East Anglia TWO Offshore Windfarm

Appendix 19.1

Air Quality Consultation Responses

Environmental Statement
Volume 3

Applicant: East Anglia TWO Limited
Document Reference: 6.3.19.1
SPR Reference: EA2-DWF-ENV-REP-IBR-000911_001 Rev 01
Pursuant to APFP Regulation: 5(2)(a)

Author: Royal HaskoningDHV
Date: October 2019
Revision: Version 1

Revision Summary				
Rev	**Date**	**Prepared by**	**Checked by**	**Approved by**
01	08/10/2019	Paolo Pizzolla	Julia Bolton	Helen Walker

Description of Revisions			
Rev	**Page**	**Section**	**Description**
01	n/a	n/a	Final for Submission

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Glossary of Acronyms

AQMA	Air Quality Management Area
CoCP	Code of Construction Practice
ES	Environmental Statement
ETG	Expert Topic Group
IAQM	Institute of Air Quality Management
OCoCP	Outline Code of Construction Practice
PEIR	Preliminary Environmental Information Report
PM_{10}	Particulate Matter with a mean aerodynamic diameter of less than 10 µm
$PM_{2.5}$	Particulate Matter with a mean aerodynamic diameter of less than 2.5 µm
SCC	Suffolk County Council
SCDC	Suffolk Coastal District Council

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.

19.1 Air Quality Consultation Responses

19.1 Introduction

1. This appendix to ***Chapter 19 Air Quality*** covers those statutory consultation responses that have been received as a response to the Scoping Report (2017), the Preliminary Environmental Information Report (PEIR) (2018) and Expert Topic Group (ETG) Meetings.

2. Responses from stakeholders and regard given by the Applicant have been captured in ***Table A19.1***.

3. As Section 42 consultation for the proposed East Anglia TWO project was conducted in parallel with the proposed East Anglia ONE North project, where appropriate, stakeholder comments which were specific to East Anglia ONE North, but may be of relevance East Anglia TWO, have also been included in the consultation responses for East Anglia TWO.

Table A19.1 Consultation Responses Related to Chapter 19 Air Quality

Consultee	Date/ Document	Comment	Response / where addressed in the ES
The following comments were received prior to consultation on PEIR and were in response to the Scoping Report or direct consultation with stakeholders. These comments were taken into account in the production of the PEIR.			
Suffolk County Council (SCC) and Suffolk Coastal District Council (SCDC)	08/12/2017 Scoping Response	Details of all potential construction site works which may give rise to dust (e.g. excavation, demolition, movement of vehicles, loading and stockpiling of soil and rubble, crushing of material etc.) shall be specified together with the location and the particular methods of dust suppression to be used for each specific activity.	The assessment of impacts associated with construction dust was carried out based on a worst-case scenario, as defined in ***section 19.3.2*** of this chapter. Mitigation measures commensurate with the level of dust expected to be generated by the worst-case activities are detailed in ***section 19.3.3*** of this chapter and will be applied to the onshore infrastructure and Construction Consolidation Sites (CCAS)as a whole, and will be included in a Code of Construction Practice (CoCP). An Outline CoCP (OCoCP) has been submitted with this DCO applicated, secured under the requirements of the draft DCO.
SCC and SCDC	08/12/2017 Scoping Response	Atmospheric concentrations of particulate matter (PM_{10}) arising from all potential construction works, which may give rise to airborne dust shall also be predicted at the nearest relevant receptor locations and submitted for the purposes of the Local Air Quality Management Regime. The predicted concentrations for each receptor shall be formatted for comparison with the objectives included in the Air Quality (England) Regulations 2000 (SI928) and Air Quality (England) Amendment Regulations 2002 (SI3043).	It is not possible to quantitatively predict PM_{10} emissions from construction works. A qualitative assessment of dust and PM_{10} emissions was therefore undertaken in accordance with guidance provided by the Institute of Air Quality Management (IAQM), as detailed in ***section 19.5.1.1*** of this chapter. Quantitative assessment of PM_{10} and $PM_{2.5}$ emissions

