XLINKS' MOROCCO-UK POWER PROJECT

Environmental Statement

Volume 2, Chapter 7: Air Quality

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Glossary

Term	Meaning
Air Quality Management Area	An area declared by a local authority where its review and assessment of air quality shows that an air quality objective is likely to be exceeded.
Alverdiscott Substation Connection Development	The development required at the existing Alverdiscott Substation Site, which is envisaged to include development of a new 400 kV substation, and other extension modification works to be carried out by National Grid Electricity Transmission. This does not form part of the Proposed Development, however, it is considered cumulatively within the Environmental Impact Assessment as it is necessary to facilitate connection to the national grid.
Annoyance (dust)	Loss of amenity due to dust deposition or visible dust plumes, often related to people making complaints, but not necessarily sufficient to be a legal nuisance, as defined by the Institute of Air Quality Management.
Applicant	Xlinks 1 Limited.
Baseline	The status of the environment without the Proposed Development in place.
Bipole	A Bipole system is an electrical transmission system that comprises two Direct Current conductors of opposite polarity (one conductor with positive voltage and one with negative voltage).
Construction	Any activity involved with the provision of a new structure (or structures), its modification or refurbishment.
Construction Environmental Management Plan	A document detailing the overarching management principles for construction, which includes construction-related environmental management measures, pollution prevention measures, the selection of appropriate construction techniques and monitoring processes.
Converter Site	The Converter Site is proposed to be located to the immediate west of the existing Alverdiscott Substation site in north Devon. The Converter Site would contain two converter stations (known as Bipole 1 and Bipole 2) and associated infrastructure, buildings and landscaping.
Cumulative Effects	The combined effect of the Proposed Development in combination with the effects from other planning applications, on the same receptor or resource.
Deposited Dust	Dust that has settled out onto a surface after having been suspended in air.
Development Consent Order	An order made under the Planning Act 2008, as amended, granting development consent.
Dust	Solid particles suspended in air or settled out onto a surface after having been suspended in air, as defined by the Institute of Air Quality Management.
Earthworks	Covers the processes of soil-stripping, ground-levelling, excavation, and landscaping, as defined by the Institute of Air Quality Management.
Effect	The term used to express the consequence of an impact. The significance of effect is determined by correlating magnitude of the impact with the importance, or sensitivity, of the receptor or resource in accordance with defined significance criteria.
Environmental Impact Assessment	The process of identifying and assessing the significant effects likely to arise from a project. This requires consideration of the likely changes to the environment, where these arise as a consequence of a project, through comparison with the existing and projected future baseline conditions.
Environmental Statement	The document presenting the results of the Environmental Impact Assessment process.
HVAC Cable Corridors	The proposed corridors (for each Bipole) within which the onshore High Voltage Alternating Current cables would be routed between the Converter Site and the Alverdiscott Substation Site.

Term	Meaning
Horizontal Directional Drilling	Horizontal Directional Drilling (HDD) is a method of installing underground pipelines, cables and service conduit (or ducts) through trenchless methods to avoid obstacles and sensitive features (e.g. roads, watercourses, woodlands, etc.). The term HDD is used here interchangeably with other similar trenchless techniques but excluding micro tunnelling or direct pipe methods.
Impact	Change that is caused by an action/proposed development, e.g., land clearing (action) during construction which results in habitat loss (impact).
Inter-related effects	Multiple effects on the same receptor as a result of the Proposed Development. These occur when a series of the same effect acts on a receptor over time to produce a potential additive effect or where a number of separate effects, such as noise and habitat loss, affect a single receptor.
Landfall	The proposed area in which the offshore cables make landfall in the United Kingdom (come on shore) and the transitional area between the offshore cabling and the onshore cabling. This term applies to the entire landfall area at Cornborough Range, Devon, between Mean Low Water Springs and the transition joint bays inclusive of all construction works, including the offshore and onshore cable routes, and landfall compound(s).
Preliminary Environmental Information Report	A report that provides preliminary environmental information in accordance with the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017. This is information that enables consultees to understand the likely significant environmental effects of a project, and which helps to inform consultation responses.
Proposed Development	The element of Xlinks' Morocco-UK Power Project within the UK. The Proposed Development covers all works required to construct and operate the offshore cables (from the UK Exclusive Economic Zone to Landfall), Landfall, onshore Direct Current and Alternating Current cables, converter stations, and highways improvements.
Onshore HVDC Cable Corridor	The proposed corridor within which the onshore High Voltage Direct Current Cables would be located.
Onshore Infrastructure Area	The proposed infrastructure area within the Order Limits landward of Mean High Water Springs. The Onshore Infrastructure Area comprises the transition joint bays, onshore HVDC Cables, converter stations, HVAC Cables, highways improvements, utility diversions and associated temporary and permanent infrastructure including temporary compound areas and permanent accesses.
Order Limits	The area within which all offshore and onshore components of the Proposed Development are proposed to be located, including areas required on a temporary basis during construction (such as construction compounds).
Receptor	The element of the receiving environment that is affected.
Risk	The likelihood of an adverse event occurring.
Study area	This is an area which is defined for each environmental topic which includes the Order Limits as well as potential spatial and temporal considerations of the impacts on relevant receptors. The study area for each topic is intended to cover the area within which an impact can be reasonably expected.
Trackout	The transport of dust and dirt from the construction/demolition site onto the public road network, where it may be deposited and then re-suspended by vehicles using the network, as defined by the Institute of Air Quality Management.
Xlinks' Morocco-UK Power Project	The overall scheme from Morocco to the national grid, including all onshore and offshore elements of the transmission network and the generation site in Morocco (referred to as the 'Project').

Acronyms

Acronym	Meaning
AIL	Abnormal Indivisible Load
AQMA	Air Quality Management Area
AURN	Automatic Urban and Rural Network
CEA	Cumulative Effects Assessment
CEMP	Construction Environmental Management Plan
CTMP	Construction Traffic Management Plan
CWS	County Wildlife Site
DCO	Development Consent Order
Defra	Department for Environment, Food & Rural Affairs
DESNZ	The Department for Energy Security and Net Zero
DMP	Dust Management Plan
EIA	Environmental Impact Assessment
EPUK	Environmental Protection UK
HDV	Heavy Duty Vehicle
HGV	Heavy Goods Vehicle
IAQM	Institute of Air Quality Management
LAQM	Local Air Quality Management
LDV	Light Duty Vehicle
LNR	Local Nature Reserve
NPPF	National Planning Policy Framework
NPS	National Policy Statement
PEIR	Preliminary Environmental Information Report
PM	Particulate Matter
PPG	Planning Practice Guidance
SSSI	Site of Special Scientific Interest
UK	United Kingdom
UWS	Unconfirmed Wildlife Site

Units

Units	Meaning
$\mu g.m^{-3}$	Microgram per cubic metre
km	Kilometre
ha	Hectares
m	Metre
m^2	Square metre
m^3	Cubic metre
mph	Miles per hour

7 AIR QUALITY

7.1 Introduction

7.1.1 This chapter of the Environmental Statement (ES) presents the findings of the Environmental Impact Assessment (EIA) undertaken for the United Kingdom (UK) elements of the Xlinks Morocco-UK Power Project (the 'Project'). For ease of reference, the UK elements of the Project are referred to in this chapter as the 'Proposed Development'. The ES accompanies the application to the Planning Inspectorate for development consent for the Proposed Development.

