



**SCOTTISHPOWER  
RENEWABLES**

# **East Anglia TWO Offshore Windfarm**

## **Appendix 19.4** Emissions Sensitivity Test

### **Environmental Statement Volume 3**

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## Glossary of Acronyms

AQMA	Air Quality Management Area
EPUK	Environmental Protection United Kingdom
IAQM	Institute of Air Quality Management
LAQM	Local Air Quality Management
NO <sub>2</sub>	Nitrogen Dioxide
PM <sub>10</sub>	Particulate Matter with a mean aerodynamic diameter of less than 10 µm
PM <sub>2.5</sub>	Particulate Matter with a mean aerodynamic diameter of less than 2.5 µm
SPA	Special Protected Area
SSSI	Site of Special Scientific Interest
TG	Technical Guidance
µg.m-3	Micrograms (of pollutant) per cubic meter (of air)

## Glossary of Terminology

Applicant	East Anglia TWO 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 TWO project	The proposed project consisting of up to 75 wind turbines, up to four offshore electrical platforms, up to one construction, operation and maintenance platform, inter-array cables, platform link cables, up to one operational meteorological mast, up to two offshore export cables, fibre optic cables, landfall infrastructure, onshore cables and ducts, onshore substation, and National Grid infrastructure.
East Anglia TWO 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.
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 regular 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 TWO 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 TWO project to the national electricity grid which will be owned by National Grid but is being consented as part of the proposed East Anglia TWO 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 TWO 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 TWO 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 TWO project.
Transition Bay	Underground structures at the landfall that house the joints between the offshore export cables and the onshore cables.



## 19.4 Emissions Sensitivity Test

1. The following appendix to **Chapter 19 Air Quality** details the results of the sensitivity test carried out for three assessment scenarios:
  - The proposed East Anglia TWO project alone; and
  - Cumulative scenario 1 - the proposed East Anglia TWO project and proposed East Anglia ONE North project are built simultaneously.
2. This appendix considers the effects of the proposed East Anglia TWO project at receptors should emissions from road vehicles and background pollutant concentrations not decrease as predicted.
3. The sensitivity test was carried out using the same assessment tools as detailed in **section 19.4.3.2** of **Chapter 19 Air Quality**, but emission factors and background concentrations were kept at the base year (2018) in the future year 2023 and 2026 scenarios considered.
4. The results of the sensitivity test are given in **section 19.1** and **section 19.2**.

### 19.1 Human Receptors

#### 19.1.1 Proposed East Anglia TWO Project Alone

5. Predicted NO<sub>2</sub>, PM<sub>10</sub> and PM<sub>2.5</sub> concentrations for the 2023 year of peak construction are detailed in **Table A19.1** to **Table A19.4**. Concentrations for 'without project' scenarios and the predicted change in NO<sub>2</sub>, PM<sub>10</sub> and PM<sub>2.5</sub> concentrations, as a result of the proposed East Anglia TWO project, are also shown for comparison purposes.

**Table A19.1 Annual Mean NO<sub>2</sub> results at Sensitive Human Receptor Locations (read in conjunction with Figure 19.3)**

Receptor ID	Annual mean NO <sub>2</sub> concentrations (µg.m <sup>-3</sup> )				
	Without East Anglia TWO	With East Anglia TWO	Change	Change as % of Objective	Impact descriptor
R1	40.65	41.55	0.90	2%	Moderate adverse
R2	22.97	23.42	0.45	1%	Negligible
R3	21.44	21.85	0.41	1%	Negligible
R4	19.70	19.97	0.27	1%	Negligible
R5	17.89	18.13	0.24	1%	Negligible
R6	16.55	16.84	0.29	1%	Negligible

Receptor ID	Annual mean NO <sub>2</sub> concentrations (µg.m <sup>-3</sup> )				
	Without East Anglia TWO	With East Anglia TWO	Change	Change as % of Objective	Impact descriptor
R7	16.78	17.07	0.29	1%	Negligible
R8	16.09	16.28	0.19	0%	Negligible
R9	11.01	11.36	0.35	1%	Negligible
R10	9.76	10.02	0.26	1%	Negligible
R11	9.95	10.18	0.23	1%	Negligible
R12	9.60	9.79	0.19	0%	Negligible
R13	14.46	14.92	0.46	1%	Negligible
R14	13.38	13.71	0.33	1%	Negligible
R15	11.30	11.85	0.55	1%	Negligible
R16	11.14	11.67	0.53	1%	Negligible