Consultee	Date/ Document	Comment	Response / where addressed in the ES
			associated with road vehicle exhaust emissions was carried out and is detailed in ***section 19.5.1.2*** of this chapter.
SCC and SCDC	08/12/2017 Scoping Response	If any of the Air Quality Standards or Objectives in the Air Quality (England) Regulations 2000 (SI928) and Air Quality (England) Amendment Regulations 2002 (SI3043), set for Local Air Quality Management, are predicted to be exceeded by the above mentioned activities, further assessment will be required. This may include monitoring at relevant receptor locations, detailed computer modelling and investigations of solutions to reduce pollutant concentrations.	As detailed above, a quantitative assessment of PM_{10} associated with construction works could not be carried out. Concentrations of PM_{10} and $PM_{2.5}$ were predicted in the context of road vehicle exhaust emissions, and were compared to the air quality Objectives, as detailed in ***section 19.5.1.2*** of this chapter.
Public Health England	05/12/2017 Scoping Response	When considering a baseline (of existing air quality) and in the assessment and future monitoring of impacts these: Should include consideration of impacts on existing areas of poor air quality e.g. existing or proposed local authority Air Quality Management Areas (AQMAs); Should include modelling using appropriate meteorological data (i.e. come from the nearest suitable meteorological station and include a range of years and worst case conditions); and Should include modelling taking into account local topography.	Consideration was given to impacts at the Stratford St Andrew AQMA. Dispersion modelling was carried out using the closest, most representative meteorological data. Dispersion modelling was carried out using a full calendar year of hourly-sequential meteorological data, and results were based on the averages of these hourly recorded dispersion conditions. The dispersion modelling assessment considered the impact of road vehicle exhaust emissions, which occur at ground level, and are therefore not subject to the same meteorological influences as elevated emission sources such as

Consultee	Date/ Document	Comment	Response / where addressed in the ES
			stacks. The distances between the source (road traffic) and receptor (at the road edge) are sufficiently small such that local changes in topography are not expected to have a significant effect on the dispersion of pollutants.
Public Health England	05/12/2017 Scoping Response	Any assessment of impacts arising from emissions due to construction and decommissioning should consider potential impacts on all receptors and describe monitoring and mitigation during these phases. Construction and decommissioning will be associated with vehicle movements and cumulative impacts should be accounted for.	Human and ecological receptor locations were selected based on their proximity to the onshore development area and/or road links affected by the proposed East Anglia TWO project, where the potential effect of development-generated emissions on local air pollution would be most significant. Mitigation measures are detailed in ***section 19.6.1.1.5*** of this chapter***.*** Traffic data for future year scenarios were derived using growth projections provided by Suffolk County Council which take into account Local Plan allocations. See ***Chapter 26 Traffic and Transport.***
The Planning Inspectorate	20/12/2017 Scoping Response	The Inspectorate does not agree that the operational impact of dust and particulates can be scoped out. The Scoping Report makes reference to traffic flows in the operational phase but does not set out whether maintenance activities would generate dust and particles. Furthermore, the archaeology and cultural heritage aspect chapter notes 'grubbing out' as a	It is not expected that the operational activities associated with maintenance of the onshore cable route and substation would lead to any significant generation of dust and fine particulate matter as there would be no earthworks carried out.

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		potential dust-creating activity. This should be fully assessed in the air quality chapter and cross-referenced between chapters.	It is therefore considered that an operational phase assessment is not required. Operational dust assessments were also scoped out upon agreement with stakeholders at ETG meetings in April 2018. The reference to 'grubbing out' was made as an example of potential decommissioning phase activities that may be required if building foundations are removed. An onshore decommissioning plan will be provided, secured under the requirements of the draft DCO, that will adhere to current legislation and best practice, which will include measures to minimise dust and fine particulate matter emissions. An assessment of operational phase impacts is therefore not considered to be required.
The Planning Inspectorate	20/12/2017 Scoping Response	Where matters have been scoped into the assessment in the Scoping Report, or the Inspectorate has not agreed to the scoping out of matters, operational impacts which could result in significant cumulative effects should be included in the cumulative impacts assessment.	The cumulative impact assessment is presented in ***section 19.7*** of this chapter. Operational dust assessments were also scoped out upon agreement with stakeholders at ETG meetings in April 2018.
The Planning Inspectorate	20/12/2017 Scoping Response	The study area for the assessment should be sufficiently broad to ensure that all receptors which could experience a significant effect are captured within the assessment. The	The study area and receptors were discussed with stakeholders at ETG meetings in April 2018, and the principle for the definition of it was

