

# **East Anglia ONE North Offshore Windfarm**

## **Appendix 29.5** Cumulative Impact Assessment

### **Environmental Statement Volume 3**

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## Glossary of Acronyms

CIA	Cumulative Impact Assessment
EIA	Environmental Impact Assessment
ETG	Expert Topic Group
LCT	Landscape Character Types
ZTV	Zone of Theoretical Visibility

## Glossary of Terminology

Applicant	East Anglia ONE North Limited.
Cable sealing end compound	A compound which allows the safe transition of cables between the overhead lines and underground cables which connect to the National Grid substation.
Cable sealing end (with circuit breaker) compound	A compound (which includes a circuit breaker) which allows the safe transition of cables between the overhead lines and underground cables which connect to the National Grid substation.
Construction consolidation sites	Compounds associated with the onshore works which may include elements such as hard standings, lay down and storage areas for construction materials and equipment, areas for vehicular parking, welfare facilities, wheel washing facilities, workshop facilities and temporary fencing or other means of enclosure.
Development area	The area comprising the onshore development area and the offshore development area (described as the 'order limits' within the Development Consent Order).
East Anglia ONE North project	The proposed project consisting of up to 67 wind turbines, up to four offshore electrical platforms, up to one construction, operation and maintenance platform, inter-array cables, platform link cables, up to one operational meteorological mast, up to two offshore export cables, fibre optic cables, landfall infrastructure, onshore cables and ducts, onshore substation, and National Grid infrastructure.
East Anglia ONE North windfarm site	The offshore area within which wind turbines and offshore platforms will be located.
European site	Sites designated for nature conservation under the Habitats Directive and Birds Directive, as defined in regulation 8 of the Conservation of Habitats and Species Regulations 2017 and regulation 18 of the Conservation of Offshore Marine Habitats and Species Regulations 2017. These include candidate Special Areas of Conservation, Sites of Community Importance, Special Areas of Conservation and Special Protection Areas.
Evidence Plan Process	A voluntary consultation process with specialist stakeholders to agree the approach to the EIA and the information required to support HRA.
Horizontal directional drilling (HDD)	A method of cable installation where the cable is drilled beneath a feature without the need for trenching.
HDD temporary working area	Temporary compounds which will contain laydown, storage and work areas for HDD drilling works.
Jointing bay	Underground structures constructed at intervals along the onshore cable route to join sections of cable and facilitate installation of the cables into the buried ducts.
Landfall	The area (from Mean Low Water Springs) where the offshore export cables would make contact with land, and connect to the onshore cables.
Link boxes	Underground chambers within the onshore cable route housing electrical earthing links.

Mitigation areas	Areas captured within the onshore Development Area specifically for mitigating expected or anticipated impacts.
National electricity grid	The high voltage electricity transmission network in England and Wales owned and maintained by National Grid Electricity Transmission
National Grid infrastructure	A National Grid substation, cable sealing end compounds, cable sealing end (with circuit breaker) compound, underground cabling and National Grid overhead line realignment works to facilitate connection to the national electricity grid, all of which will be consented as part of the proposed East Anglia ONE North project Development Consent Order but will be National Grid owned assets.
National Grid overhead line realignment works	Works required to upgrade the existing electricity pylons and overhead lines (including cable sealing end compounds and cable sealing end (with circuit breaker) compound) to transport electricity from the National Grid substation to the national electricity grid.
National Grid overhead line realignment works area	The proposed area for National Grid overhead line realignment works.
National Grid substation	The substation (including all of the electrical equipment within it) necessary to connect the electricity generated by the proposed East Anglia ONE North project to the national electricity grid which will be owned by National Grid but is being consented as part of the proposed East Anglia ONE North project Development Consent Order.
National Grid substation location	The proposed location of the National Grid substation.
Natura 2000 site	A site forming part of the network of sites made up of Special Areas of Conservation and Special Protection Areas designated respectively under the Habitats Directive and Birds Directive.
Onshore cable corridor	The corridor within which the onshore cable route will be located.
Onshore cable route	This is the construction swathe within the onshore cable corridor which would contain onshore cables as well as temporary ground required for construction which includes cable trenches, haul road and spoil storage areas.
Onshore cables	The cables which would bring electricity from landfall to the onshore substation. The onshore cable is comprised of up to six power cables (which may be laid directly within a trench, or laid in cable ducts or protective covers), up to two fibre optic cables and up to two distributed temperature sensing cables.
Onshore development area	The area in which the landfall, onshore cable corridor, onshore substation, landscaping and ecological mitigation areas, temporary construction facilities (such as access roads and construction consolidation sites), and the National Grid Infrastructure will be located.
Onshore infrastructure	The combined name for all of the onshore infrastructure associated with the proposed East Anglia ONE North project from landfall to the connection to the national electricity grid.

Onshore preparation works	Activities to be undertaken prior to formal commencement of onshore construction such as pre-planting of landscaping works, archaeological investigations, environmental and engineering surveys, diversion and laying of services, and highway alterations.
Onshore substation	The East Anglia ONE North substation and all of the electrical equipment within the onshore substation and connecting to the National Grid infrastructure.
Onshore substation location	The proposed location of the onshore substation for the proposed East Anglia ONE North project.
SuDS – Sustainable Drainage System	Approaches to manage surface water that take account of water quantity (flooding), water quality (pollution) biodiversity (wildlife and plants) and amenity
Transition bay	Underground structures at the landfall that house the joints between the offshore export cables and the onshore cables.



## 29.5 Cumulative Assessment

### 29.1 Introduction

1. The East Anglia TWO offshore windfarm project (the proposed East Anglia TWO project) is also in the application phase. The proposed East Anglia TWO project has a separate DCO which has been submitted at the same time as the proposed East Anglia ONE North project. The two projects share the same landfall location and onshore cable corridor and the two onshore substations are co-located, and connect into the same National Grid substation.

#### 29.1.1 Matters Scoped out of the EIA

2. The cumulative Landscape and Visual Impact Assessment (LVIA) assesses the potential cumulative effects relating to the onshore substation and National Grid substation, landfall and onshore cable route.
3. The Planning Inspectorate has provided comments in their Scoping Opinion on matters that can be scoped out of the Environmental Impact Assessment (EIA) and has agreed that the following landscape and visual matters can be scoped out of the assessment:
  - Landscape and visual impacts of the landfall during operation; and
  - Landscape and visual impact of the onshore cable route during operation (with the exception of the removal of woodland at the Aldeburgh Road crossing (woodland north of Fitches Lane) which is assessed as an operational effect).
4. In both cases, following remediation works, the underground infrastructure at the landfall and within the onshore cable route is unlikely to result in significant effects and these matters can be scoped out of the assessment, as agreed with the Planning Inspectorate. These matters are not assessed any further in the technical assessments in this **Appendix 29.5** and **Chapter 29 Seascape, Landscape and Visual Impact assessment**.

#### 29.1.2 Cumulative Effect Assessment Scenarios

##### 29.1.2.1 Introduction

5. The proposed East Anglia ONE North project Cumulative Impact Assessment (CIA) initially considers the cumulative effects with only the proposed East Anglia TWO project.
6. The CIA considers the proposed East Anglia ONE North project and the proposed East Anglia TWO project under two construction scenarios:

- Scenario 1 - the proposed East Anglia ONE North project and East Anglia TWO are built simultaneously; and
  - Scenario 2 - the proposed East Anglia ONE North project and East Anglia TWO are constructed sequentially.
7. The worst case scenario for each impact is then carried through to the wider CIA which considers those developments which have been screened into the CIA assessment.
8. The operational phase cumulative landscape and visual effects will be the same irrespective of the construction scenario and assess the impact of the operation of the proposed East Anglia ONE North substation, proposed East Anglia TWO substation and National Grid substation. For a more detailed description of the assessment scenarios please refer to **Chapter 5 EIA Methodology**.
9. In the LVIA, a further cumulative assessment scenario is assessed – the effects of the construction and operation of the East Anglia ONE North onshore infrastructure with the East Anglia TWO onshore infrastructure and Sizewell C New Nuclear Power Station, EDF Energy's proposals for a new nuclear power station.

### 29.1.2.2 Worst Case

#### 29.1.2.2.1 Scenario 1

10. **Table A29.1** presents the worst case assumptions for construction of both the proposed East Anglia ONE North and proposed East Anglia TWO projects simultaneously. Areas provided for onshore infrastructure are maximum footprints with indicative dimensions provided in brackets.

**Table A29.1 Worst Case for Scenario 1**

Impact	Parameter	Notes
<b>Construction</b>		
Impacts related to the landfall	<p>The effect on the landscape element of agricultural land owing to the Horizontal Directional Drilling (HDD) temporary working area (13,000m<sup>2</sup>), transition bay temporary working area (3,108m<sup>2</sup> for two transition bays), one landfall Construction Consolidation Site (CCS) (14,080m);</p> <p>The effect on landscape character and visual amenity owing to the presence of the temporary, surfaced and fenced landfall CCS, HDD temporary working area, associated security and task lighting and the presence of the HDD drilling rig, ducting materials and welfare facilities;</p> <p>The effect on landscape character and visual amenity owing to the activity associated with the</p>	

Impact	Parameter	Notes
	<p>excavation and construction of the two transition bays, HDD drilling, pulling through of cables and construction of temporary roads; and</p> <p>The effect on the visual amenity of walkers on the coastal path owing to the onshore construction works.</p>	
Impacts related to the onshore cable route	<p>The effect on the landscape element and landscape character and visual amenity of agricultural land owing to the topsoil strip of the approximately 64m wide onshore cable route;</p> <p>The effect on the landscape element of agricultural land owing to the presence of the five CCS (73,160m<sup>2</sup> for five CCS), the jointing bays (43,320m<sup>2</sup> for 76 jointing bays) and temporary roads;</p> <p>The effect on the landscape element of hedgerows and tree removal owing to the excavation for the 27.1m wide onshore cable route and felling of woodland north of Fitches Lane at the Aldeburgh Road crossing; and</p> <p>The effect on landscape character and landscape character and visual amenity owing to the presence and activity associated with the temporary, surfaced and fenced CCSs, and HDD entrance and exit compounds (retained as an option to cross the SPA / SSSI), and their content of plant, materials and welfare facilities, and the temporary roads.</p>	Refer to <b>section 29.3.3</b> of the ES chapter for instances of onshore cable route adopting a narrower width
Impacts related to the onshore substations	<p>The effect of the loss of agricultural land owing to the onshore substations CCS (34,200m<sup>2</sup>) and installation of the onshore substations operational footprint (used as a CCS during construction) (72,200m<sup>2</sup>);</p> <p>The effect on landscape character and visual amenity owing to the presence of the surfaced and fenced onshore substation CCS, and the content of plant, materials and welfare facilities;</p> <p>The effect on landscape character and visual amenity owing to the presence of the emerging onshore substation with building height up to 15m, electrical infrastructure height up to 18m (such as shunt reactors, transformers, harmonic filters etc)</p> <p>The effect on landscape character and visual amenity owing to the activity associated with the installation of the onshore substation CCS, onshore substation operational footprint and permanent access road of the B1122 Saxmundham Road, vehicles, machinery and cranes;</p> <p>The construction of the onshore infrastructure will result in some changes in ground profiles within and immediately around the onshore substation and the stockpiling of subsoil/topsoil needed</p>	

Impact	Parameter	Notes
	<p>during the construction period. The construction of a Sustainable Drainage System (SuDS) pond will be required to provide a sustainable drainage solution for the onshore substation; and</p> <p>Task and vehicle lighting may be used in the hours of darkness during approved working hours.</p>	
Impacts related to the National Grid Infrastructure	<p>The effect on the loss of agricultural land owing to the National Grid CCS (23,350m<sup>2</sup>), installation of the National Grid substation operational footprint (used as a CCS during construction) and additional temporary working areas for pylons, sealing end compounds and OHL realignment works;</p> <p>National Grid operational substation (AIS technology) (used as a CCS during construction): 44,950m<sup>2</sup> (310m x 145m);</p> <p>The effect on landscape character and visual amenity owing to the presence and activity of the surfaced and fenced National Grid CCS and temporary working areas, with its content of plant, materials and welfare facilities;</p> <p>The effect on landscape character and visual amenity owing to the presence of the emerging National Grid substation with Air Insulated Switchgear (AIS) building up to 6m in height;</p> <p>The effect on landscape character and visual amenity owing to the presence of temporary pylons or masts to facilitate the temporary overhead line diversion;</p> <p>The effect on landscape character and visual amenity owing to the activity associated with the installation of the National Grid CCS, National Grid substation operational footprint and, shared access road and overhead line realignment works;</p> <p>The construction of the onshore infrastructure will result in some changes in ground profiles within and immediately around the National Grid substation operational footprint and the stockpiling of subsoil/topsoil needed during the construction period. The construction of a SuDS pond will be required to provide a sustainable drainage solution for the National Grid substation; and</p> <p>Task and vehicle lighting may be used in the hours of darkness during approved working hours.</p>	<p>The option of a National Grid substation with GIS electrical infrastructure up to 16m in height is deemed not the worst case due to the reduced footprint (120m x 140m) compared to the AIS electrical infrastructure. For comparison, a set of visualisations from agreed Viewpoints with the National Grid substation with GIS electrical infrastructure have been produced in <b>Figure 29.28</b> to <b>Figure 29.40</b>. These are for information purposes only to enable comparison of National Grid substation options.</p> <p>Further detail regarding construction footprints are provided in <b>Chapter 6 Project Description</b>.</p>
<b>Operation</b>		
Impacts related to the onshore cable route	Permanent loss of 1.5ha of mature woodland as a result of the onshore cable route at woodland north of Fitches Lane.	It should be noted that jointing bays will be underground – there will be no surface infrastructure.
Impacts related to the	The effect on landscape character and visual amenity owing to the presence of the onshore substation with buildings up to 15m in height and	

