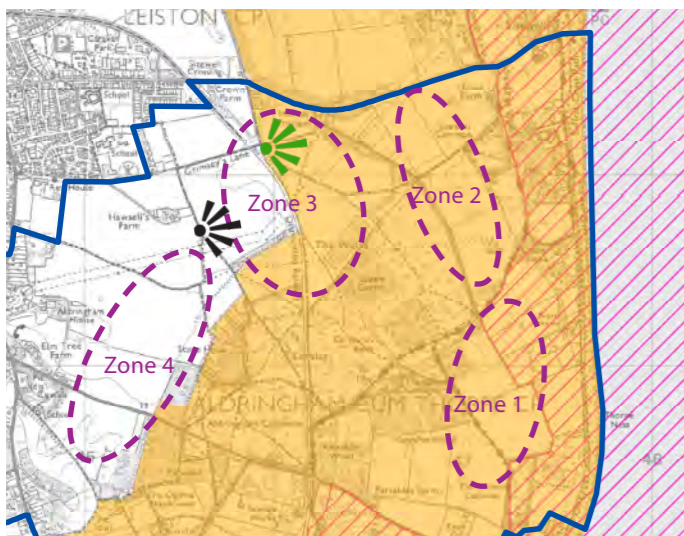


Figure. 5: Zone 3 Character Photographs



Zone 3 Character Photographs (continued)



Zone 3 - AONB Impact Appraisal (continued)

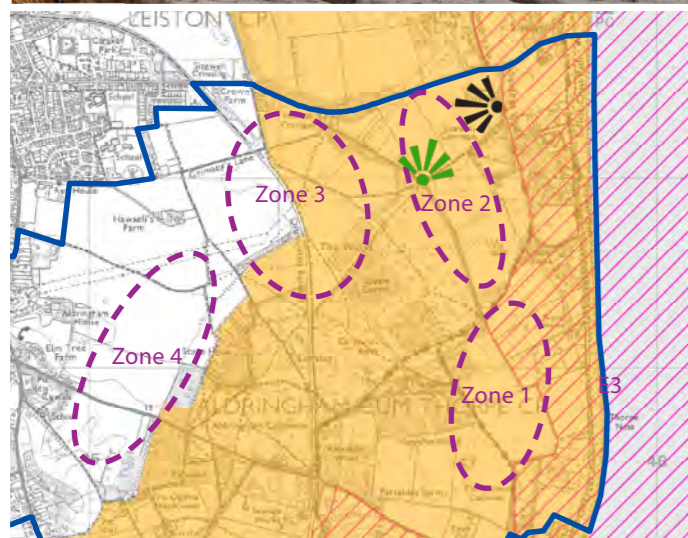
Below text from Section 2.0 of the AONB 'Special Qualities' Report				Below text AONB appraisal undertaken by OPEN		
Factor	Example Sub-Factor	Example Indicator	Suffolk Coast and Heaths AONB Indicator	Zone 3 (partially within AONB and partially just outside)		
				Degree to which AONB Indicator is present in the baseline in substation zone (prevalent/notable/limited/not present)	Assessment of potential magnitude of change to special qualities of AONB resulting from development in substation zone (high/medium/low/none)	Potential effect on AONB special qualities resulting from development in substation zone (significant / not significant)
Relative tranquility	Contributors to tranquility	Presence and / or perceptions of natural landscape, birdsong, peace and quiet, natural-looking woodland, stars at night, stream, sea, natural sounds and similar influences	Areas of semi natural habitat, where there is a general absence of development and apparent human activity, contribute to a sense of relative tranquility. Further enhanced by sounds (bird calls, the wind through reeds in estuaries, waves on shingle) and relatively dark skies.	Notable. The zone is influenced by the perceptions of a natural looking landscape of farmland, heaths and forests; which give some sense of tranquility, however this is reduced by the apparent human activity which has shaped the arable land and plantation woodlands; and the extent of settlement, transport and infrastructure development which reduces the relative tranquility.	Medium-high. Potential changes of medium to high magnitude to perceived tranquility of rural landscape on the edges of AONB and within adjacent Sandlings Heaths of the AONB, arising from the construction and operation of large scale electrical infrastructure within the zone.	Significant - during construction period, resulting from high changes to relative tranquil baseline arising from construction traffic and noise. Not significant during operational period when construction traffic and noise is no longer present in the landscape.
	Detractors from tranquility	Presence and/or perceptions of traffic noise, large numbers of people, urban development, overhead light pollution, low flying aircraft, power lines and similar influences	Some local detractors from tranquillity include the seasonal influx of visitors to coastal towns, low flying aircraft noise and urban development on fringes of the AONB	Limited. Some detractors from tranquility are present, particularly the busy Sizewell Gap Road. Although urban development and overhead transmission lines are present in the landscape, they scarcely detract from tranquility, except at a very localised level in close proximity.	Medium-high. Potential changes of medium to high magnitude to perceived tranquility of rural landscape on the edges of AONB and within adjacent Sandlings Heaths of the AONB, arising from the construction and operation of large scale electrical infrastructure within the zone.	Significant - during construction period, resulting from high changes to relative tranquil baseline arising from construction traffic and noise. Not significant during operational period when construction traffic and noise is no longer present in the landscape.
Natural heritage features	Geological and geomorphological features	Visible expression of geology in distinctive sense of place and other aspects of scenic quality	Boundary of the AONB is broadly geological marking the border between the inland boulder clay and the coastal fringe. Visible and striking expressions of geology and sedimentation on faces of crumbling coastal cliffs. Use of flint, local crag and Aldeburgh brick for building are indicators of local geology.	Notable. Boundary of the AONB passes through the zone and should arguably be located further east at land-use change from arable farmland to Sandlings Heaths and Forests habitats. 'Striking impressions of geology' are not present in the zone, nor are these coastal features visible.	Medium. Substation development within the zone has the potential to change the visible expression of the current land use relationship/transition that is evident on this edge of the AONB, but would not change the striking impressions of geology present at the coast.	Significant. Boundary of the AONB is visibly expressed in gradual change from farmland to Sandlings Heaths and Forest, with this scenic quality likely to be affected by the prominence of substation development in the foreground of the forests, particularly experienced by visitors to the AONB along local PRoW network.
		Presence of striking or memorable geomorphological 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 cusped foreland shingle spit of Orford Ness and river estuaries such as the estuary of the River Alde.	Limited. No striking or memorable geo-morphological features are present within the zone.	None. Substation development within this zone will not change the appearance or qualities of striking geo-morphological features within the AONB that are cited in this indicator.	Not significant. Substation development within this zone will not affect the appearance or qualities of striking geo-morphological features within the AONB that are cited in this indicator.
	Wildlife and habitats	Presence of wildlife and / or habitats that make a particular contribution to distinctive sense of place and other aspects of scenic quality	Varied, nationally and internationally protected sites such as SSSI, SPA and SAC, semi natural habitats designated for their nature conservation interest and range of species supported (including shingle beaches, intertidal and offshore areas, reedbeds, grazing marshes and Sandlings heaths). Intricate mosaic, highly dynamic and sensitive regimes (due to periodic flooding) along with rapid transitions add to biodiversity interest, distinctive landscape character and scenic quality.	Notable. Wildlife and habitats of the Suffolk Coast and Heaths SPA provide a distinctive backdrop and contribute to the sense of place, with transition from farmland to heaths and forestry.	None. There will be no change to the physical condition/quality of designated habitats within the AONB (assuming that development would be located entirely within arable agricultural fields and avoid heaths on the south eastern side of zone). Some changes to landscape character are likely to result on the setting on this edge of the AONB.	Not significant. Designated habitats within the AONB will be subject to no physical effects as a result of development within the zone (assuming development would be located entirely within arable agricultural fields and avoid heaths on eastern side of zone).
		Presence of individual species that contribute to sense of place, relative wildness or tranquillity	Varied protected species across major habitat types, for example breeding and wading birds in estuaries and reedbeds; rare communities of salt tolerant plants on the coast; and birds and invertebrates on the Sandlings heaths.	Limited. The intensively farmed arable land within the zone if not designated or valued for habitat or protected species, however sense of place/tranquility is influenced by the broader habitat mosaic of the Sandlings Heaths and Forests and the bird life it supports.	None. There will be no change to the protected species within the AONB as a result of development in this zone (assuming that development would be located entirely within arable agricultural fields and avoid heaths on the south eastern side of zone).	Not significant. There will be no effects on protected species within the AONB as a result of development in this zone (assuming that development would be located entirely within arable agricultural fields and avoid heaths on the south eastern side of zone).
Cultural heritage	Built environment, archaeology and designed landscapes	Presence of settlements, buildings or other structures that make a particular contribution to distinctive sense of place and other aspects of scenic quality	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.	Limited. The built environment/cultural heritage features in the AONB have limited influence on the zone. Locally, the settlement of Leiston contribute to sense of place. The Sizewell Gap Road passing the zone leads to Sizewell at 'end of the road' coastal location. Very few significant built heritage assets in zone.	Low. There will be no change to the main built environment/cultural heritage features in the AONB. The main change will be on the character of the Sizewell Gap Road as a gateway route into the village of Sizewell.	Not significant. There will be no effect on the main built environment/cultural heritage features in the AONB. The main change will be on the character of the Sizewell Gap Road as a gateway route into the village of Sizewell.
		Presence of visible archaeological remains, parkland or designed landscapes that provide striking features in the landscape	Archaeological and historic sites and features include prehistoric and later burial monuments (including the Anglo-Saxon burial ground at Sutton Hoo); early medieval churches (many of which pre-date the Domesday survey); historic field and settlement patterns; and evidence of land reclamation dating back to the 12 th 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.	Limited. There are no parklands or designed landscapes within or adjacent to the zone.	None. There will be no direct changes to parklands or designed landscapes within the AONB.	Not significant. There will be no direct changes to parklands or designed landscapes within the AONB.
	Historic influence on the landscape	Visible presence of historic landscape types or specific landscape elements or features that provide evidence of time depth or historic influence on the landscape	Field patterns reflect process of land management and enclosure stretching back many centuries. Evidence of reclamation of former intertidal areas to form freshwater grazing marsh dating back to the 12 th century. Prehistoric and later burial monuments (such as at Sutton Hoo), early medieval churches/religious houses and castles. There is also more recent military and infrastructure elements particularly on the coast (e.g. Martello towers, former military installations at Orford Ness), WWII airfields, radar installations and pillboxes that form part of the long history of "Suffolk's Defended Shore". 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.	Limited. Field patterns reflect process of arable land management, stretching back over time, but otherwise, historic influences are not a strong visible presence of the landscape within the zone. Historic elements concentrated along the AONB coast have no influence on the character of zone due to visual separation.	Low. Although there is potential for change to the arable fields on the inland edge of the AONB, the qualities of the visible historic landscape experienced primarily around the coastal landscapes within the AONB cited in this indicator will not be subject to change.	Not significant. Although there is potential for some effects on the arable fields on the inland edge of the AONB, the qualities of the visible historic landscape experienced primarily around the coastal landscapes within the AONB cited in this indicator will not be affected.
			More latterly the Sizewell nuclear complex highlights evidence of time depth across the landscape. Both the nuclear complex and the nearby infrastructure associated with offshore energy generation are part of a developing story of the Suffolk's Energy Coast. There are often strong associations between these features and areas of more remote coastal landscape character. Power stations are still cited by some as visual detractors in the landscape, despite the test of time.	Notable. Overhead transmission line crosses the zone and is visually prominent. Sizewell Power Station 'dome' is prominent in views to the north-east of zone, with overhead lines extending from it. These electrical/energy installations have a notable influence on the perceived natural/scenic quality of the area.	High. Potential addition of further electrical infrastructure influences in the landscape near to existing overhead transmission line, will increase prominence of man-made features and effect scenic quality in this narrow area of the AONB. Associations with other substations, power stations and pylons may extend perceived link to energy coast further inland.	Significant. Notable presence of existing electrical transmission infrastructure will be subject to high magnitude of change arising from addition of further large scale substation development within and on the edge/setting of AONB.
		Perceptions of a harmonious balance between natural and cultural elements in the landscape that stretch back over time	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.	Limited/notable. Presence of scattered cottages/farmsteads with vernacular building materials and small scale, displays a balance between natural and built elements; however more recent infrastructure development has strong influence on balance between landscape elements.	Medium. Potential for the scale of proposed substations to result in high change to the balance between natural and built elements, and have stark contrasts in scale with existing cottages/building materials, albeit being in keeping with other large-scale energy infrastructure in the landscape.	Not significant. Potential for the scale of proposed substations to have effects on the existing relationship between natural and built elements, however likely to be in keeping with the 'modern' infrastructure elements that are notable in the landscape.
	Characteristic land management practices	Existence of characteristic land management practices, industries or crafts which contribute to natural beauty	Landscape character and diversity of habitat types dependent on wide range of land management practices, several of which date back many centuries. Examples include pasturing; grazing on coastal marshes; forestry; extensive grazing to maintain heathland; reed cutting; and ditch/marshland and hydrological management. Small scale fishing industry results in boats, nets, pots and storage buildings on some stretches of coastline.	Limited. Characteristic land management practices have largely been lost to intensive arable farming within the zone.	None. no potential for changes to occur due to lack of characteristic land management practices in the baseline landscape of the zone.	Not significant. no effects likely to occur due to lack of characteristic land management practices in the baseline landscape of the zone.