Consultee	Date/ Document	Comment	Response / where addressed in the ES
		extent of the study area should be agreed with relevant consultees and justified within the PEI.	agreed. In addition, the assessed road traffic network was agreed during consultation with SCDC, as described below.
The Planning Inspectorate	20/12/2017 Scoping Response	Where data sources are to be interrogated to provide baseline information the periods covered by the data should be provided in the PEI to enable understanding of the reliance that can be placed on the data.	The existing environment is presented in ***section 19.5*** of this chapter.
The following comments were made in response to the PEIR and were taken into account in the production of this ES.			
Public Health England	26/03/2019 Section 42 Consultation Response	The assessment of cumulative impact should be reviewed using the latest PEIR from Sizewell C. Particular attention should be given to potential impacts of increased vehicle movements on air quality. The applicant should consider the nearby development of Sizewell C, assess the cumulative implications on the proposed East Anglia TWO and ensure assessments and mitigation measures are consistent and interoperable.	A qualitative assessment with Sizewell B and Sizewell C activities has been undertaken at this stage, as described in ***section 19.7.2*** of this chapter.
Environment Agency	26/03/2019 Section 42 Consultation Response	We note that as part of the PEI Impact Assessment Methodology (specifically section 19.4.3.1.16), Environment Agency guidance (Air Emissions Risk Assessment for your Environmental Permit, 2017) is to be used to consider the significance of impacts from road traffic on ecological receptors. The conclusion in respect of impacts from Construction Phase Road Traffic Exhaust Emissions on Ecological Receptors (section 19.6.1.2.2), is that given "increases in nutrient nitrogen deposition were no greater than 1% of the most stringent critical load", "Impacts are therefore considered to be insignificant, in accordance with Environment Agency guidance". The Environment Agency guidance referred to is intended to be used in relation to industrial	Comments were received from the Local Planning Authority with regard to the use of the criterion as described below. The methodology used for the impact assessment (study area and receptors) were discussed and agreed with stakeholders at ETG meetings in April 2018, of which the Local Planning Authority are part of.

Consultee	Date/ Document	Comment	Response / where addressed in the ES
		emissions, and it is the local authority's responsibility to manage and control air quality in relation to road traffic emission, and its impacts. You should seek confirmation from the local authority that they are satisfied with the methodology used and guidance applied.	
Environment Agency	26/03/2019 Section 42 Consultation Response	We would also highlight that following DEFRAs Clean Air Strategy, published in January 2019, the UK Government has committed to publishing new guidance for local authorities explaining how cumulative impacts of nitrogen deposition on natural habitats should be mitigated and assessed through the planning system. The executive summary is available here: https://www.gov.uk/government/publications/clean-air-strategy-2019/clean-air-strategy-2019-executive-summary	Noted. This guidance has yet to be published. The Air Quality Management Plan (AQMP) submitted post-consent to discharge a requirement of the draft DCO will adhere to future legislation and best practice guidance where appropriate.
Suffolk County Council/Suffolk Coastal District Council	27/03/2019 Section 42 Consultation Response	We seek further information regarding impacts on air quality during the operational and construction phases of the projects, justifications for assessment scope and modelling results and cumulative impacts with Sizewell C.	Air quality impacts during the construction phase are presented in ***section 19.5.1*** of this chapter***.*** Impacts associated with the operational phase were scoped out, as described in ***section 19.3*** of this chapter***.*** A qualitative assessment with Sizewell B and Sizewell C activities has been undertaken at this stage, as described in ***section 19.7.2*** of this chapter.
Suffolk County Council/Suffolk Coastal District Council	27/03/2019 Section 42 Consultation Response	Chapter 19 of the Phase 4 consultation deals with Air Quality and dust suppression and concentrates on the earthworks, construction and track-out of HGV movements associated with the projects. It is indicated that dust impacts would be temporary and of short-term exposure, therefore the	Dust management measures have been recommended in this chapter and have been incorporated into an Outline Code of Construction Practice (OCoCP) submitted with