7.1.2 This chapter considers the likely impacts and effects of the Proposed Development on air quality during the construction, operation and maintenance and decommissioning phases. Specifically, it relates to the onshore elements of the Proposed Development landward of Mean High Water Springs.

7.1.3 In particular, this ES chapter:

- identifies the key legislation, policy and guidance relevant to air quality;
- details the EIA scoping and consultation process undertaken to date for air quality;
- confirms the study area for the assessment, the methodology used to identify baseline environmental conditions, the impact assessment methodology, and identifies any assumptions and limitations encountered in compiling the environmental information;
- sets out the existing and future environmental baseline conditions, established from desk studies, surveys and consultation;
- details the mitigation and/or monitoring measures that are proposed to prevent, minimise, reduce or offset the possible environmental effects identified in the EIA process;
- defines the project design parameters used to inform for the impact assessment;
- presents an assessment of the likely impacts and effects in relation to the construction, operation and maintenance and decommissioning phases of the Proposed Development on air quality; and
- identifies any cumulative, transboundary and/or inter-related effects in relation to the construction, operation and maintenance and decommissioning phases of the Proposed Development on air quality.

7.1.4 The assessment presented is informed by the following technical chapters and should be read in conjunction with:

- Volume 2, Chapter 1: Onshore Ecology and Nature Conservation of the ES; and
- Volume 2, Chapter 5: Traffic and Transport of the ES.

7.2 Legislative and Policy Context

Legislation

The Environment Act 1995

7.2.1 The Environment Act 1995, as amended by the Environment Act 2021, established the requirement for the Government and the devolved administrations to produce a National Air Quality Strategy for improving ambient air quality, the first being published in 1997 and having been revised several times since, with the latest published in 2007 (Department for Environment, Food and Rural Affairs (Defra), 2007).

7.2.2 The Environment Act 1995 established the UK system of Local Air Quality Management (LAQM), that requires local authorities to go through a process of review and assessment of air quality in their areas, identifying places where health-based objectives are not likely to be met, then declaring Air Quality Management Areas (AQMAs) and putting in place Air Quality Action Plans to improve air quality. These plans also contribute, at local level, to the achievement of the limit values in the Air Quality Standards Regulations 2010 (see **paragraphs 7.2.3** to **7.2.5**).

The Air Quality Standards Regulations 2010

7.2.3 The Air Quality Standards Regulations 2010, amended by The Environment (Miscellaneous Amendments) (EU Exit) Regulations 2020, sets limit values for ambient air concentrations for the main air pollutants: particulate matter (PM_{10} and $PM_{2.5}$), nitrogen dioxide, sulphur dioxide, ozone, carbon monoxide, lead and benzene, certain toxic heavy metals (arsenic, cadmium and nickel) and polycyclic aromatic hydrocarbons.

7.2.4 These limit values are legally binding on the Secretary of State. The Government and devolved administrations operate various national ambient air quality monitoring networks to measure compliance and develop plans to meet the limit values.

7.2.5 The objective and limit values relevant to this development are set out in **Table 7.1.**

Table 7.1: Summary of Relevant Air Quality Limit Values and Objectives

Pollutant	Averaging Period	Objective/Limit Values	Not to be Exceeded More Than
Particulate Matter (PM_{10})	24 Hour	50 µg.m^{-3}	35 times per calendar year
	Annual*	40 µg.m^{-3}	-

*The annual limit is not allowed to be exceeded.

Planning Policy Context

7.2.6 The Proposed Development would be located within the UK Exclusive Economic Zone offshore waters (beyond 12 nautical miles (nm) from the English coast) and inshore waters, with the onshore infrastructure proposed to be located wholly

within Devon, England. As set out in Volume 1, Chapter 1: Introduction, of the ES, the Secretary of State for the Department for Energy Security and Net Zero (DESNZ) has directed that elements of the Proposed Development are to be treated as development for which development consent is required under the Planning Act 2008, as amended.

National Policy Statements

7.2.7 There are currently six energy National Policy Statements (NPSs), three of which contain policy relevant to the Proposed Development, specifically:

- Overarching NPS for Energy (NPS EN-1) which sets out the UK Government's policy for the delivery of major energy infrastructure (Department for Energy Security & Net Zero 2023a);
- NPS for Renewable Energy Infrastructure (NPS EN-3) (Department for Energy Security & Net Zero 2023b); and
- NPS for Electricity Networks Infrastructure (NPS EN-5) (Department for Energy Security & Net Zero 2023c).

7.2.8 **Table 7.2** sets out key aspects from the NPSs relevant to the Proposed Development, with particular reference to the need for and approach to consenting such infrastructure.

Table 7.2: Summary of relevant NPS policy

Summary of NPS requirement	How and where considered in the ES
NPS EN-1	
'*At the application stage of an energy NSIP, possible sources of nuisance under section 79(1) of the EPA 1990 and how they may be mitigated or limited should be identified by the applicant so that appropriate requirements can be included in any subsequent order granting development consent (see Section 5.7 on dust, odour, artificial light etc. and Section 5.12 on noise and vibration)*' (Paragraph 4.15.5 of NPS EN-1).	An assessment of dust generated during the construction and decommissioning phases is considered in **section 7.10** and **7.12**. Mitigation measures are outlined in **Table 7.21**. This includes measures to control dust, during the construction phase, through a Dust Management Plan (DMP). The DMP would be developed in accordance with the Outline DMP (document reference 7.7, Appendix C), which forms part of the application for development consent.
'*At the application stage of an energy NSIP, possible sources of nuisance under section 79(1) of the EPA 1990 and how they may be mitigated or limited should be considered by the Secretary of State so that appropriate requirements can be included in any subsequent order granting development consent (see Section 5.7 on dust, odour, artificial light etc. and Section 5.12 on noise and vibration)*' (Paragraph 4.15.6 of NPS EN-1).	
'*The Secretary of State should note that the defence of statutory authority is subject to any contrary provision made by the Secretary of State in any particular case in a Development Consent Order (section 158(3) of the Planning Act 2008). Therefore, subject to Section 5.7 and Section 5.12, the Secretary of State can disapply the defence of statutory authority, in whole or in part, in any particular case, but in so doing should have regard to whether any particular nuisance is an inevitable consequence of the development*' (Paragraph 4.15.7).	