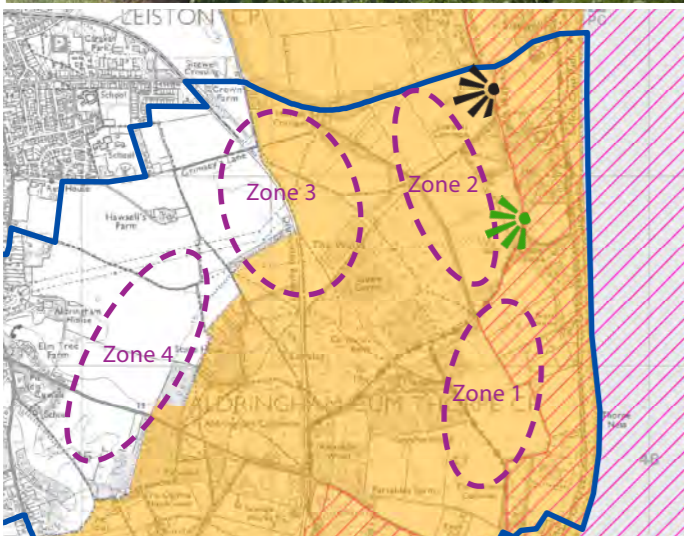
5. Zone 2

5.1 Existing Character



Figure. 6: Zone 2 Character Photographs





Zone 2 Character Photographs (continued)

5.2 Zone 2 - AONB Impact Appraisal

Below text is from Section 2.0 of the AONB 'Special Qualities' Report				Below text AONB appraisal undertaken by OPEN		
Factor	Example Sub-Factor	Example Indicator	Suffolk Coast and Heaths AONB Indicator	Zone 2 (inside AONB in a 'reduced' value area)		
				Degree to which AONB Indicator is present in the baseline in substation zone (prevalent/notable/limited/not present)	Assessment of potential magnitude of change to special qualities of AONB resulting from development in substation zone (high/medium/low/none)	Potential effect on AONB special qualities resulting from development in substation zone (significant / not significant)
Landscape quality	Intactness of the landscape in visual, functional and ecological perspectives	Characteristic natural and man-made elements are well represented throughout	Close-knit interrelationship of semi-natural and cultural landscapes (notably sea, coast, estuaries, reedbeds, Sandlings heath, forest, farmland and market towns) and built heritage features (such as Martello towers, pill boxes, river walls), creating a juxtaposition of elements in a relatively small area. The AONB contains important areas of heath and acid grassland, and it supports a high number of protected species populations. As such it has importance in a national context for biodiversity.	Notable. Characterised mainly by intensive arable agricultural fields, however Sandlings Heaths extend across western edge of Zone into AONB, with other semi-natural linear habitats/shelterbelts present. Located in the setting of Sandlings Forests, which form the backdrop and defines character of AONB.	Medium-high. Potential for medium-high changes to the visual qualities of the landscape within and on the edge of the AONB, due to the visual interruption of siting large-scale development within/and on the edge of the AONB, in the setting of the Sandlings Heaths and Forests.	Significant. Notable presence of AONB indicator relating to visual quality/intactness of the setting of Sandlings Forests, subject to medium magnitude of change. Potential for significant effects on visual qualities/setting of AONB Sandlings Forests and Heaths cited in this indicator.
	The condition of the landscape's features and elements	Landscape elements are in good condition	Strong overall character, albeit that the evolving nature of intensively farmed arable land with agricultural fleece/polythene and outdoor pig rearing can divide opinion on landscape condition in visually sensitive locations such as on valley sides.	Notable. Intensively farmed arable fields with field boundaries and Sandlings Heath habitats in good condition. Distinctiveness of character defined by the backdrop of Sandlings Heaths and Forests to the west/south-west.	Low. Although there is some potential for direct effects on the condition of landscape elements in the zone, development is likely to be sited within arable fields and avoid Sandlings Heath habitats on the edge of the AONB.	Not significant. Valued landscape elements within the AONB will be subject to low level of physical change as a result of development (assuming development would be located entirely within arable agricultural fields and avoid heaths on western side of zone).
	The influence of incongruous features or elements on the perceived natural beauty of the area	Incongruous elements are not present to a significant degree, are not visually intrusive, have only localised influence or are temporary in nature	A small number of large scale and long established elements on the coast of the AONB divide opinion, being regarded by some as incongruous features and by others as enigmatic; for example the complex military site at Orford Ness. The power stations at Sizewell also divide opinion in this way, however in many views, particularly of the B station, the apparent uncluttered simple appearance and outline as well as the lack of visible human activity, partially mitigate the adverse visual impacts. Offshore wind turbines at Greater Gabbard, Galloper and the more distant London Array are visible from some stretches of the coastline. These create a cluttered horizon and, like the large scale elements onshore, also divide opinion.	Notable. Overhead transmission line crosses the zone and is visually prominent. Sizewell Power Station 'dome' is prominent in views to north-east, with overhead lines extending from it. These electrical/energy installations have a notable influence on the perceived natural/scenic quality of the area.	High. Potential addition of further electrical infrastructure influences in the landscape near to existing overhead transmission line, will increase prominence of man-made features and effect scenic quality on this edge of the AONB.	Significant. Notable presence of existing electrical transmission infrastructure will be subject to high magnitude of change arising from addition of further large-scale electrical infrastructure influences, increasing the prominence/visual complexity of incongruous features and effecting perceived scenic quality/setting of the AONB.
Scenic quality	A distinctive sense of place	Landscape character lends a clear and recognisable sense of place	Unique character defined by semi-natural and cultural landscapes (notably sea, coast, estuaries, reedbeds, Sandlings heath, forest, farmland and villages) and built heritage features (such as Martello towers, pill boxes, river walls), creating a juxtaposition of elements in a relatively small area.	Limited. The juxtaposition between farmed arable land set against the backdrop of Sandlings Heaths and Forests creates scenic interest and some sense of place, however character within the zone is not 'unique' nor defined by semi-natural/cultural landscapes, and has limited/no relationship with the sea, coast and estuaries of the AONB.	Medium. Potential for change to the sense of place of the landscape on the edge of the AONB, due to the interruption of siting large-scale development on its inland edge, changing the juxtaposition between farmland and Sandlings Forests that form the setting of the AONB. Sense of place created by the sea, coast, estuaries and cultural heritage features on the AONB coast would not be changed.	Significant. Notable presence of AONB indicator relating to sense of place created by juxtaposition of arable land and Sandlings Forests in the setting of the AONB, will be subject to medium magnitude of change. Potential for significant effects on sense of place/setting of AONB Sandlings Forests and Heaths cited in this indicator.
	Striking landform	Landform shows a strong sense of scale or contrast	Sea cliffs and shingle beaches contrasting to flat and gently rolling Sandlings heaths and farmland. Extensive shingle beaches and shallow bays provide opportunities for long distance and panoramic views including out to sea and along the Heritage Coast. Views to coastal landform also possible from locations offshore. Landscape displays a 'rhythm' dictated by a series of east-west rivers and estuaries, and the interfluvies that lie between them.	Limited. Gently undulating, undramatic landform, rising slightly to the south. Landform within the zone does not show a strong sense of scale or contrast and has limited/no relationship with the striking landforms of sea cliffs/shingle beaches present at the coast within the AONB.	None. Although there is potential for some change to the landform within/just outside the AONB, the qualities of the striking coastal landforms within the AONB cited in this indicator will not be subject to change.	Not significant. Limited presence of AONB indicator and subject to no change. The striking landform qualities of the AONB cited in this indicator will not be significantly affected.
		There are striking landform types or coastal configurations	Coastal cliffs, shingle spits, estuaries and beaches are striking landform features.	Not present. There are no striking landforms or coastal configurations within the zone and these features within the AONB have limited/no influence on this zone.	None. The qualities of the striking coastal landforms within the AONB cited in this indicator will not be subject to change.	Not significant. The striking coastal landforms of this AONB indicator are not present and would not be subject to change.
	Visual interest in patterns of land cover	Land cover and vegetation types form an appealing pattern or composition in relation to each other and/or to landform which may be appreciated from vantage point or travelling through landscape	Varied habitats and land cover in intricate mosaic corresponding to natural geography (landform, geology, soils & climate) and displaying seasonal differences, either as a result of natural processes or past and current farming and land management regimes. Elevated vantage points provide impressive views over low lying coastal marshes, estuaries, beaches and expansive long distance views out to sea. Views to the coastline from out at sea are also noted.	Notable. Visual interest is created by pattern of farmed fields amongst mosaic of Sandlings Heath and backdrop of the Sandlings Forests, in the context of large scale energy generation/power line infrastructure. The wider network of coastal marshes, estuaries and beaches is not evident, however vantage points on Sizewell Gap Road and Sandling's Walk allow open views where the contrast in land cover between fields and forest can be appreciated. Some seasonal differences evident in deciduous trees, but forest backdrop is largely coniferous and forms year round dark green horizon.	Medium. Although there is potential for change to the appealing pattern/composition of the farming, heaths and forested landcover visible from vantage points within the AONB, these changes will occur in the context of Sizewell Power Station, other offshore wind farm substations and transmission lines. The qualities of the views over coastal landscapes within the AONB cited in this indicator will not be subject to change.	Significant. The notable visual interest created by the pattern of farmed fields and heaths against the backdrop of the Sandlings Forest may be significantly affected as a result of development within this zone, however changes will occur in the context of Sizewell Power Station, other offshore wind farm substations and transmission lines. The visual interest in views over coastal landscapes cited in this indicator will not be significantly affected.
	Appeal to the senses	Strong aesthetic qualities, reflecting factors such as scale and form, degree of openness or enclosure, colours and textures, simplicity or diversity, and ephemeral or seasonal interest	Close-knit interrelationship of constituent features creates a juxtaposition of colours and textures (such as coniferous forests, reedbeds, intertidal mud flats and heathland, sand dunes and shingle beaches) that is further enhanced by seasonal changes. Strong aesthetic, spatial and emotional experiences - for example in the contrast between open and exposed areas on the coast, seaward or within estuaries with more traditional enclosed farmland areas.	Notable. The aesthetic qualities and interest which are most evident at the coast are not present within the zone, however there are some aesthetic factors which appeal to the senses, associated with its contrast to adjacent settled areas, Sandlings Heaths and Forests and Sizewell Power Station. There is a juxtaposition of lighter colours/textures of the farmland with the darker forested backdrops, and some openness as a result of the flat landscape and lack of field boundaries.	Medium. There is potential for change to some aesthetic factors that appeal to the senses, particularly the contrast between enclosed farmland areas, Sandlings Feaths and Forests of the AONB, however the relationship of the key constituent features within the coastal areas of the AONB (forests, reedbeds, intertidal mud-flats, heathland, sand dunes and shingle beaches) cited in this indicator will not be subject to change; nor will the contrast between open and exposed areas on the coast.	Significant. There is potential for significant effects on aesthetic factors that appeal to the senses, particularly the contrast between enclosed farmland areas, Sandlings Heaths and Forests on the edge of the AONB. The relationship of the key constituent features within the coastal areas of the AONB (forests, reedbeds, intertidal mud-flats, heathland, sand dunes and shingle beaches) cited in this indicator will not be subject to change; nor will the contrast between open and exposed areas on the coast.
		Memorable or unusual views and eye-catching features or landmarks	Large open vistas across heaths and along the coast, out to sea and from sea to the coastline. Landmarks include historic structures such as medieval churches, Martello towers and lighthouses, the House in the Clouds (Thorpeness) and Snape Maltings, the riverside at Woodbridge with iconic Tide Mill, along with more modern structures including Sizewell A and B and former military site at Orford Ness.	Limited. Limited/no views across heaths or the coast are available from the zone, which is visually contained to the east by coniferous forests. Historic structures and landmarks cited are either not visible or not eye-catching. Sizewell Nuclear Power Station is visible in the distance to the east along the overhead transmission line traversing the zone. Views are not particularly memorable or unusual, but there is an open aspect to the Sandlings Forests of the AONB and Hundred River Valley.	Low. There will be no change to the memorable views cited in this indicator 'along the coast, out to sea', since views to the coast are prevented by landform and forestry; and no changes to views of historic landmarks. Substation development within the zone will be viewed in the context of other modern structures including Sizewell Power Station and overhead transmission line.	Not significant. Limited presence of AONB indicator and subject to low magnitude of change. The scenic qualities of the AONB cited in this indicator will not be significantly affected.
Characteristic cognitive and sensory stimuli (e.g. sounds, quality of light, characteristic smells, characteristics of the weather)		Sensory stimuli enhanced by quality of light/space (the big 'Suffolk skies'), areas with dark skies and sound (e.g. bird calls, curlews on heath and geese on estuaries, the wind through reeds in estuaries, waves on shingle).	Limited/notable. Big 'Suffolk skies' evident, increasing sense of scale and influence of the weather on perceived character. Dark skies to the west and south within AONB forests, punctuated by lighting of housing and infrastructure. Coastal 'stimuli' are not present and although there are 'natural' sounds of birds, rustling trees etc the busy Sizewell Gap Road is also adjacent to the zone.	High. Potential addition of substation development will increase the prominence of man-made features, sounds and lighting within the AONB.	Significant. Although the key coastal stimuli of the AONB are not present and a busy road passes the zone, the landscape benefits from its sense of scale, exposure to the elements and relative darkness at night, on which the potential addition of substation development will increase the prominence of man-made features, sounds and lighting in the AONB.	
Relative wildness	A sense of remoteness	Relatively few roads or other transport routes	Absence of major coastal road or rail route, due to estuaries, and intermittent 'soft edged', often lightly trafficked access routes across the AONB to the coastline from main routes inland, has contributed to the relatively undeveloped character of the Suffolk coast.	Limited. Sense of remoteness is relatively limited due to proximity of zone to busy Sizewell Gap Road, which passes the zone between Leiston and Sizewell and presence of several PROW which provide access across the zone into the AONB from adjacent settled areas. Footpaths do provide some sense of remoteness as they move away from settled areas into the Sandlings Heaths of the AONB.	Medium-low. Due to the potential introduction of built development features and access tracks, substation development would further reduce any sense of remoteness, however there would be limited change to the 'relatively undeveloped character of the Suffolk coast' due to the position of the zone away from the immediate coast of the AONB and its limited intervisibility with the coast.	Not significant. Due to the potential introduction of built development features and access tracks, substation development would further reduce any sense of remoteness, however there is already a limited sense of perceived remoteness within the zone and it has limited intervisibility with the undeveloped Suffolk coast.
	Distant from or perceived as distant from significant habitation	Pockets of relative wildness associated with coast, estuary and forests in this largely farmed and settled landscape.	Limited. Substition development would further reduce any sense of wildness, through the introduction of built features, however changes to perceived wildness are considered relatively low due to limited presence of this indicator in the baseline.	Medium-low. Substation development would further 'interrupt' and develop farmland within the zone, through the introduction of large scale electrical infrastructure, however changes are considered relatively low as there are overt electrical transmission and energy generation influences in the baseline, as well as urban influences around the fringes of Leiston.	Not significant. Due to the potential introduction of built development features and access tracks, substation development would further reduce any sense of remoteness, however there is already a limited sense of perceived remoteness within the zone due to farmed land-use and presence of nearby settlements, transmission lines and Sizewell Power Station.	
	A relative lack of human influence	Extensive areas of semi-natural vegetation	Semi-natural habitats evident, notably on the Sandlings heaths, marshes, reedbeds, estuaries and along the coastline.	Limited. Relatively few areas of semi-natural habitat present within the zone, which consists primarily of cultivated arable farmland, with some heathland patches on the western edge of zone. Semi-natural Sandlings Forests form backdrop to the zone within the AONB.	None. There will be no physical changes to semi-natural habitats present within the AONB (assuming that development would be entirely within arable agricultural fields and avoid heaths on western side of zone).	Not significant. Semi-natural habitats within the AONB (heaths, marshes, reedbeds and estuaries) will be subject to no significant physical effects as a result of development in this zone.
	Uninterrupted tracts of land with few built features and no overt industrial or urban influences	Largely undeveloped coastline and offshore areas and areas of semi-natural habitat including Sandlings heath, forests, reedbeds, estuaries and marshland. Landscape interspersed with isolated villages, and built heritage assets such as Martello towers, pill boxes, river walls that contribute to character. A small number of large scale and industrial elements on the coast of the AONB are long established, notably Sizewell A and B and the former military site at Orford Ness, whilst offshore wind turbines at Greater Gabbard, Galloper and the more distant London Array are visible from stretches of the coastline.	Limited. The landscape is not 'undeveloped' or 'uninterrupted' in the manner of coastal areas and heaths & forests of the AONB. Urban development is prominent on the edges of the zone, around the edges of Leiston; large-scale overhead transmission lines cross the zone and Sizewell Power Station forms a notable influence.	Medium-low. Substations would further 'interrupt' and develop farmland within the zone, through the introduction of large scale electrical infrastructure, however changes are considered relatively low as there are overt electrical transmission and energy generation influences in the baseline, as well as urban influences around the fringes of Leiston.	Not significant. Substation development would effect areas of undeveloped farmland within the zone, through the introduction of large scale electrical infrastructure, however effects are considered not significant as there are overt electrical transmission and energy generation influences in the baseline, as well as urban influences around the fringes of Leiston.	
	A sense of openness and exposure	Open, exposed to the elements and expansive in character	Big 'Suffolk skies' and expansive views offshore emphasise sense of openness and exposure on open and exposed coastline and on the Sandlings heaths.	Notable. Big 'Suffolk skies' and open views are present, due to flat landform and lack of field enclosures, which influence the perceived character. There are no views offshore from the zone, nor are there views of coastline, therefore sense of exposure is much reduced in comparison to coastal areas.	Medium. Potential addition of substation development will reduce openness and exposure within the zone and result in changes in openness of adjacent Sandlings heaths within AONB, due to presence of large scale built features. No changes to the exposure/openness of the coastline within AONB.	Significant. Large-scale development within the zone would affect sense of openness and exposure within the zone and adjacent Sandlings Heaths of AONB, however it would not affect the openness and exposure of the coastal areas of the AONB cited in this indicator.
A sense of enclosure and isolation	Sense of enclosure provided by (e.g.) woodland, landform that offers a feeling of isolation	Forestry plantations create sense of enclosure and isolation contrasting to open and more exposed areas along the coast and on the Sandlings heaths.	Notable. Sandlings Forest create sense of enclosure and isolation to the east of the zone, within AONB, contrasting to more open farmland areas within the zone.	Medium-high. Potential changes to sense of isolation experienced within adjacent Sandlings Heaths and Forests from footpath network, due to views of substation development within AONB.	Significant. Although the farmland within the zone is relatively open, some enclosure is provided by the adjacent Sandlings Forests. Within these forests, there is also a sense of enclosure and isolation which could be significantly affected by views of substation development within the AONB.	
A sense of the passing of time and a return to nature	Absence or apparent absence of active human intervention	Significant areas of semi natural landscape and seascape notably along the coastline, offshore and within undeveloped estuaries where there is little evidence of apparent human activity despite the sea walls and coastal marshes.	Limited. The zone is primarily influenced by active human intervention in the form of arable farming and modern development, including roads, power lines and settlement around its edges.	None. There will be no changes to areas of semi natural landscape along the coastline/estuaries of the AONB.	Not significant. There will be no effects on the qualities of areas of semi natural landscape along the coastline/estuaries of the AONB.	