Impact	Parameter	Notes
onshore substations	<p>electrical infrastructure up to 18m and occupying a site of 36,100m<sup>2</sup> (190m x 190m) for each of the onshore substations;</p> <p>The effect on landscape character and visual amenity owing to the presence of the new access road to the onshore substation off the B1122 Saxmundham Road;</p> <p>The effect of the re-establishment of hedgerows around the perimeter of the onshore substation, and the re-instatement of hedgerows over the onshore cable route into the onshore substation; and</p> <p>The establishment of substantial areas of new woodland planting around the onshore substation, as described in <b>section 29.3.4</b> of the ES chapter and shown in the landscape mitigation plan (<b>Figure 29.11a-b</b> and <b>Figure 29.12</b>).</p>	
Impacts related to the National Grid Infrastructure	<p>The effect on landscape character and visual amenity owing to the presence of the National Grid substation with Air Insulated Switchgear (AIS) building up to 6m in height;</p> <p>The effect on landscape character and visual amenity owing to the presence of the sealing end compounds; and</p> <p>The effect on landscape character and visual amenity owing to the presence of one additional new pylon and the wider overhead line realignment works.</p>	<p>The option of a National Grid substation with GIS electrical infrastructure up to 16m in height is deemed not the worst case due to the reduced footprint (120m x 140m) compared to the AIS electrical infrastructure. For comparison, a set of visualisations from agreed Viewpoints with the National Grid substation with GIS electrical infrastructure have been produced in <b>Figure 29.28</b> to <b>Figure 29.40</b>. These are for information purposes only to enable comparison of National Grid substation options.</p> <p>Further detail regarding construction footprints are provided in <b>Chapter 6 Project Description</b>.</p>
<b>Decommissioning</b>		
<p>No decision has been made regarding the final decommissioning policy for the onshore infrastructure as it is recognised that industry best practice, rules and legislation change over time. An Onshore Decommissioning Plan will be provided, secured under the requirements of the draft DCO. The onshore substation will be likely removed and be reused or recycled. It is anticipated that the onshore cable would be decommissioned (de-energised) and either the cables and jointing bays left <i>in situ</i> or removed depending on the requirements of the Onshore Decommissioning Plan approved by Local Planning Authority. The detail and scope of the decommissioning works will be determined by the relevant legislation and guidance at the time of decommissioning and agreed with the regulator. As such, for the purposes of a worst-case scenario, impacts no greater than those identified for the construction phase are expected for the decommissioning phase.</p>		

29.1.2.2.2 Scenario 2

11. **Table A29.2** presents the worst case assumptions in the scenario where the proposed East Anglia ONE North project and proposed East Anglia TWO project are built constructed sequentially. Areas provided for onshore infrastructure are maximum footprints with indicative dimensions provided in brackets.
12. Under scenario 2, either the proposed East Anglia ONE North project or the proposed East Anglia TWO project could be constructed first. However, there will be no difference in impact regardless of which project is constructed first. The CIA presented in this ES is presented using the intended development strategy of the proposed East Anglia TWO project being constructed first. However, in the eventuality that the proposed East Anglia ONE North project is constructed first, the impacts presented would be the same. Further detail regarding the sequential construction is provided in **Chapter 5 EIA Methodology**.

**Table A29.2 Worst Case Assumptions for Scenario 2**

Impact	Proposed East Anglia TWO Project Parameters	Proposed East Anglia ONE North Project Parameters (on the assumption that the proposed East Anglia TWO project is post-construction)	Notes
<b>Construction</b>			
Impacts related to the landfall	<p>The effect on the landscape element of agricultural land owing to the Horizontal Directional Drilling (HDD) temporary working area (7,000m<sup>2</sup>), transition bay temporary working area (1,554m<sup>2</sup> for two transition bays), one landfall Construction Consolidation Site (CCS) (7,040m);</p> <p>The effect on landscape character and visual amenity owing to the presence of the temporary, surfaced and fenced landfall CCS, HDD temporary working area, associated security and task lighting and the presence of the HDD drilling rig, ducting materials and welfare facilities;</p> <p>The effect on landscape character and visual amenity owing to the activity associated with the excavation and construction of the two transition bays, HDD drilling, pulling</p>	<p>The effect on the landscape element of agricultural land owing to the Horizontal Directional Drilling (HDD) temporary working area (7,000m<sup>2</sup>), transition bay temporary working area (1,554m<sup>2</sup> for two transition bays), one landfall Construction Consolidation Site (CCS) (7,040m);</p> <p>The effect on landscape character and visual amenity owing to the presence of the temporary, surfaced and fenced landfall CCS, HDD temporary working area, associated security and task lighting and the presence of the HDD drilling rig, ducting materials and welfare facilities;</p> <p>The effect on landscape character and visual amenity owing to the activity associated with the excavation and construction of the two transition bays, HDD drilling, pulling</p>	



Impact	Proposed East Anglia TWO Project Parameters	Proposed East Anglia ONE North Project Parameters (on the assumption that the proposed East Anglia TWO project is post-construction)	Notes
	<p>through of cables and construction of temporary roads; and</p> <p>The effect on the visual amenity of walkers on the coastal path owing to the onshore construction works.</p>	<p>through of cables and construction of temporary roads; and</p> <p>The effect on the visual amenity of walkers on the coastal path owing to the onshore construction works.</p>	
<p>Impacts related to the onshore cable route</p>	<p>The effect on the landscape element and landscape character and visual amenity of agricultural land owing to the topsoil strip of the approximately 32m wide onshore cable route;</p> <p>The effect on the landscape element of agricultural land owing to the presence of the five CCS (36,580m<sup>2</sup> for five CCS), the jointing bays (21,660m<sup>2</sup> for 38 jointing bays) and temporary roads;</p> <p>The effect on the landscape element of hedgerows and tree removal owing to the excavation for the 16.1m wide onshore cable route and felling of woodland north of Fitches Lane at the Aldeburgh Road crossing; and</p> <p>The effect on landscape character and landscape character and visual amenity owing to the presence and activity associated with the temporary, surfaced and fenced CCSs, and HDD entrance and exit compounds (retained as an option to cross the SPA / SSSI), and their content of plant, materials and welfare facilities, and the temporary roads.</p>	<p>The effect on the landscape element and landscape character and visual amenity of agricultural land owing to the topsoil strip of the approximately 32m wide onshore cable route;</p> <p>The effect on the landscape element of agricultural land owing to the presence of the five CCS (36,580m<sup>2</sup> for five CCS), the jointing bays (21,660m<sup>2</sup> for 38 jointing bays) and temporary roads;</p> <p>The effect on the landscape element of hedgerows and tree removal owing to the excavation for the 16.1m wide onshore cable route and felling of woodland north of Fitches Lane at the Aldeburgh Road crossing; and</p> <p>The effect on landscape character and landscape character and visual amenity owing to the presence and activity associated with the temporary, surfaced and fenced CCSs, and HDD entrance and exit compounds (retained as an option to cross the SPA / SSSI), and their content of plant, materials and welfare facilities, and the temporary roads.</p>	<p>Refer to <b>section 29.3.3</b> of the ES chapter for instances of onshore cable route adopting a narrower width</p> <p>The onshore cable routes would overlap (i.e. only 27.1m) to give a 1.5ha loss of woodland.</p>
<p>Impacts related to the onshore substation</p>	<p>The effect of the loss of agricultural land owing to the onshore substation CCS (17,100m<sup>2</sup>) and installation of the onshore substation operational footprint (used as a CCS during construction) (36,100m<sup>2</sup>);</p>	<p>The effect of the loss of agricultural land owing to the onshore substation CCS (17,100m<sup>2</sup>) and installation of the onshore substation operational footprint (used as a</p>	<p>Substation operational access road will be constructed as part of the proposed East</p>

Impact	Proposed East Anglia TWO Project Parameters	Proposed East Anglia ONE North Project Parameters (on the assumption that the proposed East Anglia TWO project is post-construction)	Notes
	<p>The effect on landscape character and visual amenity owing to the presence of the surfaced and fenced onshore substation CCS, and the content of plant, materials and welfare facilities;</p> <p>The effect on landscape character and visual amenity owing to the presence of the emerging onshore substation with building height up to 15m, electrical infrastructure height up to 18m (such as shunt reactors, transformers, harmonic filters etc)</p> <p>The effect on landscape character and visual amenity owing to the activity associated with the installation of the onshore substation CCS, onshore substation operational footprint and permanent access road of the B1122 Saxmundham Road, vehicles, machinery and cranes;</p> <p>The construction of the onshore infrastructure will result in some changes in ground profiles within and immediately around the onshore substation and the stockpiling of subsoil/topsoil needed during the construction period. The construction of a Sustainable Drainage System (SuDS) pond will be required to provide a sustainable drainage solution for the onshore substation; and</p> <p>Task and vehicle lighting may be used in the hours of darkness during approved working hours.</p>	<p>CCS during construction) (36,100m<sup>2</sup>);</p> <p>The effect on landscape character and visual amenity owing to the presence of the surfaced and fenced onshore substation CCS, and the content of plant, materials and welfare facilities;</p> <p>The effect on landscape character and visual amenity owing to the presence of the emerging onshore substation with building height up to 15m, electrical infrastructure height up to 18m (such as shunt reactors, transformers, harmonic filters etc)</p> <p>The effect on landscape character and visual amenity owing to the activity associated with the installation of the onshore substation CCS, onshore substation operational footprint and permanent access road of the B1122 Saxmundham Road, vehicles, machinery and cranes;</p> <p>The construction of the onshore infrastructure will result in some changes in ground profiles within and immediately around the onshore substation and the stockpiling of subsoil/topsoil needed during the construction period. The construction of a Sustainable Drainage System (SuDS) pond will be required to provide a sustainable drainage solution for the onshore substation; and</p> <p>Task and vehicle lighting may be used in the hours of darkness during approved working hours.</p>	<p>Anglia TWO project</p>
<p>Impacts related to the</p>	<p>The effect on the loss of agricultural land owing to the National Grid CCS (23,350m<sup>2</sup>), installation of the National Grid</p>	<p>National Grid infrastructure will be constructed as part of the</p>	<p>The option of a National Grid substation with GIS electrical</p>



Impact	Proposed East Anglia TWO Project Parameters	Proposed East Anglia ONE North Project Parameters (on the assumption that the proposed East Anglia TWO project is post-construction)	Notes
National Grid Infrastructure	<p>substation operational footprint (used as a CCS during construction) and additional temporary working areas for pylons, sealing end compounds and OHL realignment works;</p> <p>National Grid operational substation (AIS technology) (used as a CCS during construction): 44,950m<sup>2</sup> (310m x 145m);</p> <p>The effect on landscape character and visual amenity owing to the presence and activity of the surfaced and fenced National Grid CCS and temporary working areas, with its content of plant, materials and welfare facilities;</p> <p>The effect on landscape character and visual amenity owing to the presence of the emerging National Grid substation with Air Insulated Switchgear (AIS) building up to 6m in height;</p> <p>The effect on landscape character and visual amenity owing to the presence of temporary pylons or masts to facilitate the temporary overhead line diversion;</p> <p>The effect on landscape character and visual amenity owing to the activity associated with the installation of the National Grid CCS, National Grid substation operational footprint and, shared access road and overhead line realignment works;</p> <p>The construction of the onshore infrastructure will result in some changes in ground profiles within and immediately around the National Grid substation operational footprint and the stockpiling of subsoil/topsoil needed during the construction period. The construction of a</p>	proposed East Anglia TWO project	<p>infrastructure up to 16m in height is deemed not the worst case due to the reduced footprint (120m x 140m) compared to the AIS electrical infrastructure. For comparison, a set of visualisations from agreed Viewpoints with the National Grid substation with GIS electrical infrastructure have been produced in <b>Figure 29.28</b> to <b>Figure 29.40</b>. These are for information purposes only to enable comparison of National Grid substation options.</p> <p>Further detail regarding construction footprints are provided in <b>Chapter 6 Project Description</b>.</p>