Summary of NPS requirement	How and where considered in the ES
NPS EN-1 includes generic guidance on the assessment of air quality impacts for major energy projects: *'Where the project is likely to have adverse effects on air quality the applicant should undertake an assessment of the impacts of the proposed project as part of the ES'* (paragraph 5.2.8 of NPS EN-1). This requires the Environmental Statement to describe: • '*existing air quality concentrations and the relative change in air quality from existing levels;* • *any significant air quality effects, mitigation action taken and any residual effects, distinguishing between the project stages and taking account of any significant emissions from any road traffic generated by the project;* • *the predicted absolute emissions, concentration change and absolute concentrations as a result of the proposed project, after mitigation methods have been applied; and* • *any potential eutrophication impacts*.' (Paragraph 5.2.9 of NPS EN-1).	The potential air quality impacts which may arise during construction and decommissioning of the Proposed Development have been described and considered within this chapter. This chapter focuses on the potential impacts from dust generated during construction and decommissioning of the Proposed Development (see **section 7.10** and **section 7.12**) and considers mitigation and residual effects. Mitigation measures provided as part of the Proposed Development are presented within **section 7.8**. The potential air quality impacts arising from construction, operation and maintenance, and decommissioning traffic have been scoped out of the air quality assessment, as estimated annual average daily traffic flows do not exceed relevant thresholds (see **Table 7.8** for further details).
NPS EN-1 also states that: '*applicants should consider the Environment Targets (Fine Particulate Matter) (England) Regulations 2022 and associated Defra guidance'.* (Paragraph 5.2.10 of NPS EN-1).	Air quality targets are considered in **section 7.2**. Impacts on air quality are assessed in sections **section 7.10** to **section 7.12**.
'*The Secretary of State should consider whether mitigation measures are needed both for operational and construction emissions over and above any which may form part of the project application. A construction management plan may help codify mitigation at this stage. In doing so the Secretary of State should have regard to the Air Quality Strategy in England, or the Clean Air Plan for Wales in Wales, or any successors to these and should consider relevant advice within Local Air Quality Management guidance and PM2.5 targets guidance*.' (Paragraph 5.2.13 of NPS EN-1)	Mitigation measures are outlined in **Table 7.21**. This includes measures to control dust, during the construction phase, through a Dust Management Plan (DMP). The DMP would be developed in accordance with the (document reference 7.7, Appendix C), which forms part of the application for development consent.
'*Many activities involving air emissions are subject to pollution control. The considerations set out in Section 4.12 on the interface between planning and pollution control therefore apply. The Secretary of State must also consider duties under other legislation including duties under the Environment Act 2021 in relation to environmental targets and have regard to policies set out in the Government's Environmental Improvement Plan 2023*.' (Paragraph 5.2.15 of NPS EN-1)	The air quality impacts during construction and decommissioning of the Proposed Development have been described and considered within this **section 7.10** and **section 7.12** of this chapter. Mitigation measures provided as part of the Proposed Development are presented within **section 7.8**. Impacts during the operation and maintenance phase are not likely and have been scoped out, as outlined in **section 7.5** of this chapter.
'*The Secretary of State should give air quality considerations substantial weight where a project would lead to a deterioration in air quality. This could for example include where an area breaches any national air quality limits or*	The air quality impacts during construction and decommissioning of the Proposed Development have been described and considered within this section **7.10** and

Summary of NPS requirement	How and where considered in the ES
statutory air quality objectives. However, air quality considerations will also be important where substantial changes in air quality levels are expected, even if this does not lead to any breaches of statutory limits, objectives or targets.' (Paragraph 5.2.16 of NPS EN-1)	section **7.12** of this chapter. With the mitigation measures provided as part of the Proposed Development presented within **section 7.8,** the impacts will be mitigated to a level that is not significant.
'*The Secretary of State should give air quality considerations substantial weight where a project is proposed near a sensitive receptor site, such as an education or healthcare facility, residential use or a sensitive or protected habitat*.' (Paragraph 5.2.17 of NPS EN-1)	Sensitive receptors have been considered within the air quality assessment, as set out within **Table 7.20**.
'*Where a project is proposed near to a sensitive receptor site for air quality, if the applicant cannot provide justification for this location, and a suitable mitigation plan, the Secretary of State should refuse consent*.' (Paragraph 5.2.18 of NPS EN-1)	Mitigation measures are outlined in **Table 7.21**. This includes measures to control dust, during the construction phase, through a Dust Management Plan (DMP). The DMP would be developed in accordance with the Outline DMP (document reference 7.7, Appendix C), which forms part of the application for development consent.
'*In all cases, the Secretary of State must take account of any relevant statutory air quality limits, objectives and targets. If a project will lead to non-compliance with a statutory limit, objective or target the Secretary of State should refuse consent*.' (Paragraph 5.2.19 of NPS EN-1)	The air quality impacts during construction and decommissioning of the Proposed Development have been described and considered within this **section 7.10** and **section 7.12** of this chapter. No statutory limit, objective or target has been exceeded.
'The applicant should assess the potential for insect infestation and emissions of odour, dust, steam, smoke, and artificial light to have a detrimental impact on amenity, as part of the ES. *In particular, the assessment provided by the applicant should describe:* • *the type, quantity and timing of emissions* • *aspects of the development which may give rise to emissions* • *premises or locations that may be affected by the emissions* • *effects of the emission on identified premises or locations* • *measures to be employed in preventing or mitigating the emissions.'* (Paragraph 5.7.5 – 5.7.6 of NPS EN-1)	An assessment of dust generated during the construction and decommissioning phases is considered in **section 7.10** and **section 7.12**, respectively. Mitigation measures are detailed in **Table 7.21**. As set out within **Table 7.22**, bonfires would be avoided during construction. Furthermore, the Proposed Development would not result in any stack emissions and all operational emissions have been scoped out of the assessment, as agreed with the Planning Inspectorate (see **Table 7.8**).
'The applicant is advised to consult the relevant local planning authority and, where appropriate, the EA about the scope and methodology of the assessment.' (Paragraph 5.7.7 of NPS EN-1)	The consultation process and the responses received are outlined in section **Table 7.5.**
NPS EN-1 provides the following detail regarding mitigation, in relation to air quaility: *'Mitigation measures may include one or more of the following:*	Mitigation measures are outlined in **Table 7.21**. This includes measures to control dust, during the construction phase, through a Dust Management Plan (DMP). The DMP would be developed in accordance with the Outline DMP