Zone 2 - AONB Impact Appraisal (continued)

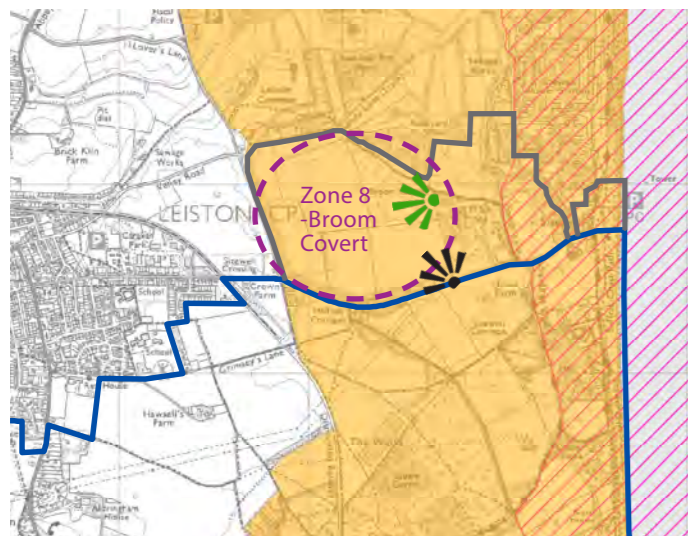
Below text from Section 2.0 of the AONB 'Special Qualities' Report				Below text AONB appraisal undertaken by OPEN		
Factor	Example Sub-Factor	Example Indicator	Suffolk Coast and Heaths AONB Indicator	Zone 2 (inside AONB in a 'reduced' value area)		
				Degree to which AONB indicator is present in the baseline in substation zone (prevalent/notable/limited/not present)	Assessment of potential magnitude of change to special qualities of AONB resulting from development in substation zone (high/medium/low/none)	Potential effect on AONB special qualities resulting from development in substation zone (significant / not significant)
Relative tranquility	Contributors to tranquility	Presence and / or perceptions of natural landscape, birdsong, peace and quiet, natural-looking woodland, stars at night, stream, sea, natural sounds and similar influences	Areas of semi natural habitat, where there is a general absence of development and apparent human activity, contribute to a sense of relative tranquillity. Further enhanced by sounds (bird calls, the wind through reeds in estuaries, waves on shingle) and relatively dark skies.	Notable. The zone is influenced by the perceptions of a natural looking landscape of farmland, heaths and forests; which give some sense of tranquility, however this is reduced by the apparent human activity which has shaped the arable land and plantation woodlands; and the extent of settlement, transport and infrastructure development which reduces the relative tranquility.	Medium-high. Potential changes of medium to high magnitude to perceived tranquility of rural landscape within AONB and adjacent Sandlings Heaths, arising from the construction and operation of large scale electrical infrastructure within the zone.	Significant - during construction period, resulting from high changes to relative tranquil baseline arising from construction traffic and noise. Not significant during operational period when construction traffic and noise is no longer present in the landscape.
	Detractors from tranquility	Presence and/or perceptions of traffic noise, large numbers of people, urban development, overhead light pollution, low flying aircraft, power lines and similar influences	Some local detractors from tranquillity include the seasonal influx of visitors to coastal towns, low flying aircraft noise and urban development on fringes of the AONB	Limited. Some detractors from tranquility are present, particularly the busy Sizewell Gap Road. Although urban development and overhead transmission lines are present in the landscape, they scarcely detract from tranquility, except at a very localised level in close proximity.	Medium-high. Potential changes of medium to high magnitude to perceived tranquility of rural landscape within AONB and adjacent Sandlings Heaths, arising from the construction and operation of large scale electrical infrastructure within the zone.	Significant - during construction period, resulting from high changes to relative tranquil baseline arising from construction traffic and noise. Not significant during operational period when construction traffic and noise is no longer present in the landscape.
Natural heritage features	Geological and geomorphological features	Visible expression of geology in distinctive sense of place and other aspects of scenic quality	Boundary of the AONB is broadly geological marking the border between the inland boulder clay and the coastal fringe. Visible and striking expressions of geology and sedimentation on faces of crumbling coastal cliffs. Use of flint, local crag and Aldeburgh brick for building are indicators of local geology.	Notable. Boundary of the AONB is located to the east of zone near land-use change from arable farmland to Sandlings Heaths and Forests habitats. 'Striking impressions of geology' are not present in the zone, nor are these coastal features visible.	Medium. Substation development within the zone has the potential to change the visible expression of the current land use relationship/transition that is evident in the AONB, but would not change the striking impressions of geology present at the coast,	Significant. Boundary of the AONB is visibly expressed in gradual change from farmland to Sandlings Heaths and Forest, with this scenic quality likely to be affected by the prominence of substation development in the foreground of the forests, particularly experienced by visitors to the AONB along local PRoW network.
		Presence of striking or memorable geomorphological 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 cusped foreland shingle spit of Orford Ness and river estuaries such as the estuary of the River Alde.	Limited. No striking or memorable geo-morphological features are present within the zone.	None. Substation development within this zone will not change the appearance or qualities of striking geo-morphological features within the AONB that are cited in this indicator.	Not significant. Substation development within this zone will not affect the appearance or qualities of striking geo-morphological features within the AONB that are cited in this indicator.
	Wildlife and habitats	Presence of wildlife and / or habitats that make a particular contribution to distinctive sense of place and other aspects of scenic quality	Varied, nationally and internationally protected sites such as SSSI, SPA and SAC, semi natural habitats designated for their nature conservation interest and range of species supported (including shingle beaches, intertidal and offshore areas, reedbeds, grazing marshes and Sandlings heaths). Intricate mosaic, highly dynamic and sensitive regimes (due to periodic flooding) along with rapid transitions add to biodiversity interest, distinctive landscape character and scenic quality.	Notable. Wildlife and habitats of the Suffolk Coast and Heaths SPA provide a distinctive backdrop and contribute to the sense of place, with transition from farmland to heaths and forestry.	None. There will be no change to the physical condition/quality of designated habitats within the AONB (assuming that development would be located entirely within arable agricultural fields and avoid heaths on eastern side of zone). Some changes to landscape character are likely to result on the setting on this edge of the AONB.	Not significant. Designated habitats within the AONB will be subject to no physical effects as a result of development within the zone (assuming development would be located entirely within arable agricultural fields and avoid heaths on eastern side of zone).
		Presence of individual species that contribute to sense of place, relative wildness or tranquillity	Varied protected species across major habitat types, for example breeding and wading birds in estuaries and reedbeds; rare communities of salt tolerant plants on the coast; and birds and invertebrates on the Sandlings heaths.	Limited. The intensively farmed arable land within the zone if not designated or valued for habitat or protected species, however sense of place/tranquillity is influenced by the broader habitat mosaic of the Sandlings Heaths and Forests and the bird life it supports.	None. There will be no change to the protected species within the AONB as a result of development in this zone (assuming that development would be located entirely within arable agricultural fields and avoid heaths on eastern side of zone).	Not significant. There will be no effects on protected species within the AONB as a result of development in this zone (assuming that development would be located entirely within arable agricultural fields and avoid heaths on eastern side of zone).
Cultural heritage	Built environment, archaeology and designed landscapes	Presence of settlements, buildings or other structures that make a particular contribution to distinctive sense of place and other aspects of scenic quality	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.	Limited. The built environment/cultural heritage features in the AONB have limited influence on the zone. Locally, Sizewell Hall contribute to sense of place. The Sizewell Gap Road passing the zone leads to Sizewell at 'end of the road' coastal location. Very few significant built heritage assets in zone.	Low. There will be no change to the main built environment/cultural heritage features in the AONB. The main change will be on the character of the Sizewell Gap Road as a gateway route into the village of Sizewell.	Not significant. There will be no effect on the main built environment/cultural heritage features in the AONB. The main change will be on the character of the Sizewell Gap Road as a gateway route into the village of Sizewell.
		Presence of visible archaeological remains, parkland or designed landscapes that provide striking features in the landscape	Archaeological and historic sites and features include prehistoric and later burial monuments (including the Anglo-Saxon burial ground at Sutton Hoo); early medieval churches (many of which pre-date the Domesday survey); historic field and settlement patterns; and evidence of land reclamation dating back to the 12 th 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.	Limited. There are no parklands or designed landscapes within or adjacent to the zone.	None. There will be no direct changes to parklands or designed landscapes within the AONB.	Not significant. There will be no direct changes to parklands or designed landscapes within the AONB.
	Historic influence on the landscape	Visible presence of historic landscape types or specific landscape elements or features that provide evidence of time depth or historic influence on the landscape	Field patterns reflect process of land management and enclosure stretching back many centuries. Evidence of reclamation of former intertidal areas to form freshwater grazing marsh dating back to the 12 th century. Prehistoric and later burial monuments (such as at Sutton Hoo), early medieval churches/religious houses and castles. There is also more recent military and infrastructure elements particularly on the coast (e.g. Martello towers, former military installations at Orford Ness), WWII airfields, radar installations and pillboxes that form part of the long history of "Suffolk's Defended Shore". 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.	Limited. Field patterns reflect process of arable land management, stretching back over time, but otherwise, historic influences are not a strong visible presence of the landscape within the zone. Historic elements concentrated along the AONB coast have limited influence on the character of zone due to visual separation., however zone is located adjacent to Heritage Coast.	Low. Although there is potential for change to the arable fields on the inland edge of the AONB, the qualities of the visible historic landscape experienced primarily around the coastal landscapes within the AONB cited in this indicator will not be subject to change.	Not significant. Although there is potential for some effects on the arable fields on the inland edge of the AONB, the qualities of the visible historic landscape experienced primarily around the coastal landscapes within the AONB cited in this indicator will not be effected.
		More latterly the Sizewell nuclear complex highlights evidence of time depth across the landscape. Both the nuclear complex and the nearby infrastructure associated with offshore energy generation are part of a developing story of the Suffolk's Energy Coast. There are often strong associations between these features and areas of more remote coastal landscape character. Power stations are still cited by some as visual detractors in the landscape, despite the test of time.	Notable. Overhead transmission line crosses the zone and is visually prominent. Sizewell Power Station 'dome' is prominent in views to the north-east of zone, with overhead lines extending from it. These electrical/energy installations have a notable influence on the perceived natural/scenic quality of the area.	High. Potential addition of further electrical infrastructure influences in the landscape near to existing overhead transmission line, will increase prominence of man-made features and effect scenic quality in this narrow area of the AONB. Associations with other substations, power stations and pylons may extend perceived link to energy coast further inland.	Significant. Notable presence of existing electrical transmission infrastructure will be subject to high magnitude of change arising from addition of further large scale substation development within and on the edge/setting of AONB.	
	Perceptions of a harmonious balance between natural and cultural elements in the landscape that stretch back over time	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.	Limited/notable. Presence of scattered cottages/farmsteads with vernacular building materials and small scale, displays a balance between natural and built elements; however more recent infrastructure development has strong influence on balance between landscape elements.	Medium. Potential for the scale of proposed substations to result in high change to the balance between natural and built elements, and have stark contrasts in scale with existing cottages/building materials, albeit being in keeping with other large-scale energy infrastructure in the landscape.	Not significant. Potential for the scale of proposed substations to have effects on the existing relationship between natural and built elements, however likely to be in keeping with the 'modern' infrastructure elements that are notable in the landscape.	
Characteristic land management practices	Existence of characteristic land management practices, industries or crafts which contribute to natural beauty	Landscape character and diversity of habitat types dependent on wide range of land management practices, several of which date back many centuries. Examples include pasturing; grazing on coastal marshes; forestry; extensive grazing to maintain heathland; reed cutting; and ditch/marshland and hydrological management. Small scale fishing industry results in boats, nets, pots and storage buildings on some stretches of coastline.	Limited. Characteristic land management practices have largely been lost to intensive arable farming within the zone.	None. no potential for changes to occur due to lack of characteristic land management practices in the baseline landscape of the zone.	Not significant. no effects likely to occur due to lack of characteristic land management practices in the baseline landscape of the zone.	