Impact	Proposed East Anglia TWO Project Parameters	Proposed East Anglia ONE North Project Parameters (on the assumption that the proposed East Anglia TWO project is post-construction)	Notes
	<p>SuDS pond will be required to provide a sustainable drainage solution for the National Grid substation; and</p> <p>Task and vehicle lighting may be used in the hours of darkness during approved working hours.</p>		
<b>Operation</b>			
Impacts related to the onshore cable route	Permanent loss of 0.9ha of mature woodland as a result of the onshore cable route at woodland north of Fitches Lane.	Permanent loss of 0.9ha of mature woodland as a result of the onshore cable route at woodland north of Fitches Lane.	The onshore cable routes would overlap (i.e. only 27.1m) to give a 1.5ha loss of woodland.
Impacts related to the onshore substation	<p>The effect on landscape character and visual amenity owing to the presence of the onshore substation with buildings up to 15m in height and electrical infrastructure up to 18m and occupying a site of 36,100m<sup>2</sup> (190m x 190m);</p> <p>The effect on landscape character and visual amenity owing to the presence of the new access road to the onshore substation off the B1122 Saxmundham Road;</p> <p>The effect of the re-establishment of hedgerows around the perimeter of the onshore substation, and the reinstatement of hedgerows over the onshore cable route into the onshore substation; and</p> <p>The establishment of substantial areas of new woodland planting around the onshore substation, as described in <b>section 29.3.4</b> of the ES chapter and shown in the landscape mitigation plan (<b>Figure 29.11a-b</b> and <b>Figure 29.12</b>).</p>	<p>The effect on landscape character and visual amenity owing to the presence of the onshore substation with buildings up to 15m in height and electrical infrastructure up to 18m and occupying a site of 36,100m<sup>2</sup> (190m x 190m);</p> <p>The effect on landscape character and visual amenity owing to the presence of the new access road to the onshore substation off the B1122 Saxmundham Road;</p> <p>The effect of the re-establishment of hedgerows around the perimeter of the onshore substation, and the reinstatement of hedgerows over the onshore cable route into the onshore substation; and</p> <p>The establishment of substantial areas of new woodland planting around the onshore substation, as described in <b>section 29.3.4</b> of the ES chapter and shown in the landscape mitigation plan (<b>Figure 29.11a-b</b> and <b>Figure 29.12</b>).</p>	<p>The operational footprint does not include the additional landscaping footprint.</p> <p>Substation operational access road will be constructed as part of the proposed East Anglia TWO project</p>

Impact	Proposed East Anglia TWO Project Parameters	Proposed East Anglia ONE North Project Parameters (on the assumption that the proposed East Anglia TWO project is post-construction)	Notes
Impacts related to the National Grid Infrastructure	<p>The effect on landscape character and visual amenity owing to the presence of the National Grid substation with Air Insulated Switchgear (AIS) building up to 6m in height;</p> <p>The effect on landscape character and visual amenity owing to the presence of the sealing end compounds; and</p> <p>The effect on landscape character and visual amenity owing to the presence of one additional new pylon and the wider overhead line realignment works.</p>	National Grid infrastructure will be constructed as part of the proposed East Anglia TWO project	
<b>Decommissioning</b>			
<p>No decision has been made regarding the final decommissioning policy for the onshore infrastructure as it is recognised that industry best practice, rules and legislation change over time. An Onshore Decommissioning Plan will be provided, secured under the requirements of the draft DCO. The onshore substation will be likely removed and be reused or recycled. It is anticipated that the onshore cable would be decommissioned (de-energised) and either the cables and jointing bays left <i>in situ</i> or removed depending on the requirements of the Onshore Decommissioning Plan approved by Local Planning Authority. The detail and scope of the decommissioning works will be determined by the relevant legislation and guidance at the time of decommissioning and agreed with the regulator. As such, for the purposes of a worst-case scenario, impacts no greater than those identified for the construction phase are expected for the decommissioning phase.</p>			

## 29.2 Cumulative Effects with the Proposed East Anglia TWO Project

### 29.2.1 Preliminary Assessment

- The approach to the assessment of cumulative landscape and visual effects follows a two-stage process. Firstly, effects from the proposed East Anglia ONE North project alone assessment in **Appendix 29.3** and **Appendix 29.4** are presented in the Preliminary Assessment in **Table A29.3** below and assessed for potential to have significant cumulative effects with the proposed East Anglia TWO project. The same landscape and visual receptors have potential for significant cumulative effects for scenario 1 and 2. Secondly, a technical assessment of those receptors with potential to undergo significant cumulative effects is presented in full in **Table A29.4** and **Table A29.5**, in respect of the relevant landscape and visual receptors during the construction and operational phase.

**Table A29.3 Potential Significant Cumulative Effects with East Anglia ONE North – Preliminary Assessment**

Receptor/Impact	Potential for significant CONSTRUCTION STAGE cumulative effect - Scenario 1 and 2	Potential for significant OPERATIONAL cumulative effect (first year of operational phase)	Potential for significant OPERATIONAL cumulative effect (15 years post construction)
<b>Landfall</b>			
<b>Landscape receptors</b>			
LCT05 Coastal Dunes and Shingle Ridges	No	No	No
Beach and coastal cliffs	No	No	No
LCT07 Estate Sandlands	Yes	No	No
Agricultural land	No	No	No
Hedgerows	No	No	No
Suffolk Coast and Heaths AONB (and Heritage Coast) Area A: AONB between Thorpeness, Sizewell and Leiston	Yes	No	No
<b>Visual receptors</b>			
Thorpeness (residents)	Yes	No	No
B1353 Thorpeness Road (motorists)	Yes	No	No
Suffolk Coastal Path (walkers)	Yes	No	No
Sandlings Walk (walkers)	Yes	No	No
<b>Onshore Cable Route</b>			
<b>Landscape receptors</b>			
LCT 01 Ancient Estate Claylands Area A North of Friston, between Grove Road, Fristonmoor and Saxmundham Road	No	No	No
Agricultural land (within Area A)	No	No	No
Woodland (within Area A)	No	No	No
Hedgerows (within Area A)	No	No	No
LCT 01 Ancient Estate Claylands	Yes	No	No

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Receptor/Impact	Potential for significant CONSTRUCTION STAGE cumulative effect - Scenario 1 and 2	Potential for significant OPERATIONAL cumulative effect (first year of operational phase)	Potential for significant OPERATIONAL cumulative effect (15 years post construction)
Area C East of Grove Wood, Knodishall			
Agricultural land (within Area C)	No	No	No
Woodland (within Area C)	No	No	No
Hedgerows (within Area C)	No	No	No
LCT 01 Ancient Estate Claylands Area D Leiston and Theberton	No	No	No
LCT05 Coastal Dunes and Shingle Ridges	No	No	No
LCT 06 Coastal Levels Area A Hundred River Valley, south of Aldringham	No	No	No
LCT 06 Coastal Levels Area B Former large meare to the south of Thorpeness	No	No	No
LCT 06 Coastal Levels Area C Marshes of the Minsmere Level	No	No	No
LCT 07 Estate Sandlands Area A Thorpeness to Aldringham and Friston	Yes	Yes	Yes
Agricultural land (within Area A)	No	No	No
Woodland (within Area A, at woodland north of Fitches Lane)	Yes	Yes	Yes
Hedgerows (within Area A)	No	No	No
Scrub vegetation (within Area A)	No	No	No
LCT 07 Estate Sandlands Area B Sizewell and north of Leiston to Dunwich Forest	No	No	No
LCT 07 Estate Sandlands Area C Aldeburgh to Snape	No	No	No
Suffolk Coast and Heaths AONB and Heritage Coast Area A: AONB between Thorpeness, Sizewell and Leiston	Yes	No	No

Receptor/Impact	Potential for significant CONSTRUCTION STAGE cumulative effect - Scenario 1 and 2	Potential for significant OPERATIONAL cumulative effect (first year of operational phase)	Potential for significant OPERATIONAL cumulative effect (15 years post construction)
Suffolk Coast and Heaths AONB and Heritage Coast Area B: AONB between Thorpeness, Aldeburgh and Snape	No	No	No
Suffolk Coast and Heaths AONB and Heritage Coast Section C: Sizewell and Dunwich Forest	No	No	No
Hundred River Valley SLA Area A: Hundred River Valley, south of Aldringham	Yes	Yes	Yes
Hundred River Valley SLA Area B: Majority of the of the SLA	No	No	No
<b>Visual receptors</b>			
Leiston (residents)	No	No	No
Aldringham (residents)	Yes	Yes	Yes
Coldfair Green (residents)	Yes	No	No
Friston (residents)	Yes	No	No
B1353 Thorpeness Road (motorists)	Yes	No	No
B1122 Aldeburgh Road (motorists)	Yes	Yes	Yes
B1069 Snape Road (motorists)	Yes	No	No
B1121 Aldeburgh – Saxmundham Road (motorists)	No	No	No
Suffolk Coastal Path (walkers)	Yes	No	No
Sandlings Walk (walkers)	Yes	No	No
Suffolk Coastal Cycle Route (cyclists)	Yes	No	No
<b>Onshore Substation and National Grid substation</b>			
<b>Landscape receptors</b>			
LCT 01 Ancient Estate Claylands	Yes	Yes	Yes

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Receptor/Impact	Potential for significant CONSTRUCTION STAGE cumulative effect - Scenario 1 and 2	Potential for significant OPERATIONAL cumulative effect (first year of operational phase)	Potential for significant OPERATIONAL cumulative effect (15 years post construction)
Area A North of Friston, between Grove Road, Fristonmoor and Saxmundham Road			
Agricultural land (within Area A)	No	No	No
Woodland (within Area A)	No	No	No
Hedgerows (within Area A)	No	No	No
LCT 01 Ancient Estate Claylands Area B East of Saxmundham	No	No	No
Ancient Estate Claylands LCT (01) Area C East of Grove Wood, Knodishall	No	No	No
Agricultural land (within Area C)	No	No	No
Woodland (within Area C)	No	No	No
Hedgerows (within Area C)	No	No	No
LCT 01 Ancient Estate Claylands Area D Leiston and Theberton	No	No	No
LCT05 Coastal Dunes and Shingle Ridges	No	No	No
LCT 06 Coastal Levels	No	No	No
LCT 07 Estate Sandlands Area A Thorpeness to Aldringham and Friston	Yes	Yes	Yes
Agricultural land (within Area A)	No	No	No
Woodland (within Area A)	Yes	Yes	Yes
Hedgerows (within Area A)	No	No	No
LCT 07 Estate Sandlands Area B Sizewell and north of Leiston to Dunwich Forest	No	No	No
LCT 07 Estate Sandlands Area C Aldeburgh to Snape	No	No	No
Suffolk Coast and Heaths AONB and Heritage Coast	No	No	No

Receptor/Impact	Potential for significant CONSTRUCTION STAGE cumulative effect - Scenario 1 and 2	Potential for significant OPERATIONAL cumulative effect (first year of operational phase)	Potential for significant OPERATIONAL cumulative effect (15 years post construction)
Hundred River Valley SLA	No	No	No
<b>Visual Receptors</b>			
Viewpoint 1: Public Right of Way near Friston House	Yes	Yes	No
Viewpoint 2: Friston, Church Road	Yes	Yes	Yes
Viewpoint 3: Grove Road, near Pear Tree Farm	No	No	No
Viewpoint 4: Friston, Grove Road	Yes	Yes	Yes
Viewpoint 5: Public Right of Way, near Moor Farm	Yes	Yes	Yes
Viewpoint 6: Friston, Village Green	No	No	No
Viewpoint 7: Public Right of Way, east of Friston	No	No	No
Viewpoint 8: B1121 Saxmundham Road, north of Friston	Yes	Yes	Yes
Viewpoint 9: B1121 Aldeburgh Road, south of Friston	Yes	Yes	Yes
Viewpoint 10: B1119 Saxmundham Road	No	No	No
Viewpoint 11: Knodishall Hall	No	No	No
Viewpoint 12: Knodishall Common	No	No	No
Viewpoint 13: B1069 Snape Road	No	No	No
Viewpoint 14: Grove Road	Yes	Yes	No
Friston (residents)	Yes	Yes	Yes
B1121 Aldeburgh / Saxmundham Road	Yes	Yes	Yes
Grove Road	Yes	Yes	Yes
Suffolk Coastal Path	No	No	No
Suffolk Coastal Cycle Route	Yes	Yes	Yes
Sandling's Walk	No	No	No



### 29.2.2 Potential Cumulative Effects during Construction

14. The preliminary assessment concluded that the same landscape and visual receptors have potential for significant cumulative effects under construction scenario 1 and 2. A technical assessment of those receptors with potential to undergo significant cumulative effects is presented in full in **Table A29.4** below. The summary of cumulative construction effects presented in **Table A29.4** below shows the effects under scenario 2 only, as the likely worst-case scenario. The magnitude of change is the same under construction scenario 1 and 2. The only difference being that under scenario 2 the effect is considered medium-term for the construction of the onshore substations and National Grid substation; landfall and onshore cable corridor - due to the duration of construction activities including the construction gap between each project, whereas under scenario 1 the effect is assessed as short-term.