Table A19.2 Annual Mean PM<sub>10</sub> results at Sensitive Human Receptor Locations (read in conjunction with Figure 19.3)

Receptor ID	Annual mean PM <sub>10</sub> concentrations (µg.m <sup>-3</sup> )				
	Without East Anglia TWO	With East Anglia TWO	Change	Change as % of Objective	Impact descriptor
R1	19.43	19.60	0.17	0%	Negligible
R2	17.61	17.68	0.07	0%	Negligible
R3	16.33	16.39	0.06	0%	Negligible
R4	15.94	16.01	0.07	0%	Negligible
R5	15.71	15.77	0.06	0%	Negligible
R6	17.15	17.21	0.06	0%	Negligible
R7	17.18	17.24	0.06	0%	Negligible
R8	16.02	16.06	0.04	0%	Negligible
R9	15.04	15.09	0.05	0%	Negligible
R10	15.62	15.65	0.04	0%	Negligible
R11	14.42	14.46	0.05	0%	Negligible
R12	14.76	14.79	0.03	0%	Negligible
R13	15.86	15.93	0.07	0%	Negligible

Receptor ID	Annual mean PM <sub>10</sub> concentrations (µg.m <sup>-3</sup> )				
	Without East Anglia TWO	With East Anglia TWO	Change	Change as % of Objective	Impact descriptor
R14	16.43	16.48	0.05	0%	Negligible
R15	14.41	14.49	0.08	0%	Negligible
R16	14.39	14.46	0.07	0%	Negligible

**Table A19.3 Short-term Exceedances of PM10 at Sensitive Human Receptor Locations (read in conjunction with Figure 19.3)**

Receptor ID	Number of Exceedances of the Short-Term PM <sub>10</sub> Objective (Days)			
	Without Scenario 1	With Scenario 1	Change	
R1	3	3	0	
R2	1	1	0	
R3	0	0	0	
R4	0	0	0	
R5	0	0	0	
R6	1	1	0	
R7	1	1	0	
R8	0	0	0	
R9	0	0	0	
R10	0	0	0	
R11	0	0	0	
R12	0	0	0	
R13	0	0	0	
R14	0	0	0	
R15	0	0	0	
R16	0	0	0	

**Table A19.4 Annual Mean PM<sub>2.5</sub> results at Sensitive Human Receptor Locations (read in conjunction with Figure 19.3)**

Receptor ID	Annual mean PM <sub>2.5</sub> concentrations (µg.m <sup>-3</sup> )				
	Without East Anglia TWO	With East Anglia TWO	Change	Change as % of Objective	Impact descriptor
R1	12.10	12.21	0.11	0%	Negligible
R2	10.65	10.69	0.05	0%	Negligible
R3	10.15	10.19	0.04	0%	Negligible
R4	9.94	9.98	0.04	0%	Negligible
R5	9.79	9.83	0.04	0%	Negligible
R6	10.06	10.09	0.03	0%	Negligible
R7	10.08	10.11	0.04	0%	Negligible
R8	9.86	9.89	0.03	0%	Negligible
R9	9.18	9.21	0.03	0%	Negligible
R10	9.26	9.29	0.02	0%	Negligible
R11	8.99	9.02	0.03	0%	Negligible
R12	9.18	9.21	0.02	0%	Negligible
R13	9.68	9.73	0.04	0%	Negligible
R14	9.77	9.80	0.03	0%	Negligible
R15	9.06	9.11	0.05	0%	Negligible
R16	9.05	9.10	0.05	0%	Negligible

6. The results of the base year emissions sensitivity test for the proposed East Anglia TWO project indicate that annual mean concentrations of NO<sub>2</sub> at receptor R1 would be in exceedance of the Objective, in both the 'without project' and 'with project' scenarios. This receptor is located within the Stratford St Andrew Air Quality Management Area (AQMA). Pollutant concentrations at all other receptors were predicted to be 'well below' (i.e. less than 75% of) the relevant Objectives.
7. The change in NO<sub>2</sub> concentrations at receptor R1 was 2% of the Objective, which corresponds to a 'moderate adverse' impact, in accordance with IAQM and Environmental Protection United Kingdom (EPUK) guidance (IAQM and EPUK 2017). This is due to the concentrations being in exceedance of the Objective. All other receptors were predicted to experience a 'negligible' impact.