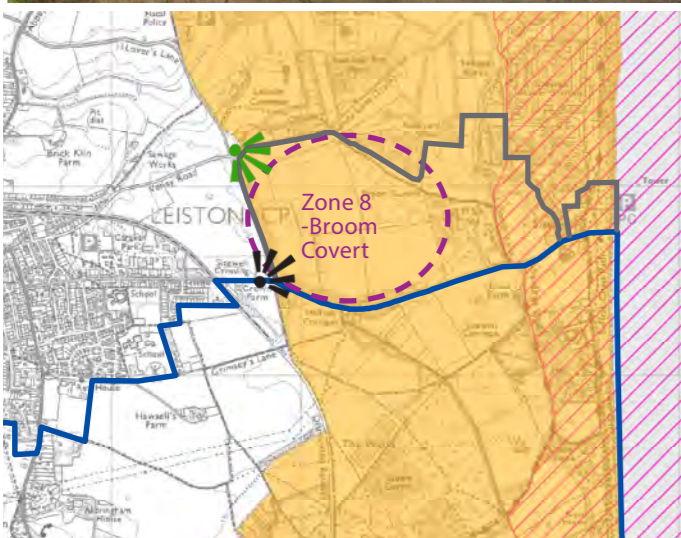
6. Zone 8 - Broom Covert

6.1 Existing Character



Figure. 7: Zone 8 - Broom Covert Character Photographs





Zone 8 - Broom Covert Character Photographs (continued)

6.2 Zone 8 - Broom Covert - AONB Impact Appraisal

Below text is from Section 2.0 of the AONB 'Special Qualities' Report				Below text AONB appraisal undertaken by OPEN in conjunction with Pegasus		
Factor	Example Sub-Factor	Example Indicator	Suffolk Coast and Heaths AONB Indicator	Zone 8 - Broom Covert (inside AONB)		
				Degree to which AONB indicator is present in the baseline in substation zone (prevalent/notable/limited/not present)	Assessment of potential magnitude of change to special qualities of AONB resulting from development in substation zone (high/medium/low/none)	Potential effect on AONB special qualities resulting from development in substation zone (significant / not significant)
Landscape quality	Intactness of the landscape in visual, functional and ecological perspectives	Characteristic natural and man-made elements are well represented throughout	Close-knit interrelationship of semi-natural and cultural landscapes (notably sea, coast, estuaries, reedbeds, Sandlings heath, forest, farmland and market towns) and built heritage features (such as Martello towers, pill boxes, river walls), creating a juxtaposition of elements in a relatively small area. The AONB contains important areas of heath and acid grassland, and it supports a high number of protected species populations. As such it has importance in a national context for biodiversity.	Notable. Characterised by former arable agricultural fields and heathland, with land now being managed as grassland as part of EDF Sizewell C's 'reptile mitigation area'. Located in the setting of Sizewell Marshes SSSI, Rookyard Wood and Sizewell Nuclear Power Station, which define main relationship of semi-natural and cultural landscape. Some sense of tranquility.	Medium-high. Potential for medium-high changes to the intactness of the landscape, through increased influence of characteristic man-made energy transmission elements.	Significant. Intractness of the visual/function/ecological aspects of the landscape subject to medium-high magnitude of change, resulting from increased influence of characteristic man-made energy transmission elements already prevalent in the landscape with the retention of natural elements. Potential for substantial in-combination effects.
	The condition of the landscape's features and elements	Landscape elements are in good condition	Strong overall character, albeit that the evolving nature of intensively farmed arable land with agricultural fleece/polythene and outdoor pig rearing can divide opinion on landscape condition in visually sensitive locations such as on valley sides.	Notable. Former arable land, now managed as grassland, with intact field boundaries and surrounding woodlands in good condition. Distinctiveness of local character defined by combination of natural/wooded setting with man-made energy generation/transmission influences in the landscape.	Low. Although there is some potential for direct effects on the condition of landscape elements in the zone, development is likely to be sited largely within arable/grassed fields, avoiding valued areas of woodland and landscape elements that are in good condition.	Not significant. Valued landscape elements within the AONB will be subject to low level of physical change as a result of development (assuming development would be located entirely within arable/grassed fields and avoid woodland areas on eastern side of zone).
	The influence of incongruous features or elements on the perceived natural beauty of the area	Incongruous elements are not present to a significant degree, are not visually intrusive, have only localised influence or are temporary in nature	A small number of large scale and long established elements on the coast of the AONB divide opinion, being regarded by some as incongruous features and by others as enigmatic; for example the complex military site at Orford Ness. The power stations at Sizewell also divide opinion in this way, however in many views, particularly of the B station, the apparent uncluttered simple appearance and outline as well as the lack of visible human activity, partially mitigate the adverse visual impacts. Offshore wind turbines at Greater Gabbard, Galloper and the more distant London Array are visible from some stretches of the coastline. These create a cluttered horizon and, like the large scale elements onshore, also divide opinion.	Notable. Existing Galloper and Greater Gabbard substations are located within the zone. Overhead transmission line crosses the zone and is visually prominent. Block massing of Sizewell A Power Station and distinctive 'dome' of Sizewell B are prominent in backdrop to the east from some viewpoints within the zone. These electrical/energy installations have a notable influence on the existing perceived natural/scenic quality of the area.	Medium-high. Potential addition of further electrical infrastructure influences in the landscape near to the existing Galloper and Greater Gabbard substations, overhead transmission line and Sizewell Power Station will increase the prominence of man-made features in this localised area of the AONB, further increasing the influence of such infrastructure in the current baseline through in-combination effects.	Significant. Notable presence of existing electrical transmission and energy generation infrastructure in the baseline likely to be subject to medium-high magnitude of change arising from addition of further large-scale electrical infrastructure influences. Potential for significant effects to arise on special qualities of AONB due to the increase of energy transmission influences in Sizewell area which could result in combined effects on special qualities/intrinsic character to the detriment of maintaining the landscape connectivity of the AONB.
Scenic quality	A distinctive sense of place	Landscape character lends a clear and recognisable sense of place	Unique character defined by semi-natural and cultural landscapes (notably sea, coast, estuaries, reedbeds, Sandlings heath, forest, farmland and villages) and built heritage features (such as Martello towers, pill boxes, river walls), creating a juxtaposition of elements in a relatively small area.	Limited. The juxtaposition between the 'natural' setting of woodland and semi-natural habitats around Sizewell Belts, set against the distinctive massing/dome of Sizewell Nuclear Power Station creates scenic interest/contrast in man-made and natural elements; and defines sense of place. Limited/no relationship with the sea, coast and estuaries of the AONB.	Low. The fundamental sense of place of this area of the AONB, which is already defined by the interaction between natural and man-made/energy generation and transmission influences would only be changed to a low level, arising from the increased influence of the energy transmission component of place.	Not significant. Notable presence of AONB indicator relating to sense of place created by juxtaposition of natural and man-made energy development influences will be subject to low magnitude of change and not significant effect. Sense of place is likely to be largely retained and not fundamentally changed, despite the increase in energy generation/transmission influences.
	Striking landform	Landform shows a strong sense of scale or contrast	Sea cliffs and shingle beaches contrasting to flat and gently rolling Sandlings heaths and farmland. Extensive shingle beaches and shallow bays provide opportunities for long distance and panoramic views including out to sea and along the Heritage Coast. Views to coastal landform also possible from locations offshore. Landscape displays a 'rhythm' dictated by a series of east-west rivers and estuaries, and the interfluvies that lie between them.	Limited. Gently undulating, undramatic landform, rising slightly from low-lying areas of Broom Covert to Sizewell Gap Road and Lovers Lane to the south and west. Landform within the zone does not show a strong sense of scale or contrast and has limited/no relationship with the striking landforms of sea cliffs/shingle beaches present at the coast within the AONB.	None. Although there is potential for some change to the landform within the AONB, the qualities of the striking coastal landforms within the AONB cited in this indicator will not be subject to change.	Not significant. Limited presence of AONB indicator and subject to no change. The striking landform qualities of the AONB cited in this indicator will not be significantly affected.
		There are striking landform types or coastal configurations	Coastal cliffs, shingle spits, estuaries and beaches are striking landform features.	Not present. There are no striking landforms or coastal configurations within the zone and these features within the AONB have limited/no influence on this zone.	None. The qualities of the striking coastal landforms within the AONB cited in this indicator will not be subject to change.	Not significant. The striking coastal landforms of this AONB indicator are not present and would not be subject to change.
	Visual interest in patterns of land cover	Land cover and vegetation types form an appealing pattern or composition in relation to each other and/or to landform which may be appreciated from vantage point or travelling through landscape	Varied habitats and land cover in intricate mosaic corresponding to natural geography (landform, geology, soils & climate) and displaying seasonal differences, either as a result of natural processes or past and current farming and land management regimes. Elevated vantage points provide impressive views over low lying coastal marshes, estuaries, beaches and expansive long distance views out to sea. Views to the coastline from out at sea are also noted.	Notable. Visual interest is created by pattern of arable fields/grassland/heathland amongst mosaic of woodland, in the context of large scale energy generation/power line infrastructure. The wider network of coastal marshes, estuaries and beaches is not evident, however vantage points on Sizewell Gap Road and Sandling's Walk, and the footpath which runs through the AONB in this location allow open views where the contrast in land cover and built elements can be appreciated.	Medium. Potential for change to the pattern/composition of the landscape visible from a footpath travelling within the AONB. These changes will occur in the context of Sizewell Power Station, other offshore wind farm substations and transmission lines which would serve to add to the combined effect on the experience of using the footpath.	Significant. The visual interest created by the pattern of farmed fields, grassland and woodlands may be subject to a medium change, occurring in the context of Sizewell Power Station, other offshore wind farm substations and transmission lines. The visual interest in views over the AONB landscapes cited in this indicator may be significantly affected from this footpath.
	Appeal to the senses	Strong aesthetic qualities, reflecting factors such as scale and form, degree of openness or enclosure, colours and textures, simplicity or diversity, and ephemeral or seasonal interest	Close-knit interrelationship of constituent features creates a juxtaposition of colours and textures (such as coniferous forests, reedbeds, intertidal mud flats and heathland, sand dunes and shingle beaches) that is further enhanced by seasonal changes. Strong aesthetic, spatial and emotional experiences - for example in the contrast between open and exposed areas on the coast, seaward or within estuaries with more traditional enclosed farmland areas.	Notable. The aesthetic qualities and interest which are most evident at the coast are not present within the zone, however there are some aesthetic factors which appeal to the senses, associated with its contrast between semi-natural woodland/grassland/heathland habitats and man-made features such as Sizewell Power Station. There is a juxtaposition of lighter colours/textures of the farmland with the darker wooded backdrops, and has some strong aesthetics arising from the visual complexity of energy generation/transmission elements. It is not a landscape that evokes the strong emotional responses evident at exposed areas of the coast, but is nonetheless clearly a part of the attractive AONB landscape.	Medium. There is potential for change to the massing and complexity of the aesthetics of the energy generation/transmission elements in the landscape, particularly the degree and balance of prominence of these features in the wider 'natural' setting. There is potential for the relationship of one of the key constituent features within the coastal areas of the AONB (heathland) cited in this indicator to be subject to change.	Significant. There is potential for effects on aesthetic factors, focused around the changing prominence and visual complexity of man-made elements in a landscape where the aesthetics are already much influenced by energy infrastructure. The relationship of one of the key constituent features within the coastal areas of the AONB (heathland) cited in this indicator will have the potential to be subject to change.
		Memorable or unusual views and eye-catching features or landmarks	Large open vistas across heaths and along the coast, out to sea and from sea to the coastline. Landmarks include historic structures such as medieval churches, Martello towers and lighthouses, the House in the Clouds (Thorpe) and Snape Maltings, the riverside at Woodbridge with iconic Tide Mill, along with more modern structures including Sizewell A and B and former military site at Orford Ness.	Limited. Limited/no views across heaths or the coast are available from the zone, which is visually contained to the east by woodland and Sizewell Power Station. Historic structures and landmarks cited are either not visible or not eye-catching. Sizewell Nuclear Power Station is the most eye-catching landmark in the local landscape.	Low. There will be no change to the memorable views cited in this indicator 'along the coast', 'out to sea', since views to the coast are prevented by landform and forestry; and no changes to views of historic landmarks. Substation development within the zone will be viewed in the context of other modern structures including Sizewell Power Station and overhead transmission line.	Not significant. Limited presence of AONB indicator and subject to low magnitude of change. The scenic qualities of the AONB cited in this indicator will not be significantly affected.
Characteristic cognitive and sensory stimuli (e.g. sounds, quality of light, characteristic smells, characteristics of the weather)		Sensory stimuli enhanced by quality of light/space (the big 'Suffolk skies'), areas with dark skies and sound (e.g. bird calls, curlews on heath and geese on estuaries, the wind through reeds in estuaries, waves on shingle).	Limited/notable. Big 'Suffolk skies' are not evident to the same extent as elsewhere in more open tracts of the AONB, although there is a sense of sense of scale and some natural sensory stimuli which influence perceived character. Night-time lighting of infrastructure reduces any dark skies qualities to some extent. Coastal 'stimuli' are not present and although there are 'natural' sounds of birds, rustling trees etc the busy Sizewell Gap Road is also adjacent to the zone and the 'hum' of electrical infrastructure is audible in close proximity.	Medium. Potential addition of substation development will further increase man-made stimuli, sounds and lighting within an area of the AONB where man-made influences from light, sounds etc are already a detracting element. However the sensory stimuli of most relevance including those related to the estuarine and coastal landscape would not be affected.	Not Significant. The landscape benefits from its sense of scale and exposure to the elements, on which the potential addition of substation development will increase the prominence of man-made features, sounds and lighting in the AONB. However, there would be no effect to the important sensory stimuli relating to the estuarine and coastal landscape.	
Relative wildness	A sense of remoteness	Relatively few roads or other transport routes	Absence of major coastal road or rail route, due to estuaries, and intermittent 'soft edged', often lightly trafficked access routes across the AONB to the coastline from main routes inland, has contributed to the relatively undeveloped character of the Suffolk coast.	Limited. Sense of remoteness is relatively limited due to proximity of zone to busy Sizewell Gap Road, which is one of the few 'main' roads which provides access to the coast at Sizewell. Footpath along Sandy Lane through Broom Covert provides some sense of remoteness, however the presence of existing Galloper/Greater Gabbard substations and Sizewell Power Station limits any sense of remoteness.	Medium-low. Due to the potential introduction of built development features and access tracks, substation development would further reduce any sense of remoteness, however there would be limited change to the 'relatively undeveloped character of the Suffolk coast' due to the position of the zone away from the immediate coast of the AONB and its limited intervisibility with the coast.	Not significant. Due to the potential introduction of built development features and access tracks, substation development would further reduce any sense of remoteness, however there is already a limited sense of perceived remoteness within the zone and it has limited intervisibility with the undeveloped Suffolk coast.
	Distant from or perceived as distant from significant habitation	Pockets of relative wildness associated with coast, estuary and forests in this largely farmed and settled landscape.	Limited. Limited sense of wildness due to managed grassland land use, proximity of settlement at Leiston, presence of electrical infrastructure and power stations, and the lack of coastal elements (coast/estuaries). The presence of extensive forests in the backdrop, which may provide some perception of wildness, is deceptive given it is plantation woodland. Increased sense of naturalness in pocket of pasture land at Broom Covert.	Medium-low. Substation development would further reduce any sense of wildness, through the introduction of built features, however changes to perceived wildness are considered relatively low due to limited presence of this indicator in the baseline.	Not significant. Due to the potential introduction of built development features and access tracks, substation development would further reduce any sense of remoteness, however there is already a limited sense of perceived remoteness within the zone due to farmed land-use and presence of nearby settlements, transmission lines, electrical substations and Sizewell Power Station.	
	A relative lack of human influence	Extensive areas of semi-natural vegetation	Semi-natural habitats evident, notably on the Sandlings heaths, marshes, reedbeds, estuaries and along the coastline.	Limited. Relatively few areas of semi-natural habitat present within the zone, which consists primarily of former arable farmland, now managed as grassland, with some pasture and mature deciduous trees in Broom Covert.	Low. There is likely to be a low level of physical change to semi-natural habitats present within the zone (assuming that development would be entirely within agricultural fields/grassland and avoid mature trees within Broom Covert on the eastern side of the zone).	Not significant. Semi-natural habitats within the AONB (heaths, marshes, reedbeds and estuaries) will be subject to no significant physical effects as a result of development in this zone.
	Uninterrupted tracts of land with few built features and no overt industrial or urban influences	Largely undeveloped coastline and offshore areas and areas of semi-natural habitat including Sandlings heath, forests, reedbeds, estuaries and marshland. Landscape interspersed with isolated villages, and built heritage assets such as Martello towers, pill boxes, river walls that contribute to character. A small number of large scale and industrial elements on the coast of the AONB are long established, notably Sizewell A and B and the former military site at Orford Ness, whilst offshore wind turbines at Greater Gabbard, Galloper and the more distant London Array are visible from stretches of the coastline.	Limited. The landscape is not 'undeveloped' or 'uninterrupted' in the manner of coastal areas and heaths & forests of the AONB. Urban development is prominent on the edges of the zone at Leiston; large-scale overhead transmission lines cross the zone; Galloper and Greater Gabbard substations are located within the zone and Sizewell Power Station forms a notable influence.	Medium-low. Substations would further 'interrupt' and develop farmland/grassland within the zone, through the introduction of large scale electrical infrastructure, however changes are considered relatively low as there are overt electrical transmission and energy generation influences in the baseline, as well as urban influences around the fringes of Leiston.	Not significant. Substation development would effect areas of undeveloped grassland within the zone, through the introduction of large scale electrical infrastructure, however effects are considered not significant as there are overt electrical transmission and energy generation influences in the baseline, as well as urban influences around the fringes of Leiston.	