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**Table A29.4 Construction Stage Cumulative Effects with East Anglia TWO (Scenario 2)**

Receptor/Impact	Sensitivity to change	Cumulative magnitude of change East Anglia ONE North and East Anglia TWO	Significance of Cumulative Effect East Anglia ONE North and East Anglia TWO
<b>Landfall</b>			
<b>Cumulative Landscape Effects - Construction</b>			
LCT07 Estate Sandlands	Medium-high	Medium-high on localised area to the north of Thorpeness within landfall.	<b>Significant</b> , medium-term, temporary
Suffolk Coast and Heaths AONB (and Heritage Coast) Area A: AONB between Thorpeness, Sizewell and Leiston	Medium-high	Medium-high on localised area to the north of Thorpeness within landfall.	<b>Significant</b> , medium-term, temporary
<b>Cumulative Visual Effects - Construction</b>			
Thorpeness (residents)	High	Low in views from a localised area on the northern and north-western edge of Thorpeness. Negligible from the majority of the central and southern areas of the settlement.	<b>Not significant</b> , medium-term and temporary.
B1353 Thorpeness Road (motorists)	Medium	Low from a short (750m) section of the B1353, to the west of Thorpeness, where the landfall is located to the north of the road. Negligible from the remainder of the B1353.	<b>Not significant</b> , medium-term and temporary.
Suffolk Coastal Path (walkers)	High	High over a short (1.0km) section of the route, to the north of Thorpeness, where the route of the path passes the landfall. Negligible over the remainder of the Suffolk Coastal Path.	<b>Significant</b> , medium-term and temporary over a short (1.0km) section of the route, to the north of Thorpeness, where the route of the path passes the landfall. <b>Not significant</b> , medium-term and temporary over the remainder of the Suffolk Coastal Path.
Sandlings Walk (walkers)	Medium - high	High over a short (1.0km) section of the route, to the north of Thorpeness, where the route of the path passes the landfall.	<b>Significant</b> , medium-term and temporary over a short (1.0km) section of the route, to

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Receptor/Impact	Sensitivity to change	Cumulative magnitude of change East Anglia ONE North and East Anglia TWO	Significance of Cumulative Effect East Anglia ONE North and East Anglia TWO
		Negligible over the remainder of the Sandling's Walk.	the north of Thorpeness, where the route of the path passes the landfall. <b>Not significant</b> , medium-term and temporary over the remainder of the Sandling's Walk.
<b>Onshore Cable Route</b>			
<b>Cumulative Landscape Effects - Construction</b>			
Ancient Estate Claylands LCT (01) Area C East of Grove Wood, Knodishall	Medium-high	Low magnitude to landscape character of this area of the LCT resulting from the construction of the onshore infrastructure, with the potential for direct changes to physical landscape elements within a very small area of the LCT, to the east of Grove Road and south of Grove Wood, where a short stretch of Section 4 of the onshore cable route passes through the southern extremity of this LCT, and the magnitude of change on the remaining areas of the LCT to the north/north-east of Grove Wood decreasing with distance from the onshore cable route.	<b>Not significant</b> , medium-term, temporary
LCT 07 Estate Sandlands Area A Thorpeness to Aldringham and Friston	Medium-high	Medium-low magnitude within and immediately adjacent to the onshore cable route during the construction period over sections 2 and 3 of the onshore cable route between Snape Road and the western edge of the AONB. Medium magnitude within and immediately adjacent to the onshore cable route over section 4 to the west of Snape Road, where the construction activity is likely to be more intensive due to the HGV access along the substation haul road. Medium within and immediately adjacent to the onshore cable route over section 1 and parts of section 2, where the onshore cable route is within the AONB and to the east of the dismantled railway.	<b>Significant</b> , medium-term, temporary on the character of the Estate Sandlands LCT within and adjacent to the onshore cable route sections 1, part of section 2 and section 4. <b>Not significant</b> , medium-term, temporary on the character of the Estate Sandlands LCT within and adjacent to the onshore cable route over the majority of sections 2 and 3.
Woodland (within Area A at woodland north of Fitches Lane)	High	Medium-high	<b>Significant</b> , medium-term, temporary

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Receptor/Impact	Sensitivity to change	Cumulative magnitude of change East Anglia ONE North and East Anglia TWO	Significance of Cumulative Effect East Anglia ONE North and East Anglia TWO
Suffolk Coast and Heaths AONB and Heritage Coast Area A: AONB between Thorpeness, Sizewell and Leiston	High	<u>Special Qualities</u> Landscape quality: Medium Scenic quality: Medium Relative wildness: Medium Relative tranquillity: Medium Natural heritage features: Low Cultural heritage: Low	<u>Special Qualities</u> <b>Significant</b> , medium-term, temporary construction stage effects on the landscape/scenic quality and relative wildness/tranquillity of area A of the AONB will primarily be experienced over several separate short 2-3 month periods of peak construction activity and not continuously throughout the construction phase. Over the majority of the construction stage, the relevant section of the onshore cable route will not be subject to these key construction works and the onshore cable route will primarily consist of installed infrastructure and stripped topsoil to be reinstated, during which time the effects on landscape/scenic quality and relative wildness/tranquillity are considered <b>not significant</b> due to the limited construction activity. Natural heritage features: <b>Not significant</b> , medium-term, temporary Cultural heritage: <b>Not significant</b> , medium-term, temporary
Hundred River Valley SLA Area A: Hundred River Valley, south of Aldringham	Medium	Medium-high over a local area at woodland north of Fitches Lane, due to the felling of mature woodland	<b>Significant</b> , medium-term, temporary
<b>Cumulative Visual Effects - Construction</b>			
Aldringham (residents)	High	Medium on views experienced from areas local to where the onshore cable route (Section 3) crosses the Hundred River and Aldeburgh	<b>Significant</b> , medium-term and temporary from the Aldeburgh Road/Fitches Lane area.

Receptor/Impact	Sensitivity to change	Cumulative magnitude of change East Anglia ONE North and East Anglia TWO	Significance of Cumulative Effect East Anglia ONE North and East Anglia TWO
		<p>Road, where the construction of the onshore cable route will be visible in views from nearby dwellings and felling of woodland north of Fitches Lane is required.</p> <p>Low on its route to the east of the settlement crossing the B1353 Thorpeness Road.</p>	<p>Construction stage visual effects will primarily be experienced by local residents over several separate short 2-3 month periods of peak construction activity and not continuously throughout the construction phase. Over the majority of the construction stage, the relevant section of the onshore cable route will not be subject to these key construction works and the onshore cable route will primarily be viewed as installed infrastructure and stripped topsoil to be reinstated, during which time the effects are considered not significant due to the limited construction activity.</p> <p><b>Not significant</b>, medium-term, temporary form the remainder of the settlement.</p>
Coldfair Green (residents)	High	<p>Medium on views experienced from a small group of dwellings on Snape Road on the southern edge of Coldfair Green, local to the onshore cable route (Section 3 and 4).</p> <p>Low on views experienced from the southern edges of the settlement (The Fitches and Buxlow Close) and negligible from the majority of the settlement where there will be no direct views of the onshore infrastructure during construction.</p> <p>Negligible from the majority of the settlement where there will be no direct views of the onshore infrastructure.</p>	<p><b>Significant</b>, medium-term and temporary on views experienced from a small group of dwellings on Snape Road on the southern edge of Coldfair Green. Construction stage visual effects will primarily be experienced by local residents over several separate short 2-3 month periods of peak construction activity and not continuously throughout the construction phase. Over the majority of the construction stage, the relevant section of the onshore cable route will not be subject to these key construction works and the onshore cable route will primarily be viewed as installed infrastructure and stripped topsoil to be reinstated, during which time the effects are considered not significant due to the limited construction activity.</p>

Receptor/Impact	Sensitivity to change	Cumulative magnitude of change East Anglia ONE North and East Anglia TWO	Significance of Cumulative Effect East Anglia ONE North and East Anglia TWO
			<b>Not significant</b> , medium-term, temporary from the majority of the settlement.
Friston (residents)	High	Medium on views experienced from a localised area on the northern edges of Friston, where the closest properties around Church Road/Grove Road are likely to have views of the onshore cable route construction (Section 4). Negligible from the majority of central and southern areas of Friston.	<b>Significant</b> , medium-term, temporary on views experienced from the northern edges of Friston. <b>Not significant</b> , medium-term, temporary from the majority of central and southern areas of Friston.
B1353 Thorpeness Road (motorists)	Medium	Medium on views experienced from a short 500m section of the B1353 to the east of Aldringham where the onshore cable route crosses the B1353. Negligible over the remainder of the B1353.	<b>Significant</b> , medium-term, temporary on views experienced over short 500m section of the B1353 east of Aldringham. <b>Not significant</b> , medium-term and temporary on the B1353 as a whole, which will generally afford no views of the onshore cable route construction to motorists.
B1122 Aldeburgh Road (motorists)	Medium	Medium on views experienced from a short 250m section of the B1122, to the south of Aldringham, where the onshore cable route crosses the B1122. Negligible over the remainder of the B1122.	<b>Significant</b> , medium-term, temporary on views experienced over a short 250m section of the B1122, to the south of Aldringham, where the onshore cable route crosses the B1122. <b>Not significant</b> , medium-term, temporary on the B1122 as a whole, which will generally afford no views of the onshore cable route construction to motorists.

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Receptor/Impact	Sensitivity to change	Cumulative magnitude of change East Anglia ONE North and East Anglia TWO	Significance of Cumulative Effect East Anglia ONE North and East Anglia TWO
B1069 Snape Road (motorists)	Medium	Medium on views experienced over a short 500m section of the B1069, to the south of Coldfair Green, where the onshore cable route crosses the B1069. Negligible over the remainder of the B1069.	<b>Significant</b> , medium-term, temporary on views experienced over a short 500m section of the B1069, to the south of Coldfair Green, where the onshore cable route crosses the B1069. <b>Not significant</b> , medium-term, temporary on the B1069 as a whole, which will generally afford no views of the onshore cable route construction to motorists.
Suffolk Coastal Path (walkers)	High	High on views experienced from a short 1.8km section of the route to the north of Thorpeness, where the onshore cable route crosses or is close to the Suffolk Coastal Path. Negligible over the remainder of the Suffolk Coastal Path.	<b>Significant</b> , medium-term, temporary on views experienced over a short 1.8km section of the Suffolk Coastal Path to the north of Thorpeness, where the onshore cable route crosses or is close to the Suffolk Coastal Path. <b>Not significant</b> , medium-term, temporary on the Suffolk Coastal Path as a whole, which will generally afford no views of the onshore cable route construction to walkers.
Sandlings Walk (walkers)	Medium - high	High on views experienced over two sections of the Sandlings Walk: from the edge of Friston to Sloe Lane for approximately 2.2km where the route runs in close proximity to and subsequently crosses the onshore cable route; and from the edge of Aldringham Common to Sizewell to the north of Thorpeness, for approximately 1.7km where the route crosses through and then runs parallel to the onshore cable route. Negligible for the remainder of the route of the Sandlings Walk.	<b>Significant</b> , medium-term and temporary on views experienced over a short 2.2km section of the Sandlings Walk between Friston and Sloe Lane; and over a 1.7km section between Aldringham Common and Sizewell. <b>Not significant</b> , medium-term, temporary on the Sandlings Walk as a whole, which will generally afford no views of the onshore cable route construction to walkers.
Suffolk Coastal Cycle Route (cyclists)	Medium - high	High on views experienced over a short 500m section of the Suffolk Coastal Cycle Route, along Grove Road between Friston and Grove	<b>Significant</b> , medium-term and temporary on views experienced a short 500m section of

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Receptor/Impact	Sensitivity to change	Cumulative magnitude of change East Anglia ONE North and East Anglia TWO	Significance of Cumulative Effect East Anglia ONE North and East Anglia TWO
		Wood, where the onshore cable route crosses or is adjacent to the route of Suffolk Coastal Cycle Route. Negligible for the remainder of the route of the Suffolk Coastal Cycle Route.	the Suffolk Coastal Cycle Route on Grove Road between Friston and Grove Wood. <b>Not significant</b> , medium-term, temporary on the Suffolk Coastal Cycle Route as a whole, which will generally afford no views of the onshore cable route construction to cyclists.
<b>Onshore Substation and National Grid substation</b>			
<b>Cumulative Landscape Effects - Construction</b>			
LCT 01 Ancient Estate Claylands Area A North of Friston, between Grove Road, Fristonmoor and Saxmundham Road	Medium-high	High on localised area to north of Friston within approximately 1.0km around the onshore substation and National Grid substation. Low to negligible over remaining areas of the LCT.	<b>Significant</b> , medium-term and temporary on localised area to north of Friston within approximately 1.0km around the onshore substation and National Grid substation. Not significant, medium-term and temporary over remaining areas of LCT.
LCT 07 Estate Sandlands Area A Thorpeness to Aldringham and Friston	Medium-high	High on localised area to north of Friston within approximately 1.0km around the onshore substation and National Grid substation. Low to negligible over remaining areas of the LCT.	<b>Significant</b> , medium-term and temporary on localised area to north of Friston within approximately 1.0km around the onshore substation and National Grid substation. <b>Not significant</b> , medium-term and temporary over remaining areas of LCT.
Woodland (within Area A)	High	Medium-high due to the combined impact of felling small area of Laurel Covert woodland at the edge of East TWO onshore substation and stand of woodland within East Anglia ONE North onshore substation.	<b>Significant</b> , medium-term, temporary
<b>Cumulative Visual Effects - Construction</b>			
Viewpoint 1: Public Right of	Walkers: medium-high	High: the construction of the East Anglia ONE North onshore substation will be visible at closer proximity (0.21km) and to the foreground of the East Anglia TWO onshore substation and National	<b>Significant</b> , medium-term, temporary