Summary of NPS requirement	How and where considered in the ES
• *engineering: prevention of a specific emission at the point of generation; control, containment and abatement of emissions if generated* • *lay-out: adequate distance between source and sensitive receptors; reduced transport or handling of material* • *administrative: limiting operating times; restricting activities allowed on the site; implementing management plans* *Construction should be undertaken in a way that reduces emissions, for example the use of low emission mobile plant during the construction, and demolition phases as appropriate, and consideration should be given to making these mandatory in Development Consent Order requirements.* *Demolition considerations should be embedded into designs at the outset to enable demolition techniques to be adopted that remove the need for explosive demolition.* *A construction management plan may help clarify and secure mitigation.'* (Paragraphs 5.7.8 to 5.7.11 of NPS EN-1)	(document reference 7.7, Appendix C), which forms part of the application for development consent.
NPS EN-3	
EN-3 states that *'The applicant should assess the effects of the offshore transmission and any associated infrastructure on the marine, coastal and onshore environment.'* (EN-3 paragraph 2.8.68). This guidance applies to all the disciplines within the EIA and is not specific to air quality impact assessment.	This air quality assessment considers potential impacts of dust on sensitive receptors located within the air quality study area (see **section 7.10** and **section 7.12**).
NPS EN-5	
No requirements specifically applicable to air quality chapter.	

The National Planning Policy Framework

7.2.9 The National Planning Policy Framework (NPPF) was published in 2012 and updated in 2018, 2019 and 2021 and 2023 (Department for Levelling Up, Housing and Communities, 2023). The NPPF sets out the Government's planning policies for England.

7.2.10 The NPPF has been updated and the draft version was published for consultation on 30 July 2024 with the consultation period ending on 24 September 2024 (Ministry of Housing, Communities and Local Government, 2024).

7.2.11 **Table 7.3** sets out a summary of the NPPF policies relevant to this chapter.

Table 7.3: Summary of NPPF requirements relevant to this chapter

Policy	Key provisions	How and where considered in the ES
NPPF (Department for Levelling Up, Housing and Communities, 2023)		
Promoting sustainable transport	*'The planning system should actively manage patterns of growth in support of these objectives. Significant development should be focused on locations which are or can be made sustainable, through limiting the need to travel and offering a genuine choice of transport modes. This can help to reduce congestion and emissions, and improve air quality and public health. However, opportunities to maximise sustainable transport solutions will vary between urban and rural areas, and this should be taken into account in both plan-making and decision-making.' (Paragraph 109).*	One of the mitigation measures listed in **Table 7.22** is to implement a Travel Plan that supports and encourages sustainable travel. The potential air quality impacts arising from construction, operation and maintenance, and decommissioning traffic have been scoped out of the air quality assessment, as estimated annual average daily traffic flows do not exceed relevant thresholds (see **Table 7.8** for further details).
Conserving and enhancing the natural environment	*'Planning policies and decisions should contribute to and enhance the natural and local environment by:* *…Preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans; …' (Paragraph 180)* *'Planning policies and decisions should sustain and contribute towards compliance with relevant limit values or national objectives for pollutants, taking into account the presence of Air Quality Management Areas and Clean Air Zones, and the cumulative impacts from individual sites in local areas. Opportunities to improve air quality or mitigate impacts should be identified, such as through traffic and travel management, and green infrastructure provision and enhancement. So far as possible these opportunities should be considered at the plan-making stage, to ensure a strategic approach and limit the need for issues to be reconsidered when determining individual applications. Planning decisions should ensure that any new development in Air Quality Management Areas and Clean Air Zones is consistent with the local air quality action plan.' (Paragraph 192)*	A dust risk assessment has been undertaken to determine the impacts on the local environment in **section 7.10** of this ES chapter. **Paragraph 7.8.5**, details the mitigation measures proportionate to the risk level of the Proposed Development. The potential air quality impacts arising from construction, operation and maintenance, and decommissioning traffic have been scoped out of the air quality assessment, as estimated annual average daily traffic flows do not exceed relevant thresholds (see **Table 7.8** for further details). There are no AQMAs or Clean Air Zones situated within the air quality study area.

7.2.12 The draft NPPF includes similar provisions as the current designated NPPF. The draft NPPF has been reviewed and there are no material updates for Air Quality.

7.2.13 The Planning Practice Guidance (PPG) (Department for Levelling Up, Housing and Communities and Ministry of Housing, Communities and Local Government, 2023) supports the NPPF and provides guidance across a range of topic areas.

7.2.14 The PPG was issued on-line on 6 March 2014 and is updated periodically by government as a live document. The last major update was on 1 November 2019. The Air Quality section of the PPG describes the circumstances when air quality, odour and dust can be a planning concern, requiring assessment.

7.2.15 The PPG advises that whether or not air quality is relevant to a planning decision will depend on the Proposed Development and its location. Concerns could arise if the development is likely to have an adverse effect on air quality in areas where it is already known to be poor, particularly if it could affect the implementation of air quality strategies and action plans and/or breach legal obligations (including those relating to the conservation of habitats and species). Air quality may also be a material consideration if the Proposed Development would be particularly sensitive to poor air quality in its vicinity. The PPG states that when deciding whether air quality is relevant to a planning application, considerations could include whether the development would:

- '*Lead to changes (including any potential reductions) in vehicle-related emissions in the immediate vicinity of the Proposed Development or further afield. This could be through the provision of electric vehicle charging infrastructure; altering the level of traffic congestion; significantly changing traffic volumes, vehicle speeds or both; or significantly altering the traffic composition on local roads. Other matters to consider include whether the proposal involves the development of a bus station, coach or lorry park; could add to turnover in a large car park; or involve construction sites that would generate large Heavy Goods Vehicle flows over a period of a year or more;*
- *Introduce new point sources of air pollution. This could include furnaces which require prior notification to local authorities; biomass boilers or biomass-fuelled Combined Heat and Power plant; centralised boilers or plant burning other fuels within or close to an air quality management area or introduce relevant combustion within a Smoke Control Area; or extraction systems (including chimneys) which require approval or permits under pollution control legislation;*
- *Expose people to harmful concentrations of air pollutants, including dust. This could be by building new homes, schools, workplaces or other development in places with poor air quality;*
- *Give rise to potentially unacceptable impacts (such as dust) during construction for nearby sensitive locations;*
- *Have a potential adverse effect on biodiversity, especially where it would affect sites designated for their biodiversity value*.' (Paragraph 006)

7.2.16 The PPG provides advice on how air quality impacts can be mitigated and notes the following.

'Mitigation options will need to be locationally specific, will depend on the proposed development and need to be proportionate to the likely impact. It is important that local planning authorities work with applicants to consider appropriate mitigation so as to ensure new development is appropriate for its location and unacceptable risks are prevented. Planning conditions and

obligations can be used to secure mitigation where the relevant tests are met.' (paragraph 008).