Zone 8 - Broom Covert - AONB Impact Appraisal (continued)

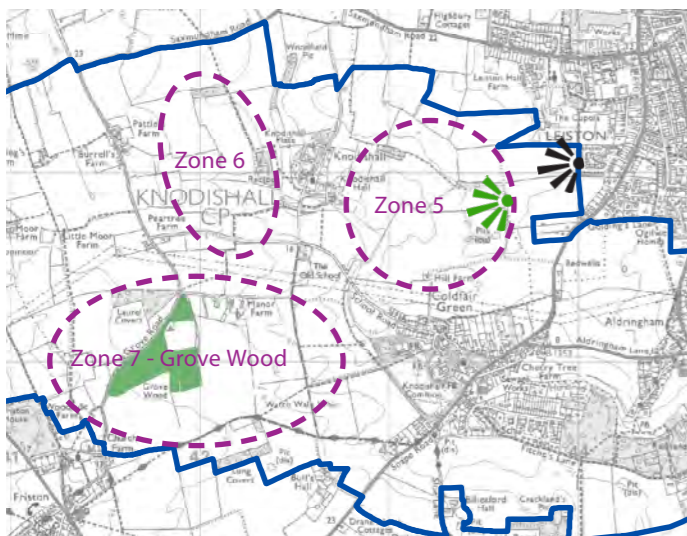
Below text from Section 2.0 of the AONB 'Special Qualities' Report				Below text AONB appraisal undertaken by OPEN		
Factor	Example Sub-Factor	Example Indicator	Suffolk Coast and Heaths AONB Indicator	Zone 8 - Broom Covert (inside AONB in a 'reduced' value area)		
				Degree to which AONB Indicator is present in the baseline in substation zone (prevalent/notable/limited/not present)	Assessment of potential magnitude of change to special qualities of AONB resulting from development in substation zone (high/medium/low/none)	Potential effect on AONB special qualities resulting from development in substation zone (significant / not significant)
Relative tranquillity	Contributors to tranquillity	Presence and / or perceptions of natural landscape, birdsong, peace and quiet, natural-looking woodland, stars at night, stream, sea, natural sounds and similar influences	Areas of semi natural habitat, where there is a general absence of development and apparent human activity, contribute to a sense of relative tranquillity. Further enhanced by sounds (bird calls, the wind through reeds in estuaries, waves on shingle) and relatively dark skies.	Limited/Notable. The zone is influenced by the perceptions of a natural looking landscape of farmland, grassland and woodland; which give some sense of tranquillity, however this is reduced by substantial development activity in the form of settlement, transport and energy infrastructure which limits relative tranquillity.	Medium-high. Potential changes arising on tranquillity from the construction and operation of further substation infrastructure, reinforcing an existing impact within an area where other electrical substations have recently been constructed (Galloper and Greater Gabbard) creating an increased overall in-combination effect.	Significant - during construction and operational period, resulting from medium-high changes to relative tranquillity in a landscape which is already subject to substantial development a relative lack of tranquillity, particularly in comparison to other areas of the AONB (such as its estuaries, shingle beaches and forests).
	Detractors from tranquillity	Presence and/or perceptions of traffic noise, large numbers of people, urban development, overhead light pollution, low flying aircraft, power lines and similar influences	Some local detractors from tranquillity include the seasonal influx of visitors to coastal towns, low flying aircraft noise and urban development on fringes of the AONB	Limited. The zone is influenced by the perceptions of a natural looking landscape of farmland, grassland and woodland; which give some sense of tranquillity, however this is reduced by substantial development activity in the form of settlement, transport and energy infrastructure which limits relative tranquillity.	Medium-high. Potential changes arising on tranquillity from the construction and operation of further substation infrastructure within an area where other electrical substations have recently been constructed (Galloper and Greater Gabbard) creating an increased overall in-combination effect.	Significant - during construction and operational period, resulting from medium-high changes to relative tranquillity in a landscape which has already been subject to substantial development and has a relative lack of tranquillity, particularly in comparison to other areas of the AONB (such as its estuaries, shingle beaches and forests).
Natural heritage features	Geological and geomorphological features	Visible expression of geology in distinctive sense of place and other aspects of scenic quality	Boundary of the AONB is broadly geological marking the border between the inland boulder clay and the coastal fringe. Visible and striking expressions of geology and sedimentation on faces of crumbling coastal cliffs. Use of flint, local crag and Aldeburgh brick for building are indicators of local geology.	Limited. 'Striking impressions of geology' are not present in the zone, nor are these coastal features visible and visible expressions of geology do not therefore influence the scenic quality of the zone.	Low. Substation development within the zone has low potential to change the visible expressions of geology, as this feature does not currently influence the scenic quality of the zone.	Not significant - substation development will not have significant effects on visible expressions of geology, as this feature does not currently influence the scenic quality of the zone.
		Presence of striking or memorable geomorphological 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 cusped foreland shingle spit of Orford Ness and river estuaries such as the estuary of the River Alde.	Limited. No striking or memorable geomorphological features are present within the zone.	None. Substation development within this zone will not change the appearance or qualities of striking geomorphological features within the AONB that are cited in this indicator.	Not significant. Substation development within this zone will not affect the appearance or qualities of striking geomorphological features within the AONB that are cited in this indicator.
	Wildlife and habitats	Presence of wildlife and / or habitats that make a particular contribution to distinctive sense of place and other aspects of scenic quality	Varied, nationally and internationally protected sites such as SSSI, SPA and SAC, semi natural habitats designated for their nature conservation interest and range of species supported (including shingle beaches, intertidal and offshore areas, reedbeds, grazing marshes and Sandlings heaths). Intricate mosaic, highly dynamic and sensitive regimes (due to periodic flooding) along with rapid transitions add to biodiversity interest, distinctive landscape character and scenic quality.	Notable. Wildlife and habitats of the Suffolk Coast and Heaths SPA and Sizewell Marshes SSSI provide a distinctive backdrop and contribute to the sense of place, with transition from farmland to heaths and forestry.	Low. There will be no change to the physical condition/quality of designated habitats within the AONB (assuming that development would be located entirely within fields/grassland and avoid woodlands on eastern side of zone). Some changes to landscape character are likely to result on the setting on this edge of the SSSI.	Not significant. Designated habitats within the AONB will be subject to no physical effects as a result of development within the zone (assuming development would be located entirely within agricultural fields/grassland and avoid woodland areas within and on the edges of the zone.
	Presence of individual species that contribute to sense of place, relative wildness or tranquillity	Varied protected species across major habitat types, for example breeding and wading birds in estuaries and reedbeds; rare communities of salt tolerant plants on the coast; and birds and invertebrates on the Sandlings heaths.	Limited. The arable land/grassland within the zone is not designated or yet to be highly valued for habitat or protected species, however sense of place/tranquillity is influenced by the broader habitat mosaic of the surrounding woodlands and the wildlife it supports.	None. There will be no change to the protected species within the AONB as a result of development in this zone.	Not significant. There will be no effects on protected species within the AONB as a result of development in this zone.	
Cultural heritage	Built environment, archaeology and designed landscapes	Presence of settlements, buildings or other structures that make a particular contribution to distinctive sense of place and other aspects of scenic quality	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.	Limited. The built environment/cultural heritage features in the AONB have limited influence on the zone. The Sizewell Gap Road passing the zone leads to Sizewell at 'end of the road' coastal location.	Low. There will be no change to the main built environment/cultural heritage features in the AONB. Some changes to the views experienced from the Sizewell Gap Road as it passes Galloper/Greater Gabbard substations as a gateway route into the village of Sizewell, however the substations will be viewed in the context of existing Galloper/Gabbard substations and Sizewell Power Station.	Not significant. There will be no effect on the main built environment/cultural heritage features in the AONB. The main change will be on the character of the Sizewell Gap Road as a gateway route into the village of Sizewell.
		Presence of visible archaeological remains, parkland or designed landscapes that provide striking features in the landscape	Archaeological and historic sites and features include prehistoric and later burial monuments (including the Anglo-Saxon burial ground at Sutton Hoo); early medieval churches (many of which pre-date the Domesday survey); historic field and settlement patterns; and evidence of land reclamation dating back to the 12 th 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.	Not present. There are no visible archaeological remains, parkland or designed landscape within the zone.	None. There will be no change to any visible archaeological remains, parkland or designed landscapes as a result of development in this zone.	Not significant. There will be no effect on any visible archaeological remains, parkland or designed landscapes.
	Historic influence on the landscape	Visible presence of historic landscape types or specific landscape elements or features that provide evidence of time depth or historic influence on the landscape	Field patterns reflect process of land management and enclosure stretching back many centuries. Evidence of reclamation of former intertidal areas to form freshwater grazing marsh dating back to the 12 th 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), WW1 airfields, radar installations and pillboxes that form part of the long history of "Suffolk's Defended Shore". 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.	Limited. Field patterns reflect process of arable land management, stretching back over time, but otherwise, historic influences are not a strong visible presence of the landscape within the zone. Historic elements concentrated along the AONB coast have limited influence on the character of zone due to visual separation, however zone is located adjacent to Heritage Coast.	Low. Although there is potential for change to the arable fields on the inland edge of the AONB, the qualities of the visible historic landscape experienced primarily around the coastal landscapes within the AONB cited in this indicator will not be subject to change.	Not significant. Although there is potential for some effects on the arable fields on the inland edge of the AONB, the qualities of the visible historic landscape experienced primarily around the coastal landscapes within the AONB cited in this indicator will not be effected.
	Perceptions of a harmonious balance between natural and cultural elements in the landscape that stretch back over time	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.	Notable. Galloper and Greater Gabbard substations are located within the zone. Overhead transmission line crosses the zone and is visually prominent. Sizewell Power Station built massing and 'dome' is prominent in views to the east of zone. These electrical/energy installations have a notable influence on the perceived scenic quality of the area and are visible representations of changes in energy generation over time.	Medium. Potential addition of further electrical infrastructure influences in the landscape near to existing overhead transmission line, will increase prominence of man-made features and influence scenic quality in this narrow area of the AONB. Associations with other substations, power stations and pylons likely to extend perceived influence of the energy coast within this area of the AONB near Sizewell.	Significant. Notable presence of existing electrical transmission infrastructure will be subject to medium magnitude of change arising from addition of further large scale substation development which is likely to extend the perceived influence of the energy coast within this area of the AONB near Sizewell. Opportunities for effective and deliverable mitigation through sensitive siting/design, earthwork bunding and planting to prevent, avoid or reduce significant effects.	
Characteristic land management practices	Existence of characteristic land management practices, industries or crafts which contribute to natural beauty	Landscape character and diversity of habitat types dependent on wide range of land management practices, several of which date back many centuries. Examples include pasturing; grazing on coastal marshes; forestry; extensive grazing to maintain heathland; reed cutting; and ditch/marshland and hydrological management. Small scale fishing industry results in boats, nets, pots and storage buildings on some stretches of coastline.	Limited. Characteristic land management practices have largely been lost to farming within the zone, although Broom Covert is a remnant area of traditional grazing/pasture land.	Medium-low, arising from changes if developments are sited within Broom Covert areas as a remnant area of traditional grazing/pasture land.	Not significant. Potential for not significant and localised changes in characteristic land management of Broom Covert pasture/grazing land.	