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Receptor/Impact	Sensitivity to change	Cumulative magnitude of change East Anglia ONE North and East Anglia TWO	Significance of Cumulative Effect East Anglia ONE North and East Anglia TWO
Way near Friston House ( <b>Figure 29.13d</b> )	Residents: high	Grid substation in the view, such that it would be the most prominent and large-scale substation in the view, contributing most to the overall cumulative effect. The built form of the East Anglia ONE North substation will take shape over time during the construction period and become the prevailing feature of the view beyond the bunded landform of the SUDs detention basin in the immediate foreground.	
Viewpoint 2: Friston, Church Road ( <b>Figure 29.14d</b> )	Walkers: medium-high Residents: high	High: the construction of the East Anglia ONE North onshore substation will be visible in the mid-ground of the view, partially screened by layers of intervening hedgerows and mature field boundary trees, but located at closer proximity (0.4km) and to the foreground of the East Anglia TWO onshore substation, National Grid substation and overhead re-alignment works in the view, such that it would be the most prominent and large-scale substation in the view, contributing most to the overall cumulative effect. The built form of the East Anglia ONE North substation will take shape over time during the construction period, with the massing of the GIS building and taller electrical infrastructure visible over the foreground screening, becoming a defining feature of the view.	<b>Significant</b> , medium-term, temporary
Viewpoint 4: Friston, Grove Road ( <b>Figure 29.16d</b> )	Walkers: medium-high Residents: high Motorists: medium	Medium: the construction of the East Anglia ONE North onshore substation will be visible in the mid-ground of the view, partially screened by layers of intervening hedgerows and mature field boundary trees, but located at closer proximity (0.46km) to the foreground of the National Grid substation and overhead re-alignment works in the view, and to the south-west of the East Anglia TWO onshore substation, such that it would be the most prominent and large-scale substation in the view, contributing most to the overall cumulative effect. The built form of the East Anglia ONE North substation will take shape over time during the construction period, with the massing of the taller electrical infrastructure most visible over the foreground hedgerows and trees, becoming a defining feature in the backdrop of the view.	Walkers and residents: <b>Significant</b> , medium-term, temporary Motorists: <b>Significant</b> , medium-term, temporary
Viewpoint 5: Public Right of	Walkers: medium-high	High: the construction of the East Anglia ONE North onshore substation will be visible in the mid-ground of the view, backdropped	<b>Significant</b> , medium-term, temporary

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Receptor/Impact	Sensitivity to change	Cumulative magnitude of change East Anglia ONE North and East Anglia TWO	Significance of Cumulative Effect East Anglia ONE North and East Anglia TWO
Way, near Moor Farm ( <b>Figure 29.17d</b> )	Residents: high	by Grove Wood, within the context of the realignment of the existing overhead lines. The East Anglia ONE North onshore substation will be located behind the National Grid substation, and to the west of the East Anglia TWO substation, at a similar distance from the viewpoint (0.64km). The East Anglia ONE North substation slightly extends the spread of development in the view and intensifies the effect of substation development in this section of the view towards Friston, but because it is behind the National Grid substation and adjacent to East Anglia TWO, has a fairly equal contribution towards the overall cumulative effect. The built form of the East Anglia ONE North substation, East Anglia TWO substation and National Grid substation will take shape over time during the construction period, with the massing of the GIS buildings and taller electrical infrastructure visible over the foreground hedgerow, becoming a defining feature of the view.	
Viewpoint 8: B1121 Saxmundham Road, north of Friston ( <b>Figure 29.20d</b> )	Residents: high Motorists: medium	Medium-high: the construction of the East Anglia ONE North onshore substation will be visible in the mid-ground of the view, backdropped by Grove Wood, within the context of the realignment of the existing overhead lines. The East Anglia ONE North onshore substation will be located at closer proximity (0.76km) to the fore of the East Anglia TWO substation and extends the spread of development in the view within the wooded landscape setting of Grove Wood, contributing to the overall cumulative effect with the East Anglia TWO substation, National Grid substation and the overhead line re-alignment works. These cumulative changes will be viewed in the context of the large-scale pylons and high voltage overhead transmission lines which dominate the existing view, with the scale of the onshore substations and National Grid substation subsumed below the vertical scale of the electrical pylons and contained by larger scale of Grove Wood in the backdrop.	Residents: <b>Significant</b> , medium-term, temporary Motorists: <b>Significant</b> , medium-term, temporary
Viewpoint 9: B1121 Aldeburgh	Residents: high Motorists: medium	Medium: the construction of the East Anglia ONE North onshore substation, East Anglia TWO substation and National Grid substation will largely be screened during the construction period by housing in Friston in the foreground and intervening layers of vegetation/trees.	Residents: <b>Significant</b> , medium-term, temporary

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Receptor/Impact	Sensitivity to change	Cumulative magnitude of change East Anglia ONE North and East Anglia TWO	Significance of Cumulative Effect East Anglia ONE North and East Anglia TWO
Road, south of Friston <b>(Figure 29.21d)</b>		Only the larger elements associated with the construction of the onshore infrastructure, such as cranes and the installation of the larger electrical infrastructure, will be visible during construction and will be apparent behind housing in Friston in the view. The East Anglia ONE North substation contributes to extending the spread of development behind Friston in the view, albeit, with marginal visibility of the upper parts of the taller infrastructure.	Motorists: <b>Not significant</b> , medium-term, temporary
<b>Viewpoint 14: Grove Road</b> <b>(Figure 29.26d)</b>	Motorists: medium Cyclists: medium-high	High: the construction of the East Anglia ONE North onshore substation will be visible at close proximity (0.15km), adjacent to the west of the East Anglia TWO onshore substation and to the fore of the National Grid substation in the view, extending the spread of development to close off the open section of the view, and contributing to the overall cumulative effect with the East Anglia TWO substation. The built form of the combined East Anglia TWO and East Anglia ONE North substation will take shape over time during the construction period and become the prevailing feature of the view beyond the pre-construction mitigation planting in the immediate foreground.	Motorists: <b>Significant</b> , medium-term, temporary Cyclists: <b>Significant</b> , medium-term, temporary
Friston Area A (northern part) (residents)	Residents: high	High	<b>Significant</b> , medium-term, temporary
Friston Area B (central part) (residents)	Residents: high	Low	<b>Not significant</b> , medium-term, temporary
Friston Area C (Aldeburgh Road) (residents)	Residents: high	Medium	<b>Significant</b> , medium-term, temporary
Friston Area D (southern part) (residents)	Residents: high	Low	<b>Not significant</b> , medium-term, temporary

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Receptor/Impact	Sensitivity to change	Cumulative magnitude of change East Anglia ONE North and East Anglia TWO	Significance of Cumulative Effect East Anglia ONE North and East Anglia TWO
B1121 Aldeburgh / Saxmundham Road Section B North of Moor Farm to Friston House (Saxmundham Road)	Motorists: medium	Medium-high	<b>Significant</b> , medium-term, temporary
Grove Road Section B Grove Wood (Manor Farm) to northern edge of Friston	Motorists: medium	High	<b>Significant</b> , medium-term, temporary
Suffolk Coastal Cycle Route: Section B Grove Wood (Manor Farm) to northern edge of Friston	Cyclists: medium - high	High	<b>Significant</b> , medium-term, temporary

### 29.2.3 Potential Cumulative Effects during Operation

15. The approach to the assessment of cumulative landscape and visual effects during operation follows a two-stage process. Firstly, effects from project alone assessment in **Appendix 29.3 and Appendix 29.4** are presented in the Preliminary Assessment in **Table A29.3** and assessed for potential to have significant cumulative effects with the proposed East Anglia TWO project. Secondly, a technical assessment of those receptors with potential to undergo significant cumulative effects is presented in full in **Table A29.5** in respect of the relevant landscape and visual receptors.
  
16. The potential cumulative effects during operation would occur primarily in relation to the presence of the East Anglia ONE North and East Anglia TWO onshore substations and National Grid infrastructure. The assessment considers potential cumulative effects on the landscape character and visual amenity of the site and surrounding area, taking into account the maturing of mitigation planting during the operational phase. The potential cumulative effects of the onshore cable route during operation are also assessed in relation to the removal of woodland at the Aldeburgh Road crossing (woodland north of Fitches Lane)

Table A29.5 Operational Stage Cumulative Effects with East Anglia ONE North

Receptor/Impact	Sensitivity to change	Cumulative magnitude of change East Anglia ONE North and East Anglia TWO (first year of operational phase)	Significance of Cumulative Effect East Anglia ONE North and East Anglia TWO (first year of operational phase)	Cumulative magnitude of change East Anglia ONE North and East Anglia TWO (15 years post construction)	Significance of Effect East Anglia ONE North and East Anglia TWO (15 years post construction)
<b>Onshore Cable Route</b>					
<b>Cumulative Landscape Effects – Operation</b>					
LCT 07 Estate Sandlands Area A Thorpeness to Aldringham and Friston	Medium-high	Medium within a local area of the LCT at woodland north of Fitches Lane, due to the felling of mature woodland. Low/negligible over the remainder of this area of the LCT.	<b>Significant</b> , short-term, temporary within a local area of the LCT near woodland north of Fitches Lane. <b>Not significant</b> , short-term, temporary over the remainder of this area of the LCT.	Low within a local area of the LCT near woodland north of Fitches Lane, due to land being reinstated with heathland (directly above the onshore cables) and areas of woodland around the edges of the affected area, in addition to the retained woodland. Low/negligible over the remainder of this area of the LCT.	<b>Not significant</b> , long-term, permanent.
Woodland (within Area A)	High	Medium-high due to felling of mature woodland at woodland north of Fitches Lane.	<b>Significant</b> , short-term, temporary due to felling of mature woodland at woodland north of Fitches Lane.	Medium-high due to felling of mature woodland at woodland north of Fitches Lane.	<b>Not significant</b> , long-term, permanent once replanted woodland established along the outer edges of the onshore cable route has established after 5 years.
Hundred River Valley SLA	Medium	Medium within a local area at woodland north of Fitches Lane, due to the felling of mature woodland.	<b>Significant</b> , short-term, temporary within a localised area of the SLA near	Low within a local area near woodland north of Fitches Lane, due to land being reinstated with heathland	<b>Not significant</b> , long-term, permanent.

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Receptor/Impact	Sensitivity to change	Cumulative magnitude of change East Anglia ONE North and East Anglia TWO (first year of operational phase)	Significance of Cumulative Effect East Anglia ONE North and East Anglia TWO (first year of operational phase)	Cumulative magnitude of change East Anglia ONE North and East Anglia TWO (15 years post construction)	Significance of Effect East Anglia ONE North and East Anglia TWO (15 years post construction)
Area A: Hundred River Valley, south of Aldringham		Low/negligible over the remainder of the SLA.	woodland north of Fitches Lane. <b>Not significant</b> , short-term, temporary over the remainder of the SLA.	(directly above the onshore cables) and areas of woodland around the edges of the affected area, in addition to the retained woodland. Low/negligible over the remainder of the SLA.	
<b>Cumulative Visual Effects – Operation</b>					
Aldringham (residents)	High	Medium The visual amenity experienced by residents of the local area around Aldeburgh Road and Fitches Lane is likely to be changed, due to loss of mature woodland in local views, resulting in more open views (which are currently contained by the woodland) and changes to the setting of Aldringham Court. Woodland will be retained acting as screening between residential properties on Fitches Lane and the onshore cable route and also between the onshore cable route and Aldringham Court Nursing Home.	<b>Significant</b> , short-term, temporary in the vicinity of woodland north of Fitches Lane. Not significant, short-term, temporary from the remainder of the settlement.	Low in views from the vicinity of the Aldeburgh Road crossing, where land will be reinstated with heathland (directly above the onshore cables) and areas of woodland around the edges of the affected area, providing further screening (in addition to the retained woodland). Negligible from the remainder of the settlement.	<b>Not significant</b> , long-term, permanent in the vicinity of the Aldeburgh Road crossing. <b>Not significant</b> , long-term, permanent from the remainder of the settlement.

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Receptor/Impact	Sensitivity to change	Cumulative magnitude of change East Anglia ONE North and East Anglia TWO (first year of operational phase)	Significance of Cumulative Effect East Anglia ONE North and East Anglia TWO (first year of operational phase)	Cumulative magnitude of change East Anglia ONE North and East Anglia TWO (15 years post construction)	Significance of Effect East Anglia ONE North and East Anglia TWO (15 years post construction)
		Negligible from the remainder of the settlement.			
B1122 Aldeburgh Road (motorists)	Medium	Medium over a short 300m section of the B1122, to the south of Aldringham, where the onshore cable route crosses the B1122 and the felling of woodland north of Fitches Lane will be visible in views from a short section of the road immediately passing woodland north of Fitches Lane, and will change the visual amenity experienced from the road, creating more open views which are currently enclosed on either side by mature woodland. Woodland will be retained which will reduce the width of felled area visible to a short section of the road.  Negligible over the remainder of the B1122.	<b>Significant</b> , short-term, temporary over a short 300m section of the B1122, to the south of Aldringham, where the onshore cable route crosses the B1122.  Not significant, long-term, permanent over the remainder of the B1122.	Low over a short 300m section of the B1122, to the south of Aldringham, where the onshore cable route crosses the B1122, where land will be reinstated with heathland (directly above the onshore cables) and areas of woodland around the edges of the affected area, providing further screening (in addition to the retained woodland).  Negligible over the remainder of the B1122.	<b>Significant</b> , long-term, permanent over a short 300m section of the B1122, to the south of Aldringham, where the onshore cable route crosses the B1122.  <b>Not significant</b> , long-term, permanent over the remainder of the B1122.
<b>Onshore Substation and National Grid substation</b>					
<b>Cumulative Landscape Effects – Operation</b>					
LCT 01 Ancient Estate Claylands	Medium-high	High on localised area to the north of Friston within approximately 1.0km around the	<b>Significant</b> , long-term and temporary on localised area to	Medium-high, on localised area to north of Friston within approximately 1.0km around	<b>Significant</b> , long-term and permanent on localised area to north



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Receptor/Impact	Sensitivity to change	Cumulative magnitude of change East Anglia ONE North and East Anglia TWO (first year of operational phase)	Significance of Cumulative Effect East Anglia ONE North and East Anglia TWO (first year of operational phase)	Cumulative magnitude of change East Anglia ONE North and East Anglia TWO (15 years post construction)	Significance of Effect East Anglia ONE North and East Anglia TWO (15 years post construction)
Area A North of Friston, between Grove Road, Fristonmoor and Saxmundham Road		onshore substation and National Grid substation. Low to negligible over remaining areas of the LCT.	north of Friston within approximately 1.0km around the onshore substation and National Grid substation. <b>Not significant</b> , long-term and temporary over remaining areas of LCT.	the onshore substation and National Grid substation. Low to negligible over remaining areas of the LCT.	of Friston within approximately 1.0km around the onshore substation and National Grid substation. <b>Not significant</b> , long-term and permanent over remaining areas of LCT.
LCT 07 Estate Sandlands Area A Thorpeness to Aldringham and Friston	High	High on the localised area to north of Friston within approximately 1.0km around the onshore substation and National Grid substation. Low to negligible over remaining areas of the LCT.	<b>Significant</b> , long-term and temporary on localised area to north of Friston within approximately 1.0km around the onshore substation and National Grid substation. <b>Not significant</b> , long-term and temporary over remaining areas of LCT.	Medium-high on localised area to north of Friston within approximately 1.0km around the onshore substation and National Grid substation. Low to negligible over remaining areas of the LCT.	<b>Significant</b> , long-term and permanent on localised area to north of Friston within approximately 1.0km around the onshore substation and National Grid substation. <b>Not significant</b> , long-term and permanent over remaining areas of the LCT.