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		magnitude is considered to be low, however, a Dust Management Plan (DMP) should be agreed. In particular it is important that this DMP includes a range of measures to prevent wind whipping of the long stretch of stockpiled top soil which will be created by the projects. The stockpiles will run east/west the length of the cable route and haul road and in the main will consist of light top soil. Wind entrainment is commonly seen in the 'Suffolk Sandling' area and presents a major risk to both residential and ecological receptors. Whereas individual movement of soils may be of short duration this long length of stockpile will be in place for many months and subjected to strong winds at times. Covering or fencing this length of stockpile is impracticable and seeding or re-vegetation is likely to be the only suitable measure to mitigate wind whipping of this vulnerable stockpiled material.	this DCO application, as secured under the requirements of the draft DCO. This includes measures to minimise windblown dust from soil stockpiles, such as seeding and revegetation.
Suffolk County Council/Suffolk Coastal District Council	27/03/2019 Section 42 Consultation Response	The air quality assessment of construction impacts associated with the East Anglia TWO project is considered comprehensive and the methodology follows appropriate guidance. However, there are a number of specific issues or concerns that have been identified which have been set out in detail within Appendix F. To summarise the Councils require clarification in relation to the version of the Emissions Factors Toolkit referenced and utilised for the assessments, provenance of traffic data utilised, and cumulative peak construction year identified. Further information is required in relation to the decommissioning impacts and reasons behind the decision to scope out operational impacts. Greater justification is required for the exclusion of Sizewell Marshes Site of Special Scientific Interest as an ecological receptor, and the exclusion of some diffusion tub monitoring sites from the air quality assessment	The latest version of the Emissions Factors Toolkit (v9.0) was used in the assessment. The traffic flow data were derived as described in ***Chapter 26 Traffic and Transport***. Additional detail on elements scoped out of the assessment are detailed in ***section 19.3*** of this chapter***.*** Impacts associated with decommissioning are detailed in ***section 19.6.2*** of this chapter***.*** The Sizewell Marshes SSSI was considered in the assessment as

Consultee	Date/ Document	Comment	Response / where addressed in the ES
			described in ***section 19.5.3.2.2*** of this chapter***.*** The diffusion tube monitoring sites considered in the model verification process are detailed in ***section 19.4.3.2.6*** of this chapter***.***
Suffolk County Council/Suffolk Coastal District Council	27/03/2019 Section 42 Consultation Response	The air quality assessment results concluded that there would be a moderate adverse impact in the Stratford St. Andrew Air Quality Management Area (AQMA). However, the PEI chapter argues that there is an overall conclusion of insignificance based on the effect at other receptor sites being negligible, the conservative approach applied and in consideration of Suffolk Coastal District Council/East Suffolk's measures targeted at reducing AQMA concentrations. Verification within this location (tube STA 8 at Long Row) showed the model has a tendency to under-predict (a factor of 4.73 compared to the 3.89 average applied across the study area). In terms of absolute concentrations, the model therefore under predicts by nearly 5 µg/m3 in this AQMA post model adjustment which means that actual concentrations reported at Receptor 1, modelled at 39 µg/m3 could in fact be as high as 44 µg/m3. Accordingly, there is the potential for exceedance of the Nitrogen Dioxide (NO2) Air Quality Strategy (AQS) objective here based on model uncertainties and as such a conclusion of insignificant effects is not supported without appropriate mitigation. Given the conservative nature of the methodology, SPR could demonstrate that the concentrations may not in fact be as high in this location as reported in the Chapter, either by way of sensitivity analysis or use of year-appropriate emissions and background concentrations.	Model verification was revisited to more adequately represent model underprediction within the AQMA, as described in ***section 19.4.3.2.6*** of this chapter***.*** The assessment used future year emission factors and background concentrations. A sensitivity test was carried out whereby emissions would not improve in the future, as presented in ***Appendix 19.4***.