Local Planning Policy

7.2.17 The onshore elements of the Proposed Development are located within the administrative area of Torridge District Council (and Devon County Council at the County level). The relevant local planning policies applicable to air quality based on the extent of the study areas for this assessment are summarised in **Table 7.4**.

Table 7.4: Summary of local planning policy relevant to this chapter

Policy	Key provisions	How and where considered in the ES
The North Devon and Torridge Local Plan 2011-2031 (North Devon District Council and Torridge District Council, 2018)		
Policy DM02: Environmental Protection	The Policy DM02 highlights that development will be supported where it does not result in unacceptable impacts to atmospheric pollution, resulting from gas or particulates, including odour, dust, fumes, grit, smoke or dirt. Furthermore, the policy states that*: ' Development and traffic proposals that help to deliver measures identified within a Local Air Quality Action Plan or improved overall air quality will be supported.'*	A dust risk assessment has been undertaken to determine the impacts on the local environment in **section 7.10** of this ES chapter. Mitigation measures have also been listed to ensure that the risk of adverse dust effects is reduced to a level categorised as 'not significant' (see **section 7.8**).

7.3 Consultation and Engagement

Scoping

7.3.1 In January 2024, the Xlinks 1 Limited ('the Applicant') submitted a Scoping Report to the Planning Inspectorate, which described the scope and methodology for the technical studies being undertaken to provide an assessment of any likely significant effects for the construction, operation and maintenance and decommissioning phases of the Proposed Development. It also described those topics or sub-topics which are proposed to be scoped out of the EIA process and provided justification as to why the Proposed Development would not have the potential to give rise to significant environmental effects in these areas.

7.3.2 Following consultation with the appropriate statutory bodies, the Planning Inspectorate (on behalf of the Secretary of State) provided a Scoping Opinion on 7 March 2024. Key issues raised during the scoping process specific to air quality are listed in **Table 7.5**, together with details of how these issues have been addressed within the ES.

Table 7.5: Summary of Scoping Responses

Comment	How and where considered in the ES
Planning Inspectorate	
'*Several aspect chapters in the Scoping Report refer to fixed distance study areas with no explanation as to why these have been selected. The ES should ensure the study area for each aspect reflects the Proposed Development's ZoI and the impact assessment should be based on the ZoI from the Proposed Development with reference to potential effect pathways. Clear justification should be provided to support any distances applied*.' (Scoping Opinion ID: 2.2.1)	The air quality study area is provided within **section 7.4** and is based upon the guidance set out within the Institute of Air Quality Management (IAQM) (2024). The assessment of construction (**section 7.10**) and decommissioning (**section 7.12**) are based on the air quality study area.
'*It is unclear from the Scoping Report what potential effects on statutory designated sites are to be included in the impact assessment. The Inspectorate notes the statement that the Proposed Development would not directly affect the Torridge Estuary SSSI/LNR and would avoid its primary estuarine habitats by drilling under using HDD. At present there is no information in the Scoping Report to confirm the likely proximity of construction activity to the designated sites and their interest features, such as the likely location of HDD exit/entry points, compounds, and haul roads.* *The SSSI and LNR are designated for their important estuarine habitats, plants and bird species. The Inspectorate considers there is the potential for likely significant effects during construction (and decommissioning) to these sites and their features from potential changes to air quality, including dust deposition, changes to water quality, including proximity of HDD and accidental release of drilling fluids such as bentonite, and disturbance to species. The ES should include an assessment of such impacts to designated sites and features, where likely effects could occur*.' (Scoping Opinion ID: 3.1.8)	With regards to dust, the impacts have been considered on all designated ecological sites within the air quality study area, as detailed within **section 7.4**. The air quality study area is provided in Volume 2, Figure 7.1. Air quality impacts on the Kynoch's Foreshore Local Nature Reserve (LNR) is included within this ES chapter. Locally designated sites, such as County Wildlife Sites (CWS) and Unconfirmed Wildlife Sites (UWS), within 50 m of the Onshore Infrastructure Area have also been considered as ecological receptors. The Mermaid's Pool to Rowden Gut Site of Special Scientific Interest (SSSI) is not sensitive and the Taw-Torridge Estuary SSSI is situated outside of the air quality study area as detailed within **section 7.4.** As such, these ecological sites are not considered in the assessment.
'*As per the Inspectorate's comments at ID 3.7.1 and ID 3.7.2 above, it is considered that insufficient justification has been provided in the Scoping Report and the Inspectorate does not agree to scope this matter out at this stage. The Inspectorate would expect the ES to provide a detailed explanation of the likely construction emission to justify not undertaking further assessment. The ES should include an assessment of air emissions during construction on sensitive ecological receptors, such as habitats and species of the LNR, during the construction phase where likely significant effects could occur or provide evidence that this matter can be scoped out*.' (Scoping Opinion ID: 3.7.3)	Details on the anticipated vehicle movements are included within Volume 2, Chapter 5: Traffic and Transport, of the ES. The results of the transport assessment (detailed in Volume 2, Chapter 5: Traffic and Transport of the ES) indicates that the relevant thresholds are not expected to be exceeded for any individual road during the construction, operation and maintenance, and decommissioning phases. As such, the impact on human and ecological receptors arising from air emissions generated by vehicles has been scoped out, as detailed within **Table 7.8**.
'*The ES should detail the type and number of anticipated vehicle movements during all phases of the Proposed Development and explain the*	