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Receptor/Impact	Sensitivity to change	Cumulative magnitude of change East Anglia ONE North and East Anglia TWO (first year of operational phase)	Significance of Cumulative Effect East Anglia ONE North and East Anglia TWO (first year of operational phase)	Cumulative magnitude of change East Anglia ONE North and East Anglia TWO (15 years post construction)	Significance of Effect East Anglia ONE North and East Anglia TWO (15 years post construction)
<b>Cumulative Visual Effects – Operation</b>					
Viewpoint 1: Public Right of Way near Friston House <i>(Figure 29.13d and Figure 29.13e)</i>	Walkers: medium-high Residents: high	High: the operational East Anglia ONE North onshore substation will be visible at closer proximity (0.21km) and to the foreground of the East Anglia TWO onshore substation and National Grid substation in the view, such that it would be the most prominent and large-scale substation in the view, contributing most to the overall cumulative effect. The built form of the East Anglia ONE North substation will form the prevailing feature of the view beyond the bunded landform of the SUDs detention basin and newly planted woodland trees in the immediate foreground.	Walkers and residents: <b>Significant</b> , long-term, temporary	Negligible: Mitigation woodland planting between the viewpoint and the East Anglia ONE North onshore substation around the bunded landform of the SUDs basin will be located in the immediate foreground of the view and is predicted to entirely screen the view of the East Anglia ONE North onshore substation, East Anglia TWO onshore substation and East Anglia TWO onshore substation, reducing the magnitude of change to negligible after approximately 15 years post-construction.	Walkers and residents: <b>Not significant</b> , long-term, permanent (note that the woodland planting which will be in the immediate foreground of the view is not shown in <i>Figure 29.13c</i> ).
Viewpoint 2: Friston, Church Road <i>(Figure 29.14d and Figure 29.14e)</i>	Walkers: medium-high Residents: high	High: the operational East Anglia ONE North onshore substation will be visible in the mid-ground of the view, partially screened by layers of intervening hedgerows and mature field boundary trees, but located at closer proximity (0.4km) and to the foreground of the East Anglia TWO onshore substation, National Grid	Walkers and residents: <b>Significant</b> , long-term, temporary	Medium-high: the operational East Anglia ONE North onshore substation will be partially visible in the mid-ground of the view but is increasingly screened by layers of re-instated hedgerows, individual field boundary trees and woodland. It will mainly be the upper parts of the taller	Walkers and residents: <b>Significant</b> , long-term, permanent

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Receptor/Impact	Sensitivity to change	Cumulative magnitude of change East Anglia ONE North and East Anglia TWO (first year of operational phase)	Significance of Cumulative Effect East Anglia ONE North and East Anglia TWO (first year of operational phase)	Cumulative magnitude of change East Anglia ONE North and East Anglia TWO (15 years post construction)	Significance of Effect East Anglia ONE North and East Anglia TWO (15 years post construction)
		substation and overhead re-alignment works, such that it would be the most prominent and large-scale substation in the view, contributing most to the overall cumulative effect. The built form of the East Anglia ONE North substation, particularly the GIS building and taller electrical infrastructure, will be visible over the foreground screening elements, combining with the East Anglia TWO substation to form a defining feature of the view.		infrastructure and buildings within the East Anglia ONE North onshore substation that will be visible, which continue to form prominent features behind and above the intervening layers of re-instated hedgerows, individual field boundary trees and woodland, with the lower infrastructure and ground level features of the East Anglia ONE North onshore substation entirely screened. Due to its closer proximity and larger scale of its visible elements, the East Anglia ONE North onshore substation would be the most prominent substation in the view, contributing most to the overall cumulative effect.	
Viewpoint 4: Friston, Grove Road ( <b>Figure 29.16d</b> and <b>Figure 29.16e</b> )	Walkers: medium-high Residents: high Motorists: medium	Medium: the operational East Anglia ONE North onshore substation will be visible in the mid-ground of the view, partially screened by layers of intervening hedgerows and mature field boundary trees, but located at closer proximity (0.46km) to the	Walkers and residents: <b>Significant</b> , long-term, temporary Motorists: <b>Significant</b> , long-term, temporary	Medium: the view of the operational East Anglia ONE North onshore substation will be similar 15 years post-construction. The hedgerow reinstated alongside Grove Road in the immediate foreground will provide an	Walkers, residents and motorists: <b>Significant</b> , long-term, permanent

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Receptor/Impact	Sensitivity to change	Cumulative magnitude of change East Anglia ONE North and East Anglia TWO (first year of operational phase)	Significance of Cumulative Effect East Anglia ONE North and East Anglia TWO (first year of operational phase)	Cumulative magnitude of change East Anglia ONE North and East Anglia TWO (15 years post construction)	Significance of Effect East Anglia ONE North and East Anglia TWO (15 years post construction)
		foreground of the National Grid substation and overhead re-alignment works, and to the south-west of the East Anglia TWO onshore substation, such that it would be the most prominent and large-scale substation in the view, contributing most to the overall cumulative effect. The built form of the East Anglia ONE North substation, particularly the taller electrical infrastructure, will be visible over the foreground screening elements, combining with the East Anglia TWO substation to form a defining element on the skyline, despite being substantially screened by the intervening landform, hedgerows and trees.		additional layer of screening in the view, as will woodland to the fore of the East Anglia TWO substation along Grove Road, however the taller electrical infrastructure will remain visible over the foreground screening elements, such that the East Anglia ONE North onshore substation will continue to be the most prominent and large-scale substation in the view, contributing most to the overall cumulative effect.	
Viewpoint 5: Public Right of Way, near Moor Farm ( <b>Figure 29.17d</b> and <b>Figure 29.17e</b> )	Walkers: medium-high Residents: high	High: the operational East Anglia ONE North onshore substation will be visible in the mid-ground of the view, backdropped by Grove Wood, within the context of the realigned overhead lines. The East Anglia ONE North onshore substation will be located behind	Walkers and residents: <b>Significant</b> , long-term, temporary	Medium: The PRoW on which the viewpoint is located will be lined by a mature native hedgerow and individual field boundary trees, as shown in the immediate foreground in <b>Figure 29.17e</b> . Provided that this hedgerow is maintained at	Walkers and residents: <b>Significant</b> , long-term, permanent

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		<p>the National Grid substation, and to the west of the East Anglia TWO substation, at a similar distance from the viewpoint (0.64km). The East Anglia ONE North substation slightly extends the spread of development in the view and intensifies the effect of substation development in this section of the view towards Friston, but because it is behind the National Grid substation and adjacent to East Anglia TWO, has a fairly equal contribution towards the overall cumulative effect. The built form of the East Anglia ONE North substation, will be visible over the foreground hedgerow, combining with the East Anglia TWO substation and the National Grid substation to form a defining feature of the view.</p>		<p>approximately 2m high, it will provide effective and immediate screening alongside the PRoW, such that walkers will not be able see directly the view of the East Anglia ONE North substation cumulatively with the East Anglia TWO onshore substation, and National Grid substation, but may see broken views through the foreground foliage of the hedgerow. Views of the East Anglia ONE North substation, East Anglia TWO onshore substation and National Grid substation experienced by residents of Fristonmoor are likely to be increasingly screened by layers of re-instated hedgerows and the 'covert' woodland blocks established to the south of Fristonmoor, with the National Grid overhead line re-alignment forming the most prominent elements in the view.</p>	
Viewpoint 8: B1121 Saxmundham Road, north of Friston	Residents: high	Medium-high: the operational East Anglia ONE North onshore substation will be visible in the	Residents: <b>Significant</b> , long-term, temporary	Medium: the view of the operational East Anglia ONE North onshore substation will	Residents: <b>Significant</b> , long-term, permanent

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Receptor/Impact	Sensitivity to change	Cumulative magnitude of change East Anglia ONE North and East Anglia TWO (first year of operational phase)	Significance of Cumulative Effect East Anglia ONE North and East Anglia TWO (first year of operational phase)	Cumulative magnitude of change East Anglia ONE North and East Anglia TWO (15 years post construction)	Significance of Effect East Anglia ONE North and East Anglia TWO (15 years post construction)
(Figure 29.20d and Figure 29.20e)	Motorists: medium	mid-ground of the view, backdropped by Grove Wood, within the immediate context of the re-aligned overhead lines. The East Anglia ONE North onshore substation will be located at closer proximity (0.76km) to the fore of the East Anglia TWO substation and extends the spread of development in the view within the wooded landscape setting of Grove Wood, contributing to the overall cumulative effect with the East Anglia TWO substation, National Grid substation and the overhead line re-alignment. These cumulative changes will be viewed in the context of the large-scale pylons and high voltage overhead transmission lines which dominate the existing view, with the scale of the onshore substations and National Grid substation subsumed below the vertical scale of the electrical pylons and contained by larger scale of Grove Wood in the backdrop.	Motorists: <b>Significant</b> , long-term, temporary	be similar 15 years post-construction. Hedgerows and woodland planted will provide effective screening of the larger sealing end compound to the north of the overhead line and integrate the other sealing end compounds within the re-instated hedgerow field pattern. Woodland to the west of the East Anglia ONE North substation will provide an additional layer of screening in the view, however the taller electrical infrastructure will remain visible over these foreground screening elements, such that the East Anglia TWO onshore substation will continue to be the most prominent substation in the view, contributing most to the overall cumulative effect.	Motorists: <b>Not significant</b> , long-term, permanent

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Viewpoint 9: B1121 Aldeburgh Road, south of Friston ( <b>Figure 29.21d</b> and <b>Figure 29.21e</b> )	Residents: high Motorists: medium	Medium: the operational East Anglia ONE North onshore substation, East Anglia TWO substation and National Grid substation will largely be screened during the construction period by housing in Friston in the foreground and intervening layers of vegetation/trees. Only the upper parts of the larger elements of the onshore infrastructure will be visible and apparent behind housing in Friston in the view. The East Anglia ONE North substation contributes to extending the spread of development behind Friston in the view, albeit, with marginal visibility of the upper parts of the taller infrastructure.	Residents: <b>Significant</b> , long-term, temporary Motorists: <b>Not significant</b> , long-term, temporary	Medium: the view of the operational East Anglia ONE North onshore substation, cumulatively with the East Anglia TWO substation and National Grid infrastructure will be similar 15 years post-construction. Woodland and hedgerows planted during construction will not be visible in the view due to the height and position of intervening buildings and housing in Friston.	Residents: <b>Significant</b> , long-term, permanent Motorists: <b>Not significant</b> , long-term, permanent
Friston Area A (northern part) (residents)	Residents: high	High	<b>Significant</b> , long-term, temporary	Medium-high	<b>Significant</b> , long-term, permanent
Friston Area B (central part) (residents)	Residents: high	Low	<b>Not significant</b> , long-term, temporary	Negligible	<b>Not significant</b> , long-term, permanent
Friston	Residents: high	Medium	<b>Significant</b> , long-term, temporary.	Medium	<b>Significant</b> , long-term, permanent



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Receptor/Impact	Sensitivity to change	Cumulative magnitude of change East Anglia ONE North and East Anglia TWO (first year of operational phase)	Significance of Cumulative Effect East Anglia ONE North and East Anglia TWO (first year of operational phase)	Cumulative magnitude of change East Anglia ONE North and East Anglia TWO (15 years post construction)	Significance of Effect East Anglia ONE North and East Anglia TWO (15 years post construction)
Area C (Aldeburgh Road) (residents)					
Friston Area D (southern part) (residents)	Residents: high	Low	<b>Not significant</b> , long-term, temporary	Negligible	<b>Not significant</b> , long-term, permanent
B1121 Aldeburgh / Saxmundham Road Section B North of Moor Farm to Friston House (Saxmundham Road)	Motorists: medium	Medium-high	<b>Significant</b> , long-term, temporary.	Medium	<b>Not significant</b> , long-term, permanent
Grove Road Section B Grove Wood (Manor Farm) to northern edge of Friston	Motorists: medium	High	<b>Significant</b> , long-term, temporary	Medium-high	<b>Significant</b> , long-term, permanent
Suffolk Coastal Cycle Route: Section B Grove Wood (Manor Farm) to northern edge of Friston	Cyclists: medium - high	High	<b>Significant</b> , long-term, temporary	Medium-high	<b>Significant</b> , long-term, permanent



### 29.2.4 Cumulative Effects during Decommissioning with East Anglia TWO

17. No decision has been made regarding the final decommissioning policy for the onshore infrastructure as it is recognised that industry best practice, rules and legislation change over time. An Onshore Decommissioning Plan will be provided, as secured under the requirements of the draft DCO. The onshore substation will be likely removed and be reused or recycled. It is anticipated that the onshore cable would be decommissioned (de-energised) and either the cables and jointing bays left *in situ* or removed depending on the requirements of the Onshore Decommissioning Plan approved by Local Planning Authority. The detail and scope of the decommissioning works will be determined by the relevant legislation and guidance at the time of decommissioning and agreed with the regulator. As such, for the purposes of a worst-case scenario, impacts no greater than those identified for the construction phase are expected for the decommissioning phase.