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Suffolk County Council/Suffolk Coastal District Council	27/03/2019 Section 42 Consultation Response	No consideration is given to mitigating the adverse impacts in the Stratford St Andrew AQMA, which due to model under-prediction and uncertainty in this area is considered a significant effect. Concentrations and impacts are even closer to the Air Quality Strategy objective at R1 in the AQMA within the Cumulative Impact Assessment sections, Scenario 1. There is again no mention of how SPR will address this and little consideration seems to be given to the potential for exceedance here based on the reported results, relying instead on the assertion of a conservative methodological approach.	The assessment considered the use of future year emission factors and background concentrations and impacts were predicted to be negligible within the AQMA. As good practice, the Applicant will commit to the use of Euro VI HGVs during construction, where practicable, to minimise emissions associated with the proposed East Anglia TWO project insofar as possible.
Suffolk County Council/Suffolk Coastal District Council	27/03/2019 Section 42 Consultation Response	Within the dust emission magnitudes for the onshore works, the Cumulative Impact Assessment Scenario 1 (both EA1N and EA2 schemes at same time), Tables A19.3 list N/A for ecological receptors for construction. However, in the individual assessment of EA1N and EA2, the magnitude is classified as medium. This is inconsistent and should be clarified. Given proximity of ecological receptors, it is considered likely they should be included within the Cumulative Impact Assessments accordingly.	The dust emission magnitude for construction relating to ecological receptors has been amended as presented in ***Appendix 19.4***. Embedded mitigation with additional measures as recommended by the IAQM, for example soil stockpile management measures e.g. seeding, gives a residual impact of not significant for project alone and cumulative assessments.
Suffolk County Council/Suffolk Coastal District Council	27/03/2019 Section 42 Consultation Response	Section 19.4.3.1.16 paragraph 68 of the PEI states, “Guidance provided by the Environment Agency (Environment Agency 2017) states that where the contribution of a project leads to nutrient nitrogen deposition values below 1% of the critical load, impacts can be considered to be not significant. “The 1% of critical load alone is not considered robust in the determination of significance due to recent court rulings (Ashdown Forest and the Court of Appeal). If it is to be used at	The assessment considered the in-combination effects of other future sources, including Sizewell C New Nuclear Power Station, as detailed in ***section 19.7*** of this chapter***.*** Increases in deposition as percentages of the Critical Load

Consultee	Date/ Document	Comment	Response / where addressed in the ES
		all, both case law and Natural England's internal guidance require it to be used 'in combination' (i.e. taking account of other future sources) not for the scheme in isolation. Tables 19.28 show a change of 1% of critical load at receptor T-1, yet paragraph 120 states no results greater than 1%. SPR should confirm if this is a rounding issue. The above point regarding significance criteria could also be taken into consideration here, where all future sources should be considered. T-1 perhaps then warrants further ecological investigation, as they have stated.	have been reported to one decimal place for clarity.
Ricardo Energy and Environment on behalf of Suffolk County Council/East Suffolk Council	27 June 2019 Section 42 Consultation Response	The most recent version of the EFT, at the time of assessment, should be used and version made clear within the report. It is essential that construction vehicles are as accurately reflected within the EFT as possible. For example, the construction vehicle types e.g. articulated HGV, size of vehicle and associated euro standard. The applicant should either adopt Euro VI/6 standard construction vehicles or demonstrate that pre-Euro VI/6 standard construction vehicles will not cause any air quality objective exceedances. The minimum construction vehicle standards assumed within the assessment should be secured through a DCO requirement.	The assessment used the latest available version of the Emission Factor Toolkit (version 9.0) as stated in ***section 19.4.3.2.4*** of this chapter. Discussion of the construction vehicle fleet to be adopted is provided in ***section 19.6.1*** of this chapter.
Ricardo Energy and Environment on behalf of Suffolk County Council/East Suffolk Council	27 June 2019 Section 42 Consultation Response	SPR's applicant should include a reasonable worst-case assessment regarding the construction traffic flows for the individual scheme and cumulatively. This should include the combination of construction traffic flows and assessment year which result in highest emissions, rather than base it upon absolute construction traffic flows. There is a complex relationship between assumed fleet year and number of vehicles, which means that the year with highest construction traffic movements, will not necessarily have the greatest air	A discussion of the assessment scenarios considered is provided in ***section 19.4.3*** of this chapter.