Comment	How and where considered in the ES
assumptions upon which these have been established. The Inspectorate would expect the ES to confirm whether thresholds would/would not be exceeded to justify scoping out this matter from further assessment.' (Scoping Opinion ID: 3.7.1)	
'The ES should identify sensitive ecological receptors and any potential effect pathways from air quality changes, including dust, and include an assessment of any likely significant effects. This can be included in the Ecology and Nature Conservation ES chapter with reference to information in the air quality assessment.' (Scoping Opinion ID: 3.7.2)	With regards to dust, the impacts have been considered on all designated ecological sites within the study area as detailed within **section 7.4**. The air quality study area is provided in Volume 2, Figure 7.1. Air quality impacts on the Kynoch's Foreshore LNR are included within this ES chapter. Locally designated sites, such as CWS and UWS, within 50 m of the Onshore Infrastructure Area have also been considered as ecological receptors.
'*The Inspectorate agrees that fugitive dust emissions associated with operation and maintenance of the Proposed Development are unlikely to result in significant effects, and this matter can be scoped out of the ES*.' (Scoping Opinion ID: 3.7.4)	Impacts arising from fugitive dust emissions associated with operation and maintenance have been scoped out of the air quality assessment as agreed with the Planning Inspectorate (see **Table 7.8**).
'*The Scoping Report proposes to scope out onshore plant generated impacts on human and ecological receptors during operation and maintenance on the basis that the Proposed Development does not include proposals for any onshore plant or stacks which could generate air emissions*. *On the basis that there are no stacks and provided no significant emissions are likely to arise from operational plant/stations, the Inspectorate agrees that this matter can be scoped out of the ES*.' (Scoping Opinion ID: 3.7.5)	Impacts arising from emissions from plant and stacks have been scoped out of the air quality assessment as agreed with the Planning Inspectorate (see **Table 7.8**).
'*The Inspectorate notes that this aspect chapter makes no reference to the proposed Alverdiscott Substation Connection Development (see comment at ID 2.1.5 above).*' (Scoping Opinion ID: 3.7.6)	The anticipated Alverdiscott Substation Connection Development would be taken forward by National Grid Electricity Transmission. However, it has been considered cumulatively alongside the Proposed Development. Cumulative impacts are considered in **section 7.13**.
'*The Inspectorate agrees that likely significant effects arising from residues and emissions (e.g. dust, pollutants, light, noise, vibration) are to be assessed in the relevant aspect chapters of the ES and a standalone aspect chapter for residues and emissions is not required.* *The Applicant's attention is however directed to the Inspectorate's comments in the relevant aspect chapters above with regards to residue and emission matters, for example lighting*.' (Scoping Opinion ID: 3.23.1)	The air quality chapter focuses on the potential impacts from dust and suspended particulate matter. The impacts associated with artificial lighting are considered within Volume 4, Chapter 2: Landscape, Seascape and Visual Resources of the ES.
Natural England	
'*The development site is within or may impact on the following Sites of Special Scientific Interest:* • *Mermaid's Pool to Rowden Gut Site of Special Scientific Interest (SSSI)*	With regards to dust, the impacts have been considered on all designated ecological sites within the study area, as detailed within **section 7.4.**

Comment	How and where considered in the ES
• *Taw Torridge Estuary SSSI* • *Lundy SSSI* *The Environmental Statement should include a full assessment of the direct and indirect effects of the development on the features of special interest within the SSSI and identify appropriate mitigation measures to avoid, minimise or reduce any adverse significant effects*.'	However, Mermaids Pool to Rowden Gut SSSI is a geological site and thus, not sensitive to dust. Lundy and Taw Torridge Estuary SSSIs are located outside of the air quality study area .

Preliminary Environmental Information Report

7.3.3 The preliminary findings of the EIA process were published in the Preliminary Environmental Information Report (PEIR) on 16 May 2024. The PEIR was prepared to provide the basis for statutory public consultation under the Planning Act 2008. This included consultation with statutory bodies under section 42 of the Planning Act 2008.

7.3.4 A summary of the key items raised specific to air quality is presented in **Table 7.6,** together with how these issues have been considered in the production of this ES chapter.

Further Engagement

7.3.5 Throughout the EIA process, consultation and engagement (in addition to scoping and section 42 consultation) with interested parties specific to air quality has been undertaken.

7.3.6 A summary of the key items raised specific to Air Quality is presented in **Table** 7.6**,** together with how these issues have been considered in the production of this ES chapter.

Table 7.6: Summary of consultation relevant to this chapter

Date	Consultee and type of response	Issues raised	How and where considered in the ES
May 2023.	Torridge District Council Environmental Protection Officer. Consulted with via email.	The Environmental Protection Officer agreed the methodology proposed was suitable and asked whether air quality assessment will be produced and available at the planning and process stage.	This chapter outlines the air quality assessment and follows the scope and methodology agreed with the council. The study area and methodology of this chapter are included within **sections 7.4** and **7.6**, respectively. The air quality assessment has been undertaken and is presented within **sections 7.10** to **7.12** of this chapter. A cumulative assessment is also included in **section 7.13**.
February 2024	Torridge District Council Environmental Protection Officer. Consulted with via email.	Torridge District Council was contacted following the submission of the EIA Scoping Report in preparation of the Development Consent Order (DCO) submission. The Environmental Protection Officer was still in agreement with the proposed methodology.	
July 2024	Torridge District Council, Section 42 response.	'*In addition to traffic, the construction phase will inevitably also lead to an increase in dust and noise pollution for residents living in the vicinity of the construction sites. The Council's response to the PEIR sets out detailed comments from its Environmental Protection Team*.'	Air quality impacts resulting from increases in dust are assessed within **sections 7.10** to **7.12** of this chapter. Increases in noise pollution are considered within Volume 2, Chapter 6: Noise and Vibration of the ES. A Dust Management Plan (DMP) will be prepared prior to construction, in accordance with the Outline DMP (document reference 7.7, Appendix C) that forms part of the application for development consent. The Outline DMP comprises suitable measures based upon the IAQM dust guidance (IAQM, 2024).
July 2024	Torridge District Council, Section 42 responses.	'*Volume 2 Chapter 7 discusses the potential air quality impact, with particular relevance to dust emissions on neighbouring amenity from an environmental protection perspective. The proposed development will be carried out over a significant time period and has the potential to impact a considerable number of residential properties. Table 7.21 indicates that a Dust Management Plan (DMP) will be devised to support the CEMP once finalised. The Environmental Protection Team would expect a DMP to be robust and outline suitable measures to mitigate dust during construction. Reference to the IAQM guidance is highly recommended*.'	
July 2024	Cat 3 receptor, Section 42 response.	'*We live at treetops ex395hd just by the field where the cable goes underneath the river our main concern is the noise and dust that might*	An assessment of dust generated during the construction and decommissioning phases is considered in **section 7.10** and **section 7.12**, respectively. Mitigation