## 29.3 Cumulative Effects with Other Developments

### 29.3.1 Preliminary Assessment

18. Following a review of projects which have the potential to overlap temporally or spatially with the proposed East Anglia ONE North project, two further developments has been scoped into the cumulative landscape and visual effect assessment. **Table A29.6** below provides detail regarding the projects.
19. The full list of projects for consideration has been developed in consultation with the Local Planning Authority. The remainder of the section details the nature of the cumulative impacts against all those receptors scoped in for cumulative assessment.

**Table A29.6 Summary of Projects Considered for the CIA in Relation to LVIA**

Project Name	Status	Development Period	<sup>1</sup> Distance from East Anglia TWO Onshore Development Area	Project Definition	Project data status	Included in CIA?	Rationale
Sizewell C New Nuclear Power Station	PEIR formally submitted 04.01.19.	Planning application expected in 2020. Construction expected to commence in 2021.	1.4km	A new nuclear power station at Sizewell in Suffolk. Located to the north of the existing Sizewell B Power Station Complex, Sizewell C New Nuclear Power Station would have an expected electrical capacity of approximately 3,260 megawatts (MW). Full PEIR available: <a href="https://www.edfenergy.com/download-centre?keys=&amp;tid=1380&amp;year%5Bvalue%5D%5Byear%5D=">https://www.edfenergy.com/download-centre?keys=&amp;tid=1380&amp;year%5Bvalue%5D%5Byear%5D=</a>	Tier 5 <sup>2</sup>	Yes	Potential overlap of construction and operational phases

<sup>1</sup> Shortest distance between the considered project and East Anglia TWO– unless specified otherwise

<sup>2</sup> Based on criteria outlined in **section 5.7.2** of **Chapter 5 EIA Methodology**

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Project Name	Status	Development Period	<sup>1</sup> Distance from East Anglia TWO Onshore Development Area	Project Definition	Project data status	Included in CIA?	Rationale
Sizewell B Power Station Complex	Planning application formally submitted 18.04.19. Awaiting Decision.	Construction expected to commence in 2022. Expected construction timetable of 53 months. Peak construction is expected in 2022, completion of construction expected in 2027.	1.4km	The demolition and relocation of facilities at the Sizewell B Power Station Complex. In outline, demolition of various existing buildings (including the outage store, laydown area, operations training centre and technical training facility), and erection of new buildings, including a visitor centre, and the construction of new access road, footpath and amended junction at Sizewell Gap; and associated landscaping and earthworks/recontouring. Full planning application available: <a href="https://publicaccess.eastsuffolk.gov.uk/online-applications/applicationDetails.do?activeTab=summary&amp;keyVal=PQ5NVGQXJJ100">https://publicaccess.eastsuffolk.gov.uk/online-applications/applicationDetails.do?activeTab=summary&amp;keyVal=PQ5NVGQXJJ100</a>	Tier 4 <sup>3</sup>	No	Scoped out of the LVIA due to the form of the SZB proposals which comprises car parking/laydown areas/visitor centre in a location embedded next to and within the existing SZB area, and the distance from SZB and lack of inter-visibility with the onshore substation and National Grid substation

<sup>3</sup> Based on the definition of Tier 4 outlined in **section 5.7.2** of **Chapter 5 EIA Methodology**

20. The approach to the assessment of cumulative landscape and visual effects of the proposed East Anglia ONE North and East Anglia TWO project onshore infrastructure with Sizewell C New Nuclear Power Station follows a two-stage process. Firstly, effects from the proposed East Anglia ONE North project alone assessment in **Appendix 29.3** and **Appendix 29.4** are presented in the Preliminary Assessment in **Table A29.7** below and assessed for potential to have significant cumulative effects with Sizewell C Sizewell C New Nuclear Power Station. Secondly, a technical assessment of those receptors with potential to undergo significant cumulative effects is presented in full in **Table A29.7**, in respect of the relevant landscape and visual receptors.

**Table A29.7 Potential Significant Cumulative Effects with Sizewell C New Nuclear Power Station – Preliminary Assessment**

Receptor/Impact	Potential for significant CONSTRUCTION STAGE cumulative effect	Potential for significant OPERATIONAL cumulative effect (first year of operational phase)	Potential for significant OPERATIONAL cumulative effect (15 years post construction)
<b>Landfall</b>			
<b>Landscape receptors</b>			
LCT05 Coastal Dunes and Shingle Ridges	No	No	No
Beach and coastal cliffs	No	No	No
LCT07 Estate Sandlands	Yes	No	No
Agricultural land	No	No	No
Hedgerows	No	No	No
Suffolk Coast and Heaths AONB (and Heritage Coast) Area A: AONB between Thorpeness, Sizewell and Leiston	Yes	No	No
<b>Visual receptors</b>			
Thorpeness (residents)	No	No	No
B1353 Thorpeness Road (motorists)	No	No	No
Suffolk Coastal Path (walkers)	Yes	No	No
Sandlings Walk (walkers)	Yes	No	No
<b>Onshore Cable Route</b>			
<b>Landscape receptors</b>			
LCT 01 Ancient Estate Claylands Area A North of Friston, between Grove Road, Fristonmoor and Saxmundham Road	No	No	No
Agricultural land (within Area A)	No	No	No
Woodland (within Area A)	No	No	No
Hedgerows (within Area A)	No	No	No
LCT 01 Ancient Estate Claylands	No	No	No

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Receptor/Impact	Potential for significant CONSTRUCTION STAGE cumulative effect	Potential for significant OPERATIONAL cumulative effect (first year of operational phase)	Potential for significant OPERATIONAL cumulative effect (15 years post construction)
Area C East of Grove Wood, Knodishall			
Agricultural land (within Area C)	No	No	No
Woodland (within Area C)	No	No	No
Hedgerows (within Area C)	No	No	No
LCT 01 Ancient Estate Claylands Area D Leiston and Theberton	No	No	No
LCT05 Coastal Dunes and Shingle Ridges	No	No	No
LCT 06 Coastal Levels Area A Hundred River Valley, south of Aldringham	No	No	No
LCT 06 Coastal Levels Area B Former large meare to the south of Thorpeness	No	No	No
LCT 06 Coastal Levels Area C Marshes of the Minsmere Level	No	No	No
LCT 07 Estate Sandlands Area A Thorpeness to Aldringham and Friston	Yes	No	No
Agricultural land (within Area A)	No	No	No
Woodland (within Area A)	No	No	No
Hedgerows (within Area A)	No	No	No
<b>Scrub vegetation</b> (within Area A)	No	No	No
LCT 07 Estate Sandlands Area B Sizewell and north of Leiston to Dunwich Forest	Yes	No	No
LCT 07 Estate Sandlands Area C Aldeburgh to Snape	No	No	No
Suffolk Coast and Heaths AONB and Heritage Coast Area A: AONB between Thorpeness, Sizewell and Leiston	Yes	No	No

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Receptor/Impact	Potential for significant CONSTRUCTION STAGE cumulative effect	Potential for significant OPERATIONAL cumulative effect (first year of operational phase)	Potential for significant OPERATIONAL cumulative effect (15 years post construction)
Suffolk Coast and Heaths AONB and Heritage Coast Area B: AONB between Thorpeness, Aldeburgh and Snape	No	No	No
Suffolk Coast and Heaths AONB and Heritage Coast Section C: Sizewell and Dunwich Forest	Yes	No	No
Hundred River Valley SLA Area A: Hundred River Valley, south of Aldringham	No	No	No
Hundred River Valley SLA Area B: Majority of the of the SLA	No	No	No
<b>Visual receptors</b>			
Leiston (residents)	Yes	No	No
Aldringham (residents)	No	No	No
Coldfair Green (residents)	No	No	No
Friston (residents)	No	No	No
B1353 Thorpeness Road (motorists)	No	No	No
B1122 Aldeburgh Road (motorists)	Yes	No	No
B1069 Snape Road (motorists)	No	No	No
B1121 Aldeburgh – Saxmundham Road (motorists)	No	No	No
Suffolk Coastal Path (walkers)	Yes	No	No
Sandlings Walk (walkers)	Yes	No	No
Suffolk Coastal Cycle Route (cyclists)	Yes	No	No
<b>Onshore Substation and National Grid substation</b>			
<b>Landscape receptors</b>			
LCT 01 Ancient Estate Claylands Area A North of Friston, between Grove Road, Fristonmoor and Saxmundham Road	No	No	No

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Receptor/Impact	Potential for significant CONSTRUCTION STAGE cumulative effect	Potential for significant OPERATIONAL cumulative effect (first year of operational phase)	Potential for significant OPERATIONAL cumulative effect (15 years post construction)
Agricultural land (within Area A)	No	No	No
Woodland (within Area A)	No	No	No
Hedgerows (within Area A)	No	No	No
LCT 01 Ancient Estate Claylands Area B East of Saxmundham	No	No	No
Ancient Estate Claylands LCT (01) Area C East of Grove Wood, Knodishall	No	No	No
Agricultural land (within Area C)	No	No	No
Woodland (within Area C)	No	No	No
Hedgerows (within Area C)	No	No	No
LCT 01 Ancient Estate Claylands Area D Leiston and Theberton	No	No	No
LCT05 Coastal Dunes and Shingle Ridges	No	No	No
LCT 06 Coastal Levels	No	No	No
LCT 07 Estate Sandlands Area A Thorpeness to Aldringham and Friston	Yes	Yes	Yes
Agricultural land (within Area A)	No	No	No
Woodland (within Area A)	No	No	No
Hedgerows (within Area A)	No	No	No
LCT 07 Estate Sandlands Area B Sizewell and north of Leiston to Dunwich Forest	Yes	Yes	Yes
LCT 07 Estate Sandlands Area C Aldeburgh to Snape	No	No	No
Suffolk Coast and Heaths AONB and Heritage Coast	No	No	No
Hundred River Valley SLA	No	No	No



Receptor/Impact	Potential for significant CONSTRUCTION STAGE cumulative effect	Potential for significant OPERATIONAL cumulative effect (first year of operational phase)	Potential for significant OPERATIONAL cumulative effect (15 years post construction)
<b>Visual Receptors</b>			
Viewpoint 1: Public Right of Way near Friston House	No	No	No
Viewpoint 2: Friston, Church Road	No	No	No
Viewpoint 3: Grove Road, near Pear Tree Farm	No	No	No
Viewpoint 4: Friston, Grove Road	No	No	No
Viewpoint 5: Public Right of Way, near Moor Farm	No	No	No
Viewpoint 6: Friston, Village Green	No	No	No
Viewpoint 7: Public Right of Way, east of Friston	No	No	No
Viewpoint 8: B1121 Saxmundham Road, north of Friston	No	No	No
Viewpoint 9: B1121 Aldeburgh Road, south of Friston	No	No	No
Viewpoint 10: B1119 Saxmundham Road	No	No	No
Viewpoint 11: Knodishall Hall	No	No	No
Viewpoint 12: Knodishall Common	No	No	No
Viewpoint 13: B1069 Snape Road	No	No	No
Friston (residents)	No	No	No
B1121 Aldeburgh / Saxmundham Road	No	No	No
Grove Road	No	No	No
Suffolk Coastal Path	No	No	No
Suffolk Coastal Cycle Route	No	No	No
Sandling's Walk	No	No	No

### 29.3.2 Potential Cumulative Effects during Construction

21. A technical assessment of those receptors with potential to undergo significant construction stage cumulative effects with Sizewell C New Nuclear Power Station is presented in full in **Table A29.8** below. The effects assessment in **Table A29.8** assumes that the construction period for the East Anglia ONE North and East Anglia TWO onshore infrastructure occurs during the 10 to 12 year construction period expected for Sizewell C Sizewell C New Nuclear Power Station.