8. All predicted annual mean NO<sub>2</sub> concentrations were predicted to be below 60µg.m<sup>-3</sup> and therefore, in accordance with Defra guidance in Local Air Quality Management (LAQM). Technical Guidance (TG) (16) (Defra 2016), the 1-hour mean Objective is unlikely to be exceeded. Based on the calculation provided by Defra, as detailed in **Chapter 19 Air Quality**, the short-term PM<sub>10</sub> objective was predicted to be met at all modelled locations, with fewer than 35 exceedances of the daily mean objective of 50µg.m<sup>-3</sup>. Using the Defra calculation, there was no change in the number of days exceeding the daily mean Objective between the ‘without’ and ‘with’ development scenarios.

### 19.1.2 Cumulative Scenario 1

9. Predicted NO<sub>2</sub>, PM<sub>10</sub> and PM<sub>2.5</sub> concentrations for scenario 1 are detailed in **Table A19.5** to **Table A19.8**. Concentrations for ‘without project’ scenarios and the predicted change in NO<sub>2</sub>, PM<sub>10</sub> and PM<sub>2.5</sub> concentrations, as a result of the proposed scenario 1, are also shown for comparison purposes.

**Table A19.5 Annual Mean NO<sub>2</sub> results at Sensitive Human Receptor Locations – Scenario 1**

Receptor ID	Annual mean NO <sub>2</sub> concentrations (µg.m <sup>-3</sup> )				
	Without East Anglia TWO	With East Anglia TWO	Change	Change as % of Objective	Impact descriptor
R1	40.65	41.80	1.15	3%	Moderate adverse
R2	22.97	23.54	0.57	1%	Negligible
R3	21.44	21.96	0.52	1%	Negligible
R4	19.70	20.05	0.35	1%	Negligible
R5	17.89	18.19	0.30	1%	Negligible
R6	16.55	16.92	0.37	1%	Negligible
R7	16.78	17.16	0.38	1%	Negligible
R8	16.09	16.33	0.24	1%	Negligible
R9	11.01	11.47	0.46	1%	Negligible
R10	9.76	10.10	0.34	1%	Negligible
R11	9.95	10.24	0.29	1%	Negligible
R12	9.60	9.84	0.24	1%	Negligible
R13	14.46	15.03	0.57	1%	Negligible
R14	13.38	13.79	0.41	1%	Negligible
R15	11.30	11.99	0.69	2%	Negligible
R16	11.14	11.80	0.66	2%	Negligible

**Table A19.6 Annual Mean PM10 results at Sensitive Human Receptor Locations – Scenario 1**

Receptor ID	Annual mean PM <sub>10</sub> concentrations (µg.m <sup>-3</sup> )				
	Without East Anglia TWO	With East Anglia TWO	Change	Change as % of Objective	Impact descriptor
R1	19.43	19.65	0.22	1%	Negligible
R2	17.61	17.70	0.09	0%	Negligible
R3	16.33	16.41	0.08	0%	Negligible
R4	15.94	16.03	0.08	0%	Negligible
R5	15.71	15.78	0.07	0%	Negligible
R6	17.15	17.23	0.07	0%	Negligible
R7	17.18	17.26	0.08	0%	Negligible
R8	16.02	16.08	0.06	0%	Negligible
R9	15.04	15.11	0.07	0%	Negligible
R10	15.62	15.66	0.05	0%	Negligible
R11	14.42	14.47	0.06	0%	Negligible
R12	14.76	14.81	0.05	0%	Negligible
R13	15.86	15.95	0.09	0%	Negligible
R14	16.43	16.49	0.06	0%	Negligible
R15	14.41	14.50	0.10	0%	Negligible
R16	14.39	14.48	0.09	0%	Negligible

**Table A19.7 Short-term Exceedances of PM10 at Sensitive Human Receptor Locations – Scenario 1**

Receptor ID	Number of Exceedences of the Short-Term PM <sub>10</sub> Objective (Days)		
	Without Scenario 1	With Scenario 1	Change
R1	3	3	0
R2	1	1	0
R3	0	0	0
R4	0	0	0
R5	0	0	0
R6	1	1	0
R7	1	1	0
R8	0	0	0

Receptor ID	Number of Exceedences of the Short-Term PM <sub>10</sub> Objective (Days)		
	Without Scenario 1	With Scenario 1	Change
R9	0	0	0
R10	0	0	0
R11	0	0	0
R12	0	0	0
R13	0	0	0
R14	0	0	0
R15	0	0	0
R16	0	0	0