7. Zone 7 - Grove Wood

7.1 Existing Character

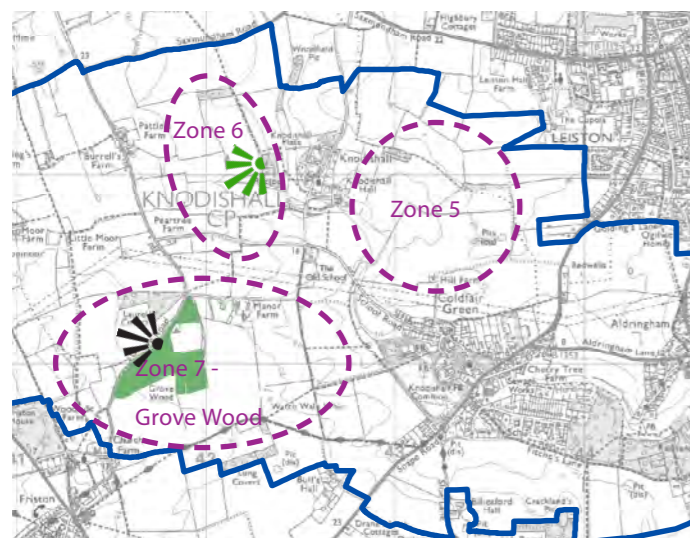


Figure. 8: Zones 5 - 7 - Grove Wood, Character Photographs





Zones 5 - 7 - Grove Wood, Character Photographs



7.2 Zone 7 - Grove Wood - AONB Impact

Below text is from Section 2.0 of the AONB 'Special Qualities' Report				Below text AONB appraisal undertaken by OPEN		
Factor	Example Sub-Factor	Example Indicator	Suffolk Coast and Heaths AONB Indicator	Zone 7 - Grove Wood (outside AONB to west) (*assessment of Zone 7 - Grove Wood can also be applied to other western zones - Zone 6 and Zone 5 outside the AONB)		
				The degree to which the AONB indicator in the separate AONB landscape can be perceived in the baseline of the substation zone (prevalent/notable/limited/not present), which indicates the potential for development in the zone to impact upon the AONB, notwithstanding that it lies outside of its boundaries	Assessment of potential magnitude of change to special qualities of AONB resulting from development in substation zone (high/medium/low/none)	Potential effect on AONB special qualities resulting from development in substation zone (significant / not significant)
Landscape quality	Intactness of the landscape in visual, functional and ecological perspectives	Characteristic natural and man-made elements are well represented throughout	Close-knit interrelationship of semi-natural and cultural landscapes (notably sea, coast, estuaries, reedbeds, Sandlings heath, forest, farmland and market towns) and built heritage features (such as Martello towers, pill boxes, river walls), creating a juxtaposition of elements in a relatively small area. The AONB contains important areas of heath and acid grassland, and it supports a high number of protected species populations. As such it has importance in a national context for biodiversity.	Not present. Characterised by intensive arable agricultural fields with hedgerow field boundaries and woodland shelterbelts. There are no characteristic AONB semi-natural or cultural landscapes (cited in this indicator) present within the zone.	Low. The zone is located outside the AONB and its immediate setting. The qualities of the AONB cited in this indicator will not be subject to change as a result of substation development within this zone.	Not significant. Limited presence of AONB indicator and subject to low change. The landscape qualities of the AONB cited in this indicator will not be significantly affected.
	The condition of the landscape's features and elements	Landscape elements are in good condition	Strong overall character, albeit that the evolving nature of intensively farmed arable land with agricultural fleeces/polythene and outdoor pig rearing can divide opinion on landscape condition in visually sensitive locations such as on valley sides.	Limited. Intensively farmed arable fields with strong hedgerow field boundaries and shelterbelts, in good condition, which contribute to distinctiveness of character, but having limited relationship with character of features in the AONB.	None. Although there is some potential for direct effects on the condition of landscape elements such as hedgerows, the zone is located outside the AONB and would result in no changes to the physical condition of landscape features and elements within the AONB.	Not significant. Landscape elements within the AONB will be subject to no physical effects as a result of development in this zone, outside the AONB.
	The influence of incongruous features or elements on the perceived natural beauty of the area	Incongruous elements are not present to a significant degree, are not visually intrusive, have only localised influence or are temporary in nature	A small number of large scale and long established elements on the coast of the AONB divide opinion, being regarded by some as incongruous features and by others as enigmatic; for example the complex military site at Orford Ness. The power stations at Sizewell also divide opinion in this way, however in many views, particularly of the B station, the apparent uncluttered simple appearance and outline as well as the lack of visible human activity, partially mitigate the adverse visual impacts. Offshore wind turbines at Greater Gabbard, Galloper and the more distant London Array are visible from some stretches of the coastline. These create a cluttered horizon and, like the large scale elements onshore, also divide opinion.	Limited. Overhead transmission line traverses the edge of the zone, where it influences the skyline backdrop to the agricultural landscape, but its influence recedes with distance. The influence of incongruous features and elements is limited and notably less in zones to the west, where there is limited visibility of Sizewell Power Station.	Low. Potential addition of further electrical influences in this zone near to existing overhead transmission line will increase prominence of man-made features in this zone, but will result in low or no change to the scenic quality of the AONB, primarily due to its distance from the AONB and limited visibility of this zone from within the AONB.	Not significant. Potential addition of further electrical influences in this zone will result in negligible and not significant effects to the scenic quality of the AONB, primarily due to its distance outside the AONB.
Scenic quality	A distinctive sense of place	Landscape character lends a clear and recognisable sense of place	Unique character defined by semi-natural and cultural landscapes (notably sea, coast, estuaries, reedbeds, Sandlings heath, forest, farmland and villages) and built heritage features (such as Martello towers, pill boxes, river walls), creating a juxtaposition of elements in a relatively small area.	Limited. The juxtaposition between farmed arable land, hedgerow field boundaries and woodland shelterbelts creates scenic interest and some sense of place, with the open character of the arable fields predominating, has limited relationship with the landscape of heaths, forests, sea, coast and estuaries that create distinctiveness of the AONB.	Low. Although there is potential for high changes to the sense of place of the landscape within this zone, the qualities of the AONB cited in this indicator will be subject to low levels of change, primarily due to its distance from the AONB and limited visibility of this zone from within the AONB.	Not significant. Limited presence of AONB indicator and subject to low magnitude of change. The scenic qualities of the AONB cited in this indicator will not be significantly affected.
	Striking landform	Landform shows a strong sense of scale or contrast	Sea cliffs and shingle beaches contrasting to flat and gently rolling Sandlings heaths and farmland. Extensive shingle beaches and shallow bays provide opportunities for long distance and panoramic views including out to sea and along the Heritage Coast. Views to coastal landform also possible from locations offshore. Landscape displays a 'rhythm' dictated by a series of east-west rivers and estuaries, and the interfluvies that lie between them.	Limited. Generally flat landscape with some gentle slopes across the arable fields. Landform within the zone does not show a strong sense of scale or contrast and has limited/no relationship with the striking landforms of sea cliffs/shingle beaches present at the coast within the AONB.	None. Although there is potential for some change to the landform just outside the AONB, the qualities of the striking coastal landforms within the AONB cited in this indicator will not be subject to change.	Not significant. Limited presence of AONB indicator and subject to no change. The striking landform qualities of the AONB cited in this indicator will not be significantly affected.
		There are striking landform types or coastal configurations	Coastal cliffs, shingle spits, estuaries and beaches are striking landform features.	Not present. There are no striking landforms or coastal configurations within the zone and these features within the AONB have limited/no influence on this zone.	None. The qualities of the striking coastal landforms within the AONB cited in this indicator will not be subject to change.	Not significant. The striking coastal landforms of this AONB indicator are not present and would not be subject to change.
	Visual interest in patterns of land cover	Land cover and vegetation types form an appealing pattern or composition in relation to each other and/or to landform which may be appreciated from vantage point or travelling through landscape	Varied habitats and land cover in intricate mosaic corresponding to natural geography (landform, geology, soils & climate) and displaying seasonal differences, either as a result of natural processes or past and current farming and land management regimes. Elevated vantage points provide impressive views over low lying coastal marshes, estuaries, beaches and expansive long distance views out to sea. Views to the coastline from out at sea are also noted.	Limited. Visual interest is created by pattern of farmed fields, mature hedgerows and woodland shelterbelts. The network of coastal marshes, estuaries and beaches of the AONB, seasonal differences between these habitats and views out to sea are not present within the zone.	Low. Although there is potential for change to the appealing pattern/composition of the farmed fields, hedgerows and woodland belts, the visual interest of the AONB created by the varied land cover within the AONB cited in this indicator will not be subject to change.	Not significant. Although there is notable visual interest created by the pattern of farmed fields, mature hedgerows and woodland belts, which will be subject to change as a result of development within this zone, the visual interest of the AONB created by the varied land cover within the AONB cited in this indicator will not be significantly affected by development in this zone.
	Appeal to the senses	Strong aesthetic qualities, reflecting factors such as scale and form, degree of openness or enclosure, colours and textures, simplicity or diversity, and ephemeral or seasonal interest	Close-knit interrelationship of constituent features creates a juxtaposition of colours and textures (such as coniferous forests, reedbeds, intertidal mud flats and heathland, sand dunes and shingle beaches) that is further enhanced by seasonal changes. Strong aesthetic, spatial and emotional experiences - for example in the contrast between open and exposed areas on the coast, seaward or within estuaries with more traditional enclosed farmland areas.	Limited. Although there are some aesthetic factors which appeal to the senses within the zone associated with the character of the rural landscape, the aesthetic qualities and interests of the AONB that are most evident at the coast, are not present within the zone.	Low. There is potential for change to some aesthetic factors that appeal to the senses, particularly resulting from changes to enclosed farmland areas of the zone, however the relationship of the key constituent features within the coastal areas of the AONB (forests, reedbeds, intertidal mud-flats, heathland, sand dunes and shingle beaches) cited in this indicator will not be subject to change; nor will the contrast between open and exposed areas	Not significant. The key aesthetic qualities of the AONB, cited in this indicator, have limited presence in this zone (which is located well outside the AONB) and would be subject to low/negligible level of effects as a result of development within this zone.
		Memorable or unusual views and eye-catching features or landmarks	Large open vistas across heaths and along the coast, out to sea and from sea to the coastline. Landmarks include historic structures such as medieval churches, Martello towers and lighthouses, the House in the Clouds (Thorpeness) and Snape Maltings, the riverside at Woodbridge with iconic Tide Mill, along with more modern structures including Sizewell A and B and former military site at Orford Ness.	Not present. There are no views of the coast or coastal landmarks in views, nor any expansive views across heaths of the AONB, from within the zone, which is visually contained to the east by landform, settlement and forestry in the wider landscape.	None. There will be no change to the memorable/unusual views cited in this indicator 'across heaths and along the coast, out to sea', since views to the coast from this zone are prevented by landform and forestry; and no changes to views of historic coastal landmarks. Substation development within the zone will be viewed in the context of other modern structures including the overhead transmission line.	Not significant. The scenic qualities of the AONB, cited in this indicator, have limited presence in this zone (which is located well outside the AONB) and would be subject to low/negligible level of effects as a result of development within this zone.
	Characteristic cognitive and sensory stimuli (e.g. sounds, quality of light, characteristic smells, characteristics of the weather)	Sensory stimuli enhanced by quality of light/space (the big 'Suffolk skies'), areas with dark skies and sound (e.g. bird calls, curlews on heath and geese on estuaries, the wind through reeds in estuaries, waves on shingle).	Limited. Big 'Suffolk skies' evident, increasing sense of scale and influence of the weather on perceived character. Dark skies punctuated by lighting of adjacent settlements (Leiston, Knodishall). Coastal 'stimuli' are not present and although there are 'natural' sounds of birds, rustling trees etc there are also busy roads passing the zone.	Low. Although there is potential for change to these indicators of scenic quality within the zone, the experience of these scenic qualities within the AONB cited in this indicator will not be subject to change due to the distance of the zone outside the AONB.	Not significant. The scenic qualities of the AONB, cited in this indicator, have limited presence in this zone (which is located well outside the AONB). The experience of these scenic qualities within the AONB cited in this indicator will not be affected due to the distance of the zone outside the AONB.	
Relative wildness	A sense of remoteness	Relatively few roads or other transport routes	Absence of major coastal road or rail route, due to estuaries, and intermittent 'soft edged', often lightly trafficked access routes across the AONB to the coastline from main routes inland, has contributed to the relatively undeveloped character of the Suffolk coast.	Limited. Sense of remoteness is relatively limited due to proximity of zone to roads passing the zone; and presence of either tracks or PrRoW which provide access.	Low. Due to the potential introduction of built development features and access tracks, substation development would further reduce any sense of remoteness, however there would be limited change to the 'relatively undeveloped character of the Suffolk coast' and the sense of remoteness in the AONB, due to the position of the zone outside the AONB and its	Not significant. The scenic qualities of the AONB, cited in this indicator, have limited presence in this zone (which is located well outside the AONB). The experience of these scenic qualities within the AONB cited in this indicator will not be affected due to the distance of the zone outside the AONB.
		Distant from or perceived as distant from significant habitation	Pockets of relative wildness associated with coast, estuary and forests in this largely farmed and settled landscape.	Limited. Limited sense of wildness due to settled, farming land use and proximity of settlements at Leiston and Knodishall and lack of coastal elements (coast/estuaries).	None. Substation development would further reduce any sense of wildness within the zone, through the introduction of built features, however the changes to perceived wildness of the AONB are considered to be negligible due to the distance of the zone outside the AONB and the limited intervisibility.	Not significant. The scenic qualities of the AONB, cited in this indicator, have limited presence in this zone (which is located well outside the AONB). The experience of these scenic qualities within the AONB cited in this indicator will not be affected due to the distance of the zone outside the AONB.
	A relative lack of human influence	Extensive areas of semi-natural vegetation	Semi-natural habitats evident, notably on the Sandlings heaths, marshes, reedbeds, estuaries and along the coastline.	Limited. Very few areas of semi-natural AONB type habitat present within the zone (heaths, marshes, estuaries). Native woodland present is within zone, but is not representative of AONB habitat. Zone primarily consists of settled and cultivated arable farmland.	None. There will be no physical changes to the semi-natural habitats present within the AONB as a result of development within this zone, as the zone is located well outside the AONB.	Not significant. Semi-natural habitats within the AONB (heaths, marshes, reedbeds and estuaries) will be subject to no physical change as a result of development in this zone, which is located well outside the AONB.
		Uninterrupted tracts of land with few built features and no overt industrial or urban influences	Largely undeveloped coastline and offshore areas and areas of semi-natural habitat including Sandlings heath, forests, reedbeds, estuaries and marshland. Landscape interspersed with isolated villages, and built heritage assets such as Martello towers, pill boxes, river walls that contribute to character. A small number of large scale and industrial elements on the coast of the AONB are long established, notably Sizewell A and B and the former military site at Orford Ness, whilst offshore wind turbines at Greater Gabbard, Galloper and the more distant London Array are visible from stretches of the coastline.	Limited. Development is present within and around the edges of the zone, including urban and industrial influences, such as overhead transmission lines, and nearby settlements of Friston and Knodishall. The landscape is not 'undeveloped' or 'uninterrupted' in the manner of coastal areas of the AONB.	None. Although substation development within the zone would further 'interrupt' and develop farmland within the zone, it would result in little or no changes to the undeveloped landscape of the AONB since the zone is located well outside the AONB.	Not significant. The scenic qualities of the AONB, cited in this indicator, have limited presence in this zone, which is subject to urban influences in particular. The experience of these scenic qualities within the AONB cited in this indicator will not be affected due to the distance and physical separation of the zone outside the AONB.
	A sense of openness and exposure	Open, exposed to the elements and expansive in character	Big 'Suffolk skies' and expansive views offshore emphasise sense of openness and exposure on open and exposed coastline and on the Sandlings heaths.	Limited/notable. Big 'Suffolk skies' and open views are present, which influence the perceived character. There are no views offshore from the zone, nor are there views of coastline, therefore sense of exposure is much reduced in comparison to coastal areas.	None. Potential addition of substation development will reduce openness and exposure within the zone due to presence of large scale built features, however, due to the location of the zone outside the AONB, it will not result in changes to the exposure/openness of the	Not significant. Although large-scale development within the zone would affect the sense of openness and exposure within the zone, it would not affect the openness and exposure of the coastal areas of the AONB cited in this indicator.
	A sense of enclosure and isolation	Sense of enclosure provided by (e.g.) woodland, landform that offers a feeling of isolation	Forestry plantations create sense of enclosure and isolation contrasting to open and more exposed areas along the coast and on the Sandlings heaths.	Limited. There is some sense of enclosure provided by mature woodland belts and hedgerows within the zone, and the undulating landform. As the zone is located outside the AONB, it does not afford the contrasts between areas of enclosed plantation forest and open	None. The contrasts between areas of enclosed forestry and open coastline that are present in the AONB, will not be changed as a result of development within this zone, outside the AONB (despite development changing sense of enclosure/experience of isolation within the	Not significant. Although large-scale development within the zone would affect the sense of enclosure/experience of isolation within the zone, it would not affect contrasts between areas of enclosed plantation forest and open coast in the AONB, which that are cited in this
A sense of the passing of time and a return to nature	Absence or apparent absence of active human intervention	Significant areas of semi natural landscape and seascape notably along the coastline, offshore and within undeveloped estuaries where there is little evidence of apparent human activity despite the sea walls and coastal marshes.	Limited. The zone is primarily influenced by active human intervention in the form of arable farming and modern development, including roads, power lines and settlement around its edges.	None. There will be no changes to areas of semi natural landscape along the coastline/estuaries of the AONB.	Not significant. There will be no effects on the qualities of areas of semi natural landscape along the coastline/estuaries of the AONB.	