Date	Consultee and type of response	Issues raised	How and where considered in the ES
		impact our way of life the alterations to the road junction will be a great improvement as at the moment it is an accident black spot as above but concerned about the operational hours, work lights, traffic movement etc.'	measures are outlined in **Table 7.21** and **Table 7.22**, which would be implemented during construction and decommissioning to ensure that impacts from dust are reduced to levels that are not significant in EIA terms. As such, this chapter concludes that there would be no significant effects arising from the Proposed Development.
July 2024	Local Residents, Section 42 responses.	The Section 42 responses included concerns from local residents relating to the impacts of dust generated during the construction and decommissioning phases of the Proposed Development. This included concerns of dust impacts resulting from the construction activities, as well as from vehicle movements.	An assessment of dust generated during the construction and decommissioning phases is considered in **section 7.10** and **section 7.12**, respectively. Mitigation measures are outlined in **Table 7.21** and **Table 7.22**, which would be implemented during construction and decommissioning to ensure that impacts from dust are reduced to levels that are not significant in EIA terms. As such, this chapter concludes that there would be no significant effects arising from the Proposed Development. The impact arising from air emissions generated by vehicles during the construction, operation and maintenance, and decommissioning phases has been scoped out of the air quality assessment. This is because the results of the traffic and transport assessment (Volume 2, Chapter 5: Traffic and Transport of the ES) indicates that the relevant Environmental Protection UK (EPUK) and IAQM thresholds are not expected to be exceeded for any individual road during any phase of the Proposed Development. Further details are provided in **Table 7.8**.
September 2024	Torridge District Council, consultation meeting.	The Section 42 responses were discussed and confirmation that a Dust Management Plan would be produced was provided. Inclusion of assessment of ecological impacts in the construction dust risk assessment was also discussed.	A Dust Management Plan (DMP) will be prepared prior to construction, in accordance with the Outline DMP (document reference 7.7, Appendix C) that forms part of the application for development consent.. An assessment of dust generated during the construction and decommissioning phases is considered in **section 7.10** and **section 7.12.**

7.4 Study Area

7.4.1 Guidance on the assessment of dust from demolition and construction (IAQM, 2024) indicates that there could potentially be annoyance dust and particulate matter (PM) with diameters of 10 micrometres or smaller (PM_{10}) effects on human heath receptors located within 250 m of onsite construction activities and ecological receptors located within 50 m of onsite construction activities.

7.4.2 As such, the air quality study area has been defined with respect to construction dust and covers an area up to 250 m around the Onshore Infrastructure Area (which excludes the Abnormal Indivisible Load (AIL) routes), and 250 m from construction site entrances. In accordance with IAQM guidance (IAQM, 2024), receptors are also considered within 20 m, 50 m, 100 m, and 250 m in the air quality assessment.

7.4.3 With respect to the AIL routes, the air quality study area covers 50 m from the edge of the roads, up to 250 m from the site entrances, in line with the IAQM (2024) guidance. Beyond 250 m from construction site entrances, the AIL routes are not considered as the impact of trackout declines with distance from the site.

7.4.4 To note, the study area used within this assessment differs from the study areas proposed within the Scoping Report, as it has decreased from 350 m to 250 m. This reflects the updates made to the IAQM guidance in 2024 (IAQM, 2024).

7.4.5 For sensitive ecological receptors, the corresponding distances are 50 m from the Onshore Infrastructure Area, as well as 50 m from the edge of roads, up to 250 m from the site entrances. The Mermaid's Pool to Rowden Gut Site of SSSI is within 50 m of the Onshore Infrastructure Area but this has been designated for its geological features. As such, it is not sensitive to air pollution. Kynoch's Foreshore LNR is within 50 m of the Onshore Infrastructure Area and is considered within the air quality assessment.

7.4.6 The location and geographic extent of the study area used to inform the air quality assessment is presented in Figure 7.1 (see Volume 2, Figures).

7.5 Scope of the Assessment

7.5.1 The scope of this ES has been developed in consultation with relevant statutory and non-statutory consultees as detailed in **Table 7.5** and **Table 7.6**.

7.5.2 Taking into account the scoping and consultation process, **Table 7.7** summarises the impacts considered as part of this assessment.

Table 7.7: Impacts considered within this assessment

Activity	Impacts scoped into the assessment
Construction Phase	
Activities required for the construction of the Proposed Development (e.g., earthworks, vehicle track-out) would generate dust emissions which could result in dust soiling effects on human receptors, including people and property.	The impact of dust soiling (annoyance) on property arising from dust emissions generated by onsite construction activities.
Activities required for the construction of the Proposed Development (e.g., earthworks, vehicle track-out) would generate dust emissions which could result in adverse effects on the health of human receptors.	The impact of increases in suspended particulate matter on human receptors arising from dust emissions generated by onsite construction activities.
There is only one Site of Special Scientific Interest (SSSI) within study area which has been designated for its geological features and therefore is not sensitive to air quality. However, there is a Local Nature Reserve (Kynoch's Foreshore), CWSs, and UWSs within the study area	The impact on ecological receptors arising from dust emissions generated by onsite construction activities.
Decommissioning Phase	
Activities required for the decommissioning of the Proposed Development (e.g., earthworks, vehicle track-out) would generate dust emissions which could result in dust soiling effects on human receptors, including people and property.	The impact of dust soiling (annoyance) on property arising from dust emissions generated by onsite decommissioning activities.
Activities required for the decommissioning of the Proposed Development (e.g., earthworks, vehicle track-out) would generate dust emissions which could result in adverse effects on the health of human receptors.	The impact of increases in suspended particulate matter on human receptors arising from dust emissions generated by onsite decommissioning activities.
There is only one SSSI within study area which has been designated for its geological features and therefore is not sensitive to air quality. However, there is a Local Nature Reserve (Kynoch's Foreshore), CWSs, and UWSs within the study area	The impact on ecological receptors arising from dust emissions generated by onsite decommissioning activities.

7.5.3 Impacts that are not likely to result in significant effects have been scoped out of the assessment. A summary of the impacts scoped out, together with justification for scoping them out and whether the approach has been agreed with key stakeholders through either scoping or consultation, is presented in **Table 7.8**.

Table 7.8: Issues scoped out of the assessment

Impact	Justification
Construction Phase	
The impact on ecological receptors arising from air emissions generated by vehicles during the construction phase.	The EPUK & IAQM Land-Use Planning & Development Control: Planning for Air Quality document (EPUK & IAQM, 2017) indicates that air quality assessments should include developments that increase annual average daily Light Duty Vehicle (LDV) traffic flows by more than 100 within or adjacent to an AQMA and more than 500 elsewhere. The results of the traffic and transport assessment (detailed in Volume 2, Chapter 5: Traffic and Transport of the ES) undertaken for this Proposed Development indicates that the aforementioned EPUK & IAQM thresholds are not expected to be exceeded for any individual road during the construction phase of this Proposed Development; therefore, construction-vehicle exhaust emissions have not been assessed specifically. The EPUK & IAQM states that: *'If none of the criteria are met then there should be no requirement to carry out an air quality assessment for the impact of the proposed*
The impact on human receptors arising from air emissions generated by vehicles during the construction phase.	