**Table A19.8 Annual Mean PM<sub>2.5</sub> results at Sensitive Human Receptor Locations – Scenario 1**

Receptor ID	Annual mean PM <sub>2.5</sub> concentrations (µg.m <sup>-3</sup> )				
	Without East Anglia TWO	With East Anglia TWO	Change	Change as % of Objective	Impact descriptor
R1	12.10	12.24	0.14	1%	Negligible
R2	10.65	10.71	0.06	0%	Negligible
R3	10.15	10.20	0.05	0%	Negligible
R4	9.94	9.99	0.05	0%	Negligible
R5	9.79	9.83	0.04	0%	Negligible
R6	10.06	10.10	0.04	0%	Negligible
R7	10.08	10.12	0.05	0%	Negligible
R8	9.86	9.90	0.03	0%	Negligible
R9	9.18	9.22	0.04	0%	Negligible
R10	9.26	9.29	0.03	0%	Negligible
R11	8.99	9.03	0.04	0%	Negligible
R12	9.18	9.21	0.03	0%	Negligible
R13	9.68	9.74	0.05	0%	Negligible
R14	9.77	9.81	0.04	0%	Negligible
R15	9.06	9.13	0.06	0%	Negligible
R16	9.05	9.11	0.06	0%	Negligible

10. The results of the base year emissions sensitivity test for scenario 1 show a similar pattern to the results of the proposed East Anglia TWO project alone assessment. Annual mean concentrations of NO<sub>2</sub> at receptor R1 were predicted to be in exceedance of the Objective, in both scenarios, within the Stratford St Andrew AQMA. Pollutant concentrations at all other receptors were predicted to be 'well below' (i.e. less than 75% of) the relevant Objectives.
11. The change in NO<sub>2</sub> concentrations at receptor R1 was 3% of the Objective, which corresponds to a 'moderate adverse' impact, in accordance with IAQM and EPUK guidance (IAQM and EPUK 2017). This is due to the concentrations being in exceedance of the Objective. All other receptors were predicted to experience a 'negligible' impact.
12. All predicted annual mean NO<sub>2</sub> concentrations were well below 60µg.m<sup>-3</sup> and therefore, in accordance with Defra guidance in LAQM.TG (16) (Defra 2016), the 1-hour mean Objective is unlikely to be exceeded. Based on the calculation provided by Defra, the short-term PM<sub>10</sub> objective was predicted to be met at all modelled locations, with fewer than 35 exceedances of the daily mean objective of 50µg.m<sup>-3</sup>. Using the Defra calculation, there was no change in the number of days exceeding the daily mean Objective between the 'without' and 'with' development scenarios.

## 19.2 Ecological Receptors

13. The results of the sensitivity test at ecological receptors is detailed below.

### 19.2.1 Proposed East Anglia TWO Project Alone

14. The results of the assessment of nutrient nitrogen deposition on designated ecological sites, as a result of the proposed East Anglia TWO project alone are detailed in **Table A19.9** and **Table A19.10**.



**Table A19.9 Nutrient Nitrogen Deposition Results**

Designated ecological site	Transect ID	Habitat	Nutrient nitrogen deposition (kgN.ha.y <sup>-1</sup> )	
			Contribution from background traffic growth	Contribution from the proposed East Anglia TWO project
Sandlings Special Protected Area (SPA)/Leiston-Aldeburgh Site of Special Scientific Interest (SSSI)	T1-1	Broadleaved woodland	0.05	0.08
	T1-2		0.01	0.01
	T1-3	Dwarf shrub heath	0.00	0.00
	T1-4		0.00	0.00
	T1-5		0.00	0.00
Sizewell Marshes SSSI	T2-1	Fen, marsh and swamp	0.03	0.06
	T2-2		0.00	0.01
	T2-3		0.00	0.01
	T2-4		0.00	0.01
	T2-5		0.00	0.00

**Table A19.10 Nutrient Nitrogen Deposition as Percentage of Critical Load**

Designated ecological site	Transect ID	Impact of the proposed East Anglia TWO project as Percentage of Critical Load			Impact of the proposed East Anglia TWO project In-Combination with Background Traffic Growth		
		% of lowest Critical Load	% of mid-range Critical Load	% of highest Critical Load	% of lowest Critical Load	% of mid-range Critical Load	% of highest Critical Load
Sandlings SPA/Leiston-Aldeburgh SSSI	T1-1	0.8%	0.6%	0.4%	1.3%	0.9%	0.7%
	T1-2	0.1%	0.1%	0.1%	0.2%	0.1%	0.1%
	T1-3	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	T1-4	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	T1-5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Sizewell Marshes SSSI	T2-1	0.4%	0.3%	0.2%	0.6%	0.4%	0.3%
	T2-2	0.1%	0.1%	0.0%	0.1%	0.1%	0.1%
	T2-3	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%
	T2-4	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	T2-5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