**Table A29.8 Construction Stage Cumulative Effects with Sizewell C Sizewell C New Nuclear Power Station**

Receptor	Sensitivity to change	Cumulative magnitude of change with Sizewell C	Significance of Cumulative Effect with Sizewell C
<b>Landfall</b>			
<b>Cumulative Landscape Effects</b>			
LCT07 Estate Sandlands	Medium-high	Low due to the distance between the landfall and Sizewell C, their visual separation by large areas of Sandlings Forest and coastline, and the relatively small scale of the construction works/footprint of the landfall.	<b>Not significant</b> , medium-term and temporary landfall.
Suffolk Coast and Heaths AONB (and Heritage Coast) Area A: AONB between Thorpeness, Sizewell and Leiston	Medium-high	Low due to the distance between the landfall and Sizewell C, their visual separation by large areas of Sandlings Forest and coastline, and the relatively small scale of the construction works/footprint of the landfall.	<b>Not significant</b> , medium-term and temporary
<b>Cumulative Visual Effects</b>			
Suffolk Coastal Path (walkers)	Medium-high	High sequential change to views experienced over a 1km section of the route, to the north of Thorpeness, where the route of the path passes the landfall and over a 5 km section of the route between Sizewell and Dunwich Heath, where the Suffolk Coastal Path passes in close proximity to the construction of Sizewell C. Low over the remainder of the Suffolk Coastal Path.	<b>Significant</b> , medium-term and temporary sequential effect to views experienced over a 1km section of the route, to the north of Thorpeness, where the route of the path passes the landfall and over a 5km section of the route between Sizewell and Dunwich Heath, where the Suffolk Coastal Path passes in close proximity to the construction of Sizewell C <b>Not significant</b> , medium-term and temporary over the remainder of the Suffolk Coastal Path.
Sandlings Walk (walkers)	Medium-high	High sequential change to views experienced over a 1.0km section of the route, to the north of Thorpeness, where the route	<b>Significant</b> , medium-term and temporary sequential effect to views experienced over a 1km section of the route, to the north

Receptor	Sensitivity to change	Cumulative magnitude of change with Sizewell C	Significance of Cumulative Effect with Sizewell C
		of the path passes the landfall and over a 6km section of the route between Sizewell, Minsmere Haven, Leiston Abbey and Eastbridge where the walk passing through the Sizewell C construction area.  Low over the remainder of the Sandling's Walk.	of Thorpeness, where the route of the path passes the landfall and over a 6km section of the route between Sizewell, Minsmere Haven, Leiston Abbey and Eastbridge where the walk passing through the Sizewell C construction area.  <b>Not significant</b> , medium-term and temporary over the remainder of the Sandling's Walk.
<b>Onshore cable route</b>			
<b>Cumulative Landscape Effects</b>			
LCT 07 Estate Sandlands Area A Thorpeness to Aldringham and Friston	Medium-high	High due to the overall changes occurring as a result of the construction of the East Anglia ONE North and East Anglia TWO onshore cable route and Sizewell C on the character of Area A of the Estate Sandlands LCT.  Low change to the landscape character to the west of Aldringham, where the cumulative interaction between the onshore cable corridor and Sizewell C becomes limited with their increasing distance apart.	<b>Significant</b> , medium-term and temporary during construction period for East Anglia ONE North and East Anglia TWO onshore cable corridor construction, on the character of Area A of the Estate Sandlands LCT.  <b>Not significant</b> , medium-term and temporary change to the landscape character to the west of Aldringham, where the cumulative interaction between the onshore cable corridor and Sizewell C becomes limited with their increasing distance apart.
LCT 07 Estate Sandlands Area B Sizewell and north of Leiston to Dunwich Forest	Medium	High due to the overall changes occurring as a result of the construction of the East Anglia ONE North and East Anglia TWO onshore cable route and Sizewell C on the character of Area B of the Estate Sandlands LCT, primarily arising as a result of the contribution of Sizewell C construction in this area near the existing Sizewell Power station.	<b>Significant</b> , medium-term and temporary during construction period for East Anglia ONE North and East Anglia TWO onshore cable corridor construction, on the character of Area B the Estate Sandlands LCT, primarily arising as a result of the contribution of Sizewell C construction in this area near Sizewell Power station.
Suffolk Coast and Heaths AONB (and Heritage Coast) Area A: Sizewell and Dunwich Forest	High	High due to the overall changes occurring as a result of the construction of the East Anglia ONE North and East Anglia TWO onshore cable route and Sizewell C on the character and special qualities of Area A of the Suffolk Coast and Heaths AONB.  Low change to the landscape character to the west of Aldringham, where the	<b>Significant</b> , medium-term and temporary during construction period for East Anglia ONE North and East Anglia TWO onshore cable corridor construction, on the character and special qualities of Area A of the AONB.  <b>Not significant</b> , medium-term and temporary change to the landscape character to the west of Aldringham, where the

Receptor	Sensitivity to change	Cumulative magnitude of change with Sizewell C	Significance of Cumulative Effect with Sizewell C
		cumulative interaction between the onshore cable corridor and Sizewell C becomes limited with their increasing distance apart as the onshore cable corridor extends outside the AONB.	cumulative interaction between the onshore cable corridor and Sizewell C becomes limited with their increasing distance apart as the onshore cable corridor extends outside the AONB.
Suffolk Coast and Heaths AONB (and Heritage Coast) Area C: Sizewell and Dunwich Forest	Medium	High due to the overall changes occurring as a result of the construction of the East Anglia ONE North and East Anglia TWO onshore cable route and Sizewell C on the character and special qualities of Area C of the AONB primarily arising as a result of the contribution of Sizewell C construction in the area near Sizewell Power station.	<b>Significant</b> , medium-term and temporary during construction period for East Anglia ONE North and East Anglia TWO onshore cable corridor construction, on the character and special qualities of Area C of the AONB primarily arising as a result of the contribution of Sizewell C construction near Sizewell Power station.
<b>Cumulative Visual Effects</b>			
Leiston (residents)	High	Negligible from the majority of the settlement  Low from localised areas along the eastern edges of Leiston where there is potential for distant visibility of the onshore cable corridor construction to the east and Sizewell C construction to the north.	<b>Not significant</b> , medium-term, temporary
B1122 Aldeburgh Road (motorists)	Medium	Medium, sequential change due to views of the onshore cable corridor construction over a medium 250m section of the B1122 to the south of Aldringham and views of the Sizewell C construction area over a 1.5km section of the B1122 between Leiston and Theberton.  Low/negligible over the remainder of the B1122.	<b>Not significant</b> , medium-term and temporary sequential effect due to views of the onshore cable corridor construction over a medium 250m section of the B1122 to the south of Aldringham and views of the Sizewell C construction area over a 1.5km section of the B1122 between Leiston and Theberton.
Suffolk Coastal Path (walkers)	Medium-high	High sequential change to views experienced over a 1.8km section of the route to the north of Thorpeness, where the onshore cable route crosses or is adjacent to the Suffolk Coastal Path and over a 5km section of the route between Sizewell and Dunwich Heath, where the Suffolk Coastal Path passes in close proximity to the construction of Sizewell C and where the changes primarily	<b>Significant</b> , medium-term and temporary sequential effect to views experienced over a 1.8km section of the route to the north of Thorpeness, where the onshore cable route crosses or is adjacent to the Suffolk Coastal Path and over a 5km section of the route between Sizewell and Dunwich Heath, where the Suffolk Coastal Path passes in close proximity to the construction of Sizewell C and

Receptor	Sensitivity to change	Cumulative magnitude of change with Sizewell C	Significance of Cumulative Effect with Sizewell C
		<p>arise as a result of the contribution of Sizewell C construction.</p> <p>Low over the remainder of the Suffolk Coastal Path.</p>	<p>where the effect on views primarily arises as a result of the contribution of Sizewell C construction.</p> <p><b>Not significant</b>, medium-term and temporary over the remainder of the Suffolk Coastal Path.</p>
Sandlings Walk (walkers)	Medium-high	<p>High sequential change to views experienced due to visibility over three sections of the route: from the edge of Friston to Sloe Lane for approximately 2.2km where the route runs parallel to and subsequently crosses the onshore cable route; from the edge of Aldringham Common to Sizewell for approximately 1.7km where the route crosses through and then runs parallel to the onshore cable route; and over a 6km section of the route between Sizewell, Minsmere Haven, Leiston Abbey and Eastbridge where the walk passing through the Sizewell C construction area and where the changes primarily arise as a result of the contribution of Sizewell C construction.</p> <p>Low over the remainder of the Sandlings Walk.</p>	<p><b>Significant</b>, medium-term and temporary sequential effect to views experienced over three sections of the route: from the edge of Friston to Sloe Lane for approximately 2.2km where the route runs parallel to and subsequently crosses the onshore cable route; from the edge of Aldringham Common to Sizewell for approximately 1.7km where the route crosses through and then runs parallel to the onshore cable route; and over a 6km section of the route between Sizewell, Minsmere Haven, Leiston Abbey and Eastbridge where the walk passing through the Sizewell C construction area and where the changes primarily arise as a result of the contribution of Sizewell C construction.</p> <p><b>Not significant</b>, medium-term and temporary over the remainder of the Sandlings Walk.</p>
Suffolk Coastal Cycle Route (cyclists)	Medium-high	<p>High sequential change on views experienced over two sections of the route: a 500m section of the route, along Grove Road between Friston and Grove Wood, where the onshore cable route crosses or is adjacent to the route of Suffolk Coastal Cycle Route; and from a 2.5km section between Leiston Abbey and Eastbridge where the route passes through the Sizewell C construction area and where the changes primarily arise as a result of the contribution of Sizewell C construction.</p> <p>Low over the remainder of the Suffolk Coastal Cycle Route.</p>	<p><b>Significant</b>, medium-term and temporary sequential effect on views experienced over two sections of the route: a 500m section of the route, along Grove Road between Friston and Grove Wood, where the onshore cable route crosses or is adjacent to the route of Suffolk Coastal Cycle Route; and from a 2.5km section between Leiston Abbey and Eastbridge where the route passes through the Sizewell C construction area and where the changes primarily arise as a result of the contribution of Sizewell C construction.</p>

Receptor	Sensitivity to change	Cumulative magnitude of change with Sizewell C	Significance of Cumulative Effect with Sizewell C
			<b>Not significant</b> , medium-term and temporary over the remainder of the Suffolk Coastal Cycle Route.
<b>Onshore Substations and National Grid Substation</b>			
<b>Cumulative Landscape Effects</b>			
LCT 07 Estate Sandlands Area A Thorpeness to Aldringham and Friston	Medium-high	Low due to the long distance between the onshore substation/National Grid substation and Sizewell C, their visual separation by areas of woodland/urban development, and the very different geographic areas of the LCT that may be influenced by each.	<b>Not significant</b> , medium-term and temporary due to the long distance between the onshore substation/National Grid substation and Sizewell C, their visual separation by areas of woodland/urban development, and the very different geographic areas of the LCT that may be influenced by each.
LCT 07 Estate Sandlands Area B Sizewell and north of Leiston to Dunwich Forest	Medium	Low due to the long distance between the onshore substation/National Grid substation and Sizewell C, their visual separation by areas of woodland/urban development, and the very different geographic areas of the LCT that may be influenced by each.	<b>Not significant</b> , medium-term and temporary due to the long distance between the onshore substation/National Grid substation and Sizewell C, their visual separation by areas of woodland/urban development, and the very different geographic areas of the LCT that may be influenced by each.

### 29.3.3 Potential Cumulative Effects during Operation

22. A technical assessment of those receptors with potential to undergo significant operational cumulative effects with Sizewell C New Nuclear Power Station is presented in full in **Table A29.9** below.



**Table A29.9 Operational Cumulative Effects with Sizewell C**

Receptor	Sensitivity to change	Cumulative magnitude of change with Sizewell C (first year of operational phase)	Significance of Cumulative Effect with Sizewell C (first year of operational phase)	Cumulative magnitude of change with Sizewell C (15 years post construction)	Significance of Cumulative Effect with Sizewell C (15 years post construction)
<b>Onshore Substations and National Grid Substation</b>					
<b>Cumulative Landscape Effects</b>					
LCT 07 Estate Sandlands Area A Thorpeness to Aldringham and Friston	Medium-high	Low due to the long distance between the onshore substation / National Grid substation and Sizewell C, their visual separation by areas of woodland /urban development, and the very different geographic areas of the LCT that may be influenced by each.	<b>Not significant</b> , long-term and temporary due to the long distance between the onshore substation / National Grid substation and Sizewell C, their visual separation by areas of woodland/ urban development, and the very different geographic areas of the LCT that may be influenced by each.	Low due to the long distance between the onshore substation / National Grid substation and Sizewell C, their visual separation by areas of woodland/ urban development, and the very different geographic areas of the LCT that may be influenced by each.	<b>Not significant</b> , long-term and permanent due to the long distance between the onshore substation/ National Grid substation and Sizewell C, their visual separation by areas of woodland/urban development, and the very different geographic areas of the LCT that may be influenced by each.
LCT 07 Estate Sandlands Area B Sizewell and north of Leiston to Dunwich Forest	Medium	Low due to the long distance between the onshore substation / National Grid substation and Sizewell C, their visual separation by areas of woodland /urban development, and the very different geographic areas of the LCT that may be influenced by each.	<b>Not significant</b> , long-term and temporary due to the long distance between the onshore substation/National Grid substation and Sizewell C, their visual separation by areas of woodland/ urban development, and the very different geographic areas of the LCT that may be influenced by each.	Low due to the long distance between the onshore substation/National Grid substation and Sizewell C, their visual separation by areas of woodland/ urban development, and the very different geographic areas of the LCT that may be influenced by each.	<b>Not significant</b> , long-term and permanent due to the long distance between the onshore substation/ National Grid substation and Sizewell C, their visual separation by areas of woodland/urban development, and the very different geographic areas of the LCT that may be influenced by each.

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