Consultee	Date/ Document	Comment	Response / where addressed in the ES
		quality impacts. As the earlier the year of assessment the more polluting the fleet will be.	
Ricardo Energy and Environment on behalf of Suffolk County Council/East Suffolk Council	27 June 2019 Section 42 Consultation Response	Justification for scoping out the operational phase should be established by demonstrating no traffic model road links meet the institute for air quality management's (IAQM) land-use planning and development control traffic screening criteria. Or provide justification, where links meet the screening criteria and have been excluded from assessment.	A discussion on the scope of the assessment is provided in ***section 19.3.1*** of this chapter, which includes operational phase road traffic.
Ricardo Energy and Environment on behalf of Suffolk County Council/East Suffolk Council	27 June 2019 Section 42 Consultation Response	It is anticipated that the construction vehicles and associated Euro standards for the proposed development can be specified though construction contracts. However, the applicant will also need to calculate emissions for non-construction related traffic, where there is less certainty on whether the assumed emissions improvements will occur in reality. Within paragraph number 19.4.3.1.7, the applicant has stated that they are going to use the EFT. This includes projections on how much the cleaner the fleet will be. Historically, these projections have not been accurate, and a sensitivity test should be undertaken to establish the impacts upon air quality concentrations which could occur if the fleet is more polluting than predicted.	A sensitivity test using base year emission factors was undertaken and is presented in ***Appendix 19.4.***
Ricardo Energy and Environment on behalf of Suffolk County Council/East Suffolk Council	27 June 2019 Section 42 Consultation Response	The applicant should provide justification for excluding Sizewell C marshes construction and operational traffic from the assessment.	The impact upon Sizewell Marshes SSSI was considered in the assessment, as presented in ***section 19.6.1*** of this chapter.
Ricardo Energy and Environment on behalf of Suffolk County Council/East Suffolk Council	27 June 2019 Section 42 Consultation Response	The applicant should explain why the assessment year has been set to 2028, especially when a peak assessment year if 2026 has been selected for each scheme individually. In addition, as mentioned within AQ2, the applicant should base their choice of scenario for assessment upon the combination of construction traffic flows and assessment year which result	A discussion of the assessment scenarios and years considered is provided in ***section 19.4.3.2.2*** of this chapter.

Consultee	Date/ Document	Comment	Response / where addressed in the ES
		in highest emissions at sensitive locations e.g. Stratford St Andrew. This should also include consideration of heightened sensitivity associated with other schemes currently at the planning stage such as EA2, Sizewell B facilities re-location and Sizewell C early years construction.	The assessment of cumulative impacts with East Anglia ONE North is presented in ***Appendix 19.2.*** At this stage, a qualitative assessment with Sizewell B and C has been carried out, as presented in ***section 19.7.2*** of this chapter.
Ricardo Energy and Environment on behalf of Suffolk County Council/East Suffolk Council	27 June 2019 Section 42 Consultation Response	The applicant should provide the root mean square error (RMSE) to establish the range in predicted concentrations. Should the range of uncertainty associated with RMSE indicate a potential breach of air quality objectives, appropriate mitigation should be put forward. This mitigation should be quantified to demonstrate that the proposed scheme does not breach AQOs.	Details of the model verification process and model performance, including the RMSE, are provided in ***section 19.4.3*** of this chapter.
Ricardo Energy and Environment on behalf of Suffolk County Council/East Suffolk Council	27 June 2019 Section 42 Consultation Response	The applicant should provide figures which demonstrate that the properties most at risk of adverse impacts in Stratford St Andrew have been included in the assessment.	The AQMA covers a row of four terraced houses. Diffusion tube monitoring carried out over the last five years at both ends of the AQMA extent shows that the monitoring location STA8, at the south-western end of the AQMA, experienced the highest pollutant concentrations. Location STA8 was included in the dispersion model as a sensitive receptor, and therefore it is considered that the most conservative concentrations within the AQMA have been captured. ***Figure 19.3*** details the receptors considered in the assessment,