15. As detailed above, increases in nutrient nitrogen deposition as a result of the proposed East Anglia TWO project, using base year emission factors, were no greater than 1% of the Critical Load range at all locations, including those closest to the road network.
16. The ‘in-combination’ assessment showed that increases in nutrient nitrogen deposition were above 1% of the most stringent Critical Load at the location closest to the road edge in the Sandlings Special Protected Area (SPA)/Leiston-Aldeburgh Site of Special Scientific Interest (SSSI). All other locations were below 1% of the Critical Loads.

### 19.2.2 Cumulative Scenario 1

17. The results of the assessment of nutrient nitrogen deposition on designated ecological sites as a result of the cumulative scenario 1 are detailed in **Table A19.11** and **Table A19.12**.

**Table A19.11 Nutrient Nitrogen Deposition Results – Scenario 1**

Designated ecological site	Transect ID	Habitat	Nutrient nitrogen deposition (kgN.ha.y <sup>-1</sup> )	
			Contribution from background traffic growth	Contribution from Scenario 1
Sandlings SPA/Leiston-Aldeburgh SSSI	T1-1	Broadleaved woodland	0.05	0.11
	T1-2		0.01	0.02
	T1-3	Dwarf shrub heath	0.00	0.00
	T1-4		0.00	0.00
	T1-5		0.00	0.00
Sizewell Marshes SSSI	T2-1	Fen, marsh and swamp	0.03	0.08
	T2-2		0.00	0.02
	T2-3		0.00	0.01
	T2-4		0.00	0.01
	T2-5		0.00	0.01

**Table A19.12 Nutrient Nitrogen Deposition as Percentage of Critical Load – Scenario 1**

Designated ecological site	Transect ID	Impact of Scenario 1 as Percentage of Critical Load			Impact of Scenario 1 In-Combination with Background Traffic Growth		
		% of lowest Critical Load	% of mid-range Critical Load	% of highest Critical Load	% of lowest Critical Load	% of mid-range Critical Load	% of highest Critical Load
Sandlings SPA/Leiston-Aldeburgh SSSI	T1-1	1.1%	0.7%	0.5%	1.6%	1.0%	0.8%
	T1-2	0.2%	0.1%	0.1%	0.3%	0.2%	0.1%
	T1-3	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	T1-4	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	T1-5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Sizewell Marshes SSSI	T2-1	0.5%	0.4%	0.3%	0.7%	0.5%	0.4%
	T2-2	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%
	T2-3	0.1%	0.0%	0.0%	0.1%	0.1%	0.0%
	T2-4	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	T2-5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

18. As detailed above, increases in nutrient nitrogen deposition as a result of scenario 1, using base year emission factors, were slightly greater than 1% of the most stringent Critical Load at the Sandlings SPA/Leiston-Aldeburgh SSSI, at the transect location closest to the road edge.
19. The ‘in-combination’ assessment showed that increases in nutrient nitrogen deposition were above 1% of the most stringent and mid-range Critical Loads at the location closest to the road edge in the Sandlings SPA/Leiston-Aldeburgh SSSI. All other locations were below 1% of the Critical Loads.

### 19.3 Conclusions

20. The emissions sensitivity test showed that, if emissions reductions are not realised in future years, pollutant concentrations may be in exceedance of the annual mean Objective within the AQMA at Stratford St Andrew, both in the future baseline and with the effect of the proposed East Anglia TWO project alone and cumulative scenario 1. The corresponding impact in this sensitive area would therefore be of a higher magnitude, and would be considered to be ‘substantial adverse’.

21. The impact on the Sizewell Marshes SSSI would not exceed 1% of the Critical Load as a result of the proposed East Anglia TWO project alone or scenario 1 'in-combination' with background traffic growth.
22. At the Sandlings SPA/Leiston-Aldeburgh SSSI, impacts were predicted to be marginally over 1% of the most stringent Critical Load as a result of the proposed East Anglia TWO project alone and scenario 1.
23. However, it is considered that the use of base year emission factors into 2023 is overly conservative, given the context of current UK policy driving improvements in air quality and the increasing proportion of lower emission vehicles in the fleet.