Zone 7 - Grove Wood - AONB Impact Appraisal (continued)

Below text from Section 2.0 of the AONB 'Special Qualities' Report				Below text AONB appraisal undertaken by OPEN		
Factor	Example Sub-Factor	Example Indicator	Suffolk Coast and Heaths AONB Indicator	Zone 7 - Grove Wood (outside AONB to west) (*assessment of Zone 5 can also be applied to other western zones - Zone 6 and Zone 5 outside the AONB)		
				Degree to which AONB Indicator is present in the baseline in substation zone (prevalent/notable/limited/not present)	Assessment of potential magnitude of change to special qualities of AONB resulting from development in substation zone (high/medium/low/none)	Potential effect on AONB special qualities resulting from development in substation zone (significant / not significant)
Relative tranquility	Contributors to tranquility	Presence and / or perceptions of natural landscape, birdsong, peace and quiet, natural-looking woodland, stars at night, stream, sea, natural sounds and similar influences	Areas of semi natural habitat, where there is a general absence of development and apparent human activity, contribute to a sense of relative tranquillity. Further enhanced by sounds (bird calls, the wind through reeds in estuaries, waves on shingle) and relatively dark skies.	Notable. The zone is influenced by the perceptions of a natural looking landscape of farmland, hedgerows and woodland belts; which give some sense of tranquility, however this is reduced by the apparent human activity which has shaped the arable land; and the extent of settlement, transport and infrastructure development which reduces the relative tranquility.	Low/none. Although there will be potential changes of high magnitude to perceived tranquility of the rural landscape within the zone, arising from the construction and operation of large scale electrical infrastructure, there will be limited/no change to the relative tranquility of the AONB itself, due to the geographic separation/distance of the zone outside the AONB.	Not significant. Although large-scale development within the zone would affect the perceived tranquility within the zone itself, it would not affect the tranquility of the AONB, due to the geographic separation/distance of the zone outside the AONB.
	Detractors from tranquility	Presence and/or perceptions of traffic noise, large numbers of people, urban development, overhead light pollution, low flying aircraft, power lines and similar influences	Some local detractors from tranquility include the seasonal influx of visitors to coastal towns, low flying aircraft noise and urban development on fringes of the AONB	Limited. Some detractors from tranquility are present, particularly the busy roads passing the zone. Although urban development and overhead transmission lines are present in the landscape, they scarcely detract from tranquility, except at a very localised level in close proximity.	Low/none. Although there will be potential changes of high magnitude to perceived tranquility of the rural landscape within the zone, arising from the construction and operation of large scale electrical infrastructure, there will be limited/no change to the relative tranquility of the AONB itself, due to the geographic separation/distance of the zone outside the AONB.	Not significant. Although large-scale development within the zone would affect the perceived tranquility within the zone itself, it would not affect the tranquility of the AONB, due to the geographic separation/distance of the zone outside the AONB.
Natural heritage features	Geological and geomorphological features	Visible expression of geology in distinctive sense of place and other aspects of scenic quality	Boundary of the AONB is broadly geological marking the border between the inland boulder clay and the coastal fringe. Visible and striking expressions of geology and sedimentation on faces of crumbling coastal cliffs. Use of flint, local crag and Aldeburgh brick for building are indicators of local geology.	Not present. Zone is located well outside the inland boundary of the AONB and is not in the setting of the visible expression of this boundary marked by land-use changes, which are further east. 'Striking impressions of geology' are not present in the zone, nor are these	None. Substation development within the zone will not change the visible expression of the current land use relationship/ transition that is evident on the inland edge of the AONB, as it located well outside the AONB.	Not significant. Substation development within the zone will have no effects on the visible expression of the current land use relationship/ transition that is evident on the inland edge of the AONB, as it located well outside the AONB.
		Presence of striking or memorable geomorphological 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 cusate foreland shingle spit of Orford Ness and river estuaries such as the estuary of the River Alde.	Limited. No striking or memorable geo-morphological features are present within the zone, or visible from it.	None. Substation development within this zone will not change the appearance or qualities of striking geo-morphological features within the AONB that are cited in this indicator.	Not significant. Substation development within this zone will not affect the appearance or qualities of striking geo-morphological features within the AONB that are cited in this indicator.
	Wildlife and habitats	Presence of wildlife and / or habitats that make a particular contribution to distinctive sense of place and other aspects of scenic quality	Varied, nationally and internationally protected sites such as SSSI, SPA and SAC, semi natural habitats designated for their nature conservation interest and range of species supported (including shingle beaches, intertidal and offshore areas, reedbeds, grazing marshes and Sandlings heaths). Intricate mosaic, highly dynamic and sensitive regimes (due to periodic flooding) along with rapid transitions add to biodiversity interest, distinctive landscape character and scenic quality.	Limited. There are no nationally or internationally protected sites (such as SSSI, SPA and SAC) within the zone, although native woodlands and hedgerows provide biodiversity interest and distinctive landscape character.	None. As the zone is located outside the AONB, there will be no change to the physical condition of designated habitats within the AONB, or to the scenic quality/character that these habitats provide to the AONB.	Not significant. As the zone is located outside the AONB, there will be no effects on the physical condition of designated habitats within the AONB, or to the scenic quality/character that these habitats provide to the AONB.
		Presence of individual species that contribute to sense of place, relative wildness or tranquility	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.	Limited. The intensively farmed arable land within the zone is not designated or valued for habitat or protected species, however sense of place/tranquility is influenced by the broader habitat mosaic and the bird life it supports.	None. There will be no change to the protected species within the AONB as a result of development outside the AONB in this zone.	Not significant. There will be no effects on protected species within the AONB as a result of development outside the AONB in this zone.
Cultural heritage	Built environment, archaeology and designed landscapes	Presence of settlements, buildings or other structures that make a particular contribution to distinctive sense of place and other aspects of scenic quality	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.	Limited. The built environment/cultural heritage features in the AONB have limited influence on the zone, being outside the AONB boundary. Locally, the cultural heritage of Knodishall / Knodishall Church settlements has strong visible influences on character and sense of place.	None. There will be no change to the built environment/cultural heritage features in the AONB as a result of development within this zone (outside the AONB).	Not significant. There will be no effects on the built environment/cultural heritage features in the AONB as a result of development within this zone (outside the AONB).
		Presence of visible archaeological remains, parkland or designed landscapes that provide striking features in the landscape	Archaeological and historic sites and features include prehistoric and later burial monuments (including the Anglo-Saxon burial ground at Sutton Hoo); early medieval churches (many of which pre-date the Domesday survey); historic field and settlement patterns; and evidence of land reclamation dating back to the 12 th 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.	Limited. Archaeological remains, parkland and designed landscapes of the AONB have limited influence on this zone, being outside the AONB boundary. Locally, the cultural heritage of Knodishall / Knodishall Church settlements has strong visible influences on character and sense of place.	None. There will be no direct changes to archaeological remains, parklands or designed landscapes within the AONB, as a result of development within this zone (outside the AONB).	Not significant. There will be no effects on the archaeological remains, parklands or designed landscapes within the AONB, as a result of development within this zone (outside the AONB).
	Historic influence on the landscape	Visible presence of historic landscape types or specific landscape elements or features that provide evidence of time depth or historic influence on the landscape	Field patterns reflect process of land management and enclosure stretching back many centuries. Evidence of reclamation of former intertidal areas to form freshwater grazing marsh dating back to the 12 th century. Prehistoric and later burial monuments (such as at Sutton Hoo), early medieval churches/religious houses and castles. There is also more recent military and infrastructure elements particularly on the coast (e.g. Martello towers, former military installations at Orford Ness), WWII airfields, radar installations and pillboxes that form part of the long history of "Suffolk's Defended Shore". 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 at the nosodes.	Limited. Field patterns reflect process of arable land management and enclosure, stretching back over time and have a strong visible presence of the landscape within the zone. Historic elements concentrated along the AONB coast have no influence on the character of zone due to visual separation.	None. Although there is potential for change to the enclosed arable fields in the zone, the qualities of the visible historic landscape experienced primarily around the coastal landscapes within the AONB cited in this indicator will not be subject to change.	Not significant. Although there is potential for change to the enclosed arable fields in the zone, the qualities of the visible historic landscape experienced primarily around the coastal landscapes within the AONB cited in this indicator will not be affected by substation development within this zone.
		Perceptions of a harmonious balance between natural and cultural elements in the landscape that stretch back over time	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.	Limited/notable. Presence of smaller settlements such as Knodishall/Coldfair Green and scattered cottages/farmsteads with vernacular/building materials and small scale, displays a balance between natural and built elements. Maritime heritage and recreational use of the coastal parts of the AONB have limited influence on this zone, being outside the AONB boundary.	Low. There is potential for proposed substations to result in high change locally within zone due contrasts in scale with existing cottages/building materials, however, development within the zone will result in low change to cultural heritage qualities of the AONB cited in this indicator.	Not significant. There is potential for proposed substations to have significant effects locally within zone due contrasts in scale with existing cottages/building materials, however, development within the zone will result in negligible effects on cultural heritage qualities of the AONB cited in this indicator.
Characteristic land management practices	Existence of characteristic land management practices, industries or crafts which contribute to natural beauty	Landscape character and diversity of habitat types dependent on wide range of land management practices, several of which date back many centuries. Examples include pasturing; grazing on coastal marshes; forestry; extensive grazing to maintain heathland; reed cutting; and ditch/marshland and hydrological management. Small scale fishing industry results in boats, nets, pots and storage buildings on some stretches of coastline.	Limited. Characteristic land management practices have largely been lost to intensive arable farming within the zone.	None. no potential for changes to occur due to lack of characteristic land management practices in the baseline landscape of the zone; and due to location of the zone outside the AONB.	Not significant. no effects likely to occur due to lack of characteristic land management practices in the baseline landscape of the zone and due to location of the zone outside the AONB.	