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			including those within the Stratford St Andrew AQMA.
Ricardo Energy and Environment on behalf of Suffolk County Council/East Suffolk Council	27 June 2019 Section 42 Consultation Response	The applicant should provide a figure which facilitates the comparison of modelled road network and traffic screening	The modelled road network is shown in ***Figure 19.3***
Ricardo Energy and Environment on behalf of Suffolk County Council/East Suffolk Council	27 June 2019 Section 42 Consultation Response	The applicant should provide justification for excluding monitoring locations from the verification process, and potentially revise the modelling study so that it provides a more accurate representation of air quality at the measurement locations.	Details of the model verification process and model performance are provided in ***section 19.4.3.2.6*** of this chapter.
Ricardo Energy and Environment on behalf of Suffolk County Council/East Suffolk Council	27 June 2019 Section 42 Consultation Response	The applicant should provide further information on the root mean square error. As per LAQM.TG(16)'s guidance on model verification, should the RMSE ≥25% of the annual mean NO2 the model should be revisited.	The RMSE of the model was calculated to be within the required 25%, as detailed in ***section 19.4.3.2.6*** of this chapter.
Ricardo Energy and Environment on behalf of Suffolk County Council/East Suffolk Council	27 June 2019 Section 42 Consultation Response	The applicant should only present mitigation measures which will be used in practice. The reported measures should be secured through the DCO requirement process and, how these are incorporated within the construction environmental management plan, should be agreed with the local authority. The construction mitigation measure should use the IAQM's high risk mitigation measures as a starting point. Given the unique nature of this development (e.g. coastal location; extended duration of construction programme; extensive storage of materials), the dust mitigation measures may need to go beyond the scope of IAQM guidance. This should be reflected in the applicant's assessment and proposed mitigation of dust impacts.	The mitigation measures detailed in ***section 19.3.4*** of this chapter have been incorporated into an OCoCP submitted with this DCO application, as secured under the requirements of the draft DCO. This includes measures to minimise windblown dust from soil stockpiles, such as seeding and revegetation.

Consultee	Date/ Document	Comment	Response / where addressed in the ES
Ricardo Energy and Environment on behalf of Suffolk County Council/East Suffolk Council	27 June 2019 Section 42 Consultation Response	The applicant should provide further information on why designated sites surrounding the offshore windfarm have been excluded from the assessment.	The Air Pollution Information System states that marine-based ecological designations are unlikely to be sensitive to air pollution impacts, or they are usually dominated by other sources of inputs (Centre for Ecology and Hydrology 2019). Furthermore, the Planning Inspectorate agreed that emissions from vessels offshore would be negligible in magnitude, and impacts would therefore be insignificant. Given the above, the assessment of offshore designated ecological sites was not carried out.
Ricardo Energy and Environment on behalf of Suffolk County Council/East Suffolk Council	27 June 2019 Section 42 Consultation Response	The Construction Management Plan should specify that any non-road mobile machinery (NRMM) plant should meet the applicable standards (currently stage IIIB engine standards from the NRMM emission standard 97/68/EC directive).	The standards for NRMM that have been incorporated into the OCoCP submitted with this DCO application are detailed in ***section 19.6.1*** of this chapter.
Ricardo Energy and Environment on behalf of Suffolk County Council/East Suffolk Council	27 June 2019 Section 42 Consultation Response	The "Two-Village Bypass" is due to come online in 2024 as part of the Sizewell C planning application should it be successful in obtaining planning consent. This would have the potential to divert most offshore windfarms construction vehicles from the Stratford St Andrew AQMA. Consequently, if Sizewell C is unsuccessful in gaining planning permission or if the construction programme is delayed, the offshore windfarms pose a risk to this AQMA. It is unclear within the PEIR air quality chapter whether preliminary results within Table 19.24 include the "Two-Village Bypass". The applicant should predict concentrations within Stratford St Andrew without the bypass	The effect of the Two Village Bypass has not been considered at this stage. A qualitative assessment with Sizewell B and Sizewell C activities has been undertaken at this stage, as described in ***section 19.7.2*** of this chapter.

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		in place. Should any exceedances be predicted the number of heavy goods vehicles (HGV) should be limited to mitigate this risk. These restricted HGV numbers will be secured through a DCO requirement.	