8. Conclusions

8.1 Summary Appraisal

8.1.1 Introduction

Further site selection appraisal has been undertaken to consider the potential impacts of siting the onshore substation developments in each of the potential zones (referred to as Zones 1 - 7) in terms of their potential landscape and visual impact on the AONB. This follows on from the earlier RAG assessment and Substation Location Options Review.

The findings in relation to each of the zones considered, some of which serve as a proxy for the remaining zones, are summarised below, followed by an overall summary and conclusions.

8.1.2 Zone 4

Zone 4 is located outside the AONB, but on its inland edge and within the immediate setting of the AONB. The key AONB issue for Zone 4 is the potentially significant effects of the substations on the setting of the AONB, particularly the effect on the landscape quality/intactness of the setting of the Sandlings Forests that form a backdrop and edge to the zone; the effects on scenic qualities arising from the sense of place, aesthetic and visual interest of the juxtaposition of arable land, the Sandlings Forests and Hundred River Valley (SLA); and potential effects on the sense of isolation/enclosure from within the AONB forests if the substations are visible on its edge. Since the zone is located entirely outside the AONB, development of the substations within this zone will have no direct effects on the special qualities within the AONB, as would arise from Zones 1 - 3 and Zone 8 - Broom Covert, particularly avoiding physical effects on semi-natural habitats and the most valued coastal areas within the AONB.

However, the effect of the substations on the scenic quality/setting of this edge of the AONB is important in particular, because it forms a key 'gateway' to the AONB (to the holiday village of Thorpeness) and there are also a number of PRoW within the adjacent Sandlings Forests from where effects of development on the edge of the AONB may be experienced.

The influence of overhead transmission lines and Sizewell Power Station is less notable in this zone compared to zones to the north-east (Zones 2 and 3 and Zone 8 - Broom Covert). As such, the substations would potentially extend 'energy coast' development further inland away from the existing energy generation influences, into areas where there are relatively few overt development influences at present. This may lead to a wider spatial effect and create significant effects on different scenic qualities of the AONB, in addition to those which are already affected by the development either at, or in the vicinity of, Sizewell Power Station.

8.1.3 Zone 3

Zone 3 is located partially within the AONB and partially just outside on its inland edge and within its immediate setting. The potential effects of siting the substations within this zone, on the landscape and scenic qualities of the AONB, are in some ways similar to those arising from Zone 4. There will for example, also be potentially significant effects on the setting of the AONB, particularly the effect on the landscape quality/intactness of the setting of the

Sandlings Forests that form a backdrop and edge to the zone; effects on scenic qualities arising from the sense of place, aesthetic and visual interest of the juxtaposition of arable land and the Sandlings Forests; and potential effects on the sense of isolation/enclosure from within the AONB forests and linear heaths extending into the AONB, where the substations are visible.

The existing influence of overhead transmission lines and Sizewell Power Station is however, more notable in this zone compared to Zone 4; as are other urban development influences at the nearby edges of Leiston and Sizewell Gap Road. Overhead transmission lines cross the zone and are visually prominent. Sizewell Power Station is also a notable existing influence located nearby to the north-east, with overhead lines extending from it into the zone. These energy generation and transmission installations have a notable influence on the perceived landscape and scenic quality of the area, as does the intensively farmed arable land with agricultural fleece/polythene and outdoor pig rearing in this area.

Development of the substations in this zone will likely result in significant effects on some of the AONB's special qualities, as a result of large-scale electrical infrastructure becoming one of the prevailing influences in the landscape, and the increasing prominence and visual complexity of man-made features on this edge of the AONB in an area which is already influenced by intensive farming/outdoor pig rearing and urban fringes influences around the edge of Leiston.

Some areas of the zone, to the north of the transmission line diversion towers, are outside the AONB and would minimise direct effects on its special qualities, with development potentially sited in areas of existing pig farming/ arable land. These areas are, however, likely to be visually prominent in views from Leiston and remain within the immediate setting of the AONB.

8.1.4 Zone 2

Zone 2 is located entirely within the AONB, but in an area where it is identified that the adjacent landscape character to the north of the zone, has already been affected by development of large scale energy generation and transmission infrastructure at the nearby Sizewell Nuclear Power Station.

The potential effects of siting the substations within this zone (or indeed Zone 1 to which it also serves as a proxy), on the landscape and scenic qualities of the AONB, are again similar to those arising from Zone 3. There will for example, also be potentially significant effects on the landscape quality/intactness of the setting of the Sandlings Forests that form a backdrop and edge to the zone; effects on scenic qualities arising from the sense of place, aesthetic and visual interest of the juxtaposition of arable land and the Sandlings Forests; and potential effects on the sense of isolation/enclosure from within these adjacent Sandlings Forest and heaths, where the substations are visible.

The existing influence of overhead transmission lines and Sizewell Power Station is however, more notable in this zone compared to Zone 3 (and Zone 4). Overhead transmission lines

traverse the northern edge of the zone and are visually prominent. Sizewell Power Station is also a prominent influence located nearby to the north-east, with overhead lines extending from it into the zone; and substations for Greater Gabbard/Galopper offshore wind farms are visible on the edge of the zone to the north. These energy generation and transmission installations have a notable existing influence on the perceived landscape and scenic quality of the area.

Development of the substations in this zone (or Zone 1 to which it also serves as a proxy) will likely result in significant effects on some of the special qualities of the AONB, as a result of large-scale electrical infrastructure becoming the prevailing influence in the landscape, and the increasing prominence and visual complexity of man-made features in this part of the AONB. Furthermore, the effect would also be to consolidate development in an area which is already influenced by this form of development, thereby concentrating and intensifying effects in this area, to such a degree that it has the potential to compromise the integrity of the AONB and its special qualities.

8.1.5 Zone 8 - Broom Covert

Zone 8 - Broom Covert, is located entirely within the AONB, in an area where the landscape character has already been influenced and adversely affected by the development of large scale energy generation and transmission infrastructure at, or adjacent to, the nearby Sizewell Nuclear Power Station. This includes overhead lines extending from Sizewell across the zone and into the wider countryside; and substations for Greater Gabbard/Galopper offshore wind farms which are already located in the area.

The potential effects of siting the substations within this zone on the landscape and scenic qualities of the AONB, have some similarities to those arising from Zones 2 and 3, but there is the potential for these to be further exacerbated by the proximity to the existing infrastructure, with the effects combining to create a greater overall in-combination impact to the AONB.

There will for example, be potentially significant effects on the landscape quality/intactness; effects on scenic qualities arising from the sense of place, aesthetic and visual interest; and potential effects on the sense of isolation/enclosure from within this Zone, where the substations are visible.

Development of the substations in this zone will be likely to result in significant effects on some of the special qualities of the AONB, as a result of large-scale electrical infrastructure becoming the key characteristic in the landscape, and the increasing prominence and visual complexity of man-made features in this part of the AONB. Furthermore, the effect would also be to consolidate development in an area which is already influenced by this form of development, thereby concentrating and intensifying effects in this area, to such a degree that it may harm the integrity of the AONB and its special qualities in this relatively narrow section of the AONB landscape. Such additional development in the AONB at this location would undermine the special qualities and diminish the natural beauty for which it has been

designated and result in what may effectively be a severance of the AONB at the point where it is narrowest, with geographic areas split to the north and south by an energy landscape that would extend across the entire width of the AONB between the coast and Leiston.

8.1.6 Zone 7 - Grove Wood

Zone 7 is located outside the AONB and its immediate setting, located at distance to the west and is considered as a representative benchmark for all of the western zones (Zones 5 - 7 Grove Wood) that are located outside the AONB.

The influence of existing incongruous features and elements in the landscape is notably less in the zones to the west, as the influence of Sizewell Power Station recedes, however the overhead lines running from the power station do traverse the rural landscape in this area. The potential addition of new, large-scale electrical infrastructure in this zone would result in limited or no effects on the special qualities of the AONB. This is primarily due the distance of Zone 7 (and the other western zones - Zones 5 and 7 - Grover Wood) from the AONB and the likelihood of limited visibility of development in this zone from within the AONB. Substation development sited within Zone 7 (and the other western zones - Zone 5 and Zone 6) is likely to have no significant effects on the special qualities of the AONB.

8.2 Summary and Conclusions

The AONB appraisal has found that development of the substations within any of the eastern zones (Zones 1 - 4 and Zone 8 - Broom Covert), which are located within or on the edge of the AONB, would be likely to result in significant effects on some of the special qualities of the AONB. Development of the substations in the western substation zones (Zones 5 - 7 - Grove Wood) would however, be likely to avoid significant effects on the special qualities of the AONB.

In general, there are some similarities in how development in Zones 2 - 4 may affect the AONB's special qualities - in that they will tend to have significant effects on indicators related to landscape/scenic qualities and relative tranquillity.

Zone 8 - Broom Covert, in particular is located entirely within the AONB, in an area where the landscape character has already been influenced and adversely affected by the development of large scale energy generation and transmission infrastructure at, or adjacent to, the nearby Sizewell Power Station. However the potential effects of siting the substations within this zone on the landscape and scenic qualities of the AONB would be further exacerbated by the proximity to this existing infrastructure, with the effects combining to create a greater overall in-combination impact on the AONB in this locality.

Due to the significant effects on AONB special qualities that would likely occur with development of the substations in the eastern zones, the appraisal identifies that siting substations of this scale within the AONB carries considerable consenting risk associated with the value of this nationally protected landscape designation. The site selection process indicates potential areas outside the AONB, to the west, where the developments may be accommodated without significant effects on the special qualities of the AONB.

Although the zones to the west are susceptible to change in their own terms, they are not subject to the nationally protected AONB landscape designation, nor any local landscape designation indicating any particular landscape sensitivity. There are however some inherent visual sensitivities due to the proximity of rural residences and small scale rural villages to

these zones, and potential physical landscape effects resulting from the onshore cable route crossing of existing woodland at Aldeburgh Road.

This AONB appraisal undertaken indicates a rationale to progress site selection in the western zones, which are located well outside the AONB, in areas where the substations would not affect the special qualities of the AONB or its immediate setting. These western zones would have notably better regard to the nationally protected landscape status of the AONB.

The planning process would need to demonstrate 'exceptional circumstances' and 'public interest' in line with paragraph 5.9.10 of Overarching National Policy Statement for Energy (EN1 if the substations were to be sited within the AONB (i.e. in Zones 1 - 3 and Zone 8 - Broom Covert); and for Zone 4 which would be considered as forming part of the 'setting' of the AONB¹. Development in the western zones (Zones 5 - 7 - Grove Wood) on the other hand, is unlikely to have any significant effects on the special quality of the nationally protected AONB landscape.

¹ See AONB Position Statement on 'setting' (Appendix A and B)

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