Impact	Justification
	development on the local area, and the impacts can be considered to have insignificant effects.'
Operation and Maintenance	
The impact on ecological receptors arising from air emissions generated by vehicles during the operation and maintenance phase.	The EPUK & IAQM Land-Use Planning & Development Control: Planning for Air Quality document (EPUK & IAQM, 2017) indicates that air quality assessments should include developments that increase annual average daily LDV traffic flows by more than 100 within or adjacent to an AQMA and more than 500 elsewhere. The results of the traffic and transport assessment (detailed in detailed in Volume 2, Chapter 5: Traffic and Transport of the ES) undertaken for this Proposed Development indicates that the aforementioned EPUK & IAQM thresholds are not expected to be exceeded for any individual road during the operation and maintenance phase of this Proposed Development; therefore, operational-vehicle exhaust emissions have not been assessed specifically. The EPUK & IAQM states that: *'If none of the criteria are met then there should be no requirement to carry out an air quality assessment for the impact of the proposed development on the local area, and the impacts can be considered to have insignificant effects.'*
The impact on human receptors arising from air emissions generated by vehicles during the operation and maintenance phase.	
The impact on human and ecological receptors (dust soling and human health) arising from fugitive dust emissions generated during operation and maintenance of the onshore elements of the Proposed Development.	Activities associated with the operation and maintenance of the onshore elements of the Proposed Development are unlikely to generate dust. Therefore, the potential impact on human or ecological receptors arising from fugitive dust emissions generated during operation and maintenance of the onshore elements of the Proposed Development is unlikely to result in significant effects and thus, has been scoped out of the assessment for air quality. This was agreed by the Planning Inspectorate in the Scoping Opinion (refer to **Table 7.5** of this ES chapter).
The impact on human and ecological receptors arising from air emissions generated by plants or stacks during operation and maintenance of the onshore elements of the Proposed Development.	The Proposed Development does not include proposals for any plant or emissions stacks which could give rise to air emissions during operation of the onshore elements of the Proposed Development. Therefore, the potential impact on human or ecological receptors arising from plant or stack emissions would not occur and would not result in significant effects and thus, has been scoped out of the assessment for air quality. This was agreed by the Planning Inspectorate in the Scoping Opinion (refer to **Table 7.5** of this ES chapter).
Decommissioning Phase	
The impact on ecological receptors arising from air emissions generated by vehicles during the decommissioning phase.	The EPUK & IAQM Land-Use Planning & Development Control: Planning for Air Quality document (EPUK & IAQM, 2017) indicates that air quality assessments should include developments that increase annual average daily LDV traffic flows by more than 100 within or adjacent to an AQMA and more than 500 elsewhere. The results of the traffic and transport assessment (detailed in detailed in Volume 2, Chapter 5: Traffic and Transport, of the ES) undertaken for this Proposed Development indicates that the aforementioned EPUK & IAQM thresholds are not expected to be exceeded for any individual road during the decommissioning phase of this Proposed Development; therefore, operational-vehicle exhaust emissions have not been assessed specifically. The EPUK & IAQM states that: *'If none of the criteria are met then there should be no requirement to carry out an air quality assessment for the impact of the proposed development on the local area, and the impacts can be considered to have insignificant effects.'*
The impact on human receptors arising from air emissions generated by vehicles during the decommissioning phase.	

7.6 Methodology

Relevant Guidance

7.6.1 The relevant guidance documents used in this assessment are listed below:

- Institute of Air Quality Management (IAQM) (2024) Guidance on the assessment of dust from demolition and construction; and
- EPUK & IAQM (2017) Land-Use Planning & Development Control: Planning for Air Quality.

Methodology for Baseline Studies

Desk Studies

7.6.2 The background concentration often represents a large proportion of the total pollution concentration, so it is important that the background concentration selected for the assessment is realistic. The PPG and EPUK & IAQM guidance highlight public information from Defra and local monitoring studies as potential sources of information on background air quality.

7.6.3 Local Air Quality Management Technical Guidance (TG22) (Defra, 2022) recommends that Defra mapped concentration estimates are used to inform background concentrations in air quality modelling and states that:

'Where appropriate these data can be supplemented by and compared with local measurements of background, although care should be exercised to ensure that the monitoring site is representative of background air quality'.

7.6.4 Baseline air quality has been characterised by drawing on information from the following public sources:

- Defra maps (Defra, 2018), which show estimated pollutant concentrations across the UK in 1 km grid squares; and
- published results of local authority Review and Assessment studies of air quality (Torridge District Council Annual Status Report (2024) and North Devon District Council Annual Status Report (2023), including local monitoring and modelling studies.

Impact Assessment Methodology

Overview

7.6.5 No statutory or official numerical air quality criterion for dust annoyance has been set at a UK, European or World Health Organisation level. Construction dust assessments have tended to be risk based, focusing on the appropriate measures to be used to keep dust impacts at an acceptable level.

7.6.6 The IAQM dust guidance aims to estimate the impacts of both PM_{10} and dust through a risk-based assessment procedure. The IAQM dust guidance document states: '*The impacts depend on the mitigation measures adopted. Therefore the emphasis in this document is on classifying the risk of dust impacts from a site,*

which will then allow mitigation measures commensurate with that risk to be identified.' (Page 4, IAQM 2024).

7.6.7 The IAQM dust guidance provides a methodological framework for the assessment but notes that professional judgement is required to assess effects:

'This is necessary, because the diverse range of projects that are likely to be subject to dust impact assessment means that it is not possible to be prescriptive as to how to assess the impacts. Also a wide range of factors affect the amount of dust that may arise, and these are not readily quantified.'

Construction Traffic

7.6.8 Exhaust emissions from construction-related vehicles (contractors' vehicles and Heavy Goods Vehicles (HGVs), diggers, and other diesel-powered vehicles) are unlikely to have a significant impact on local air quality (IAQM, 2024) except for large, long-term construction sites. The EPUK & IAQM Land-Use Planning & Development Control: Planning For Air Quality document (EPUK and IAQM, 2017) indicates that air quality assessments should include developments that increase annual average daily Heavy Duty Vehicle (HDV) traffic flows by more than 25 within or adjacent to an AQMA and more than 100 elsewhere. The results of the traffic and transport assessment (detailed in Volume 2, Chapter 5: Traffic and Transport, of the ES) undertaken for this Proposed Development indicates that the aforementioned EPUK & IAQM thresholds are not expected to be exceeded for any individual road during the construction phase of this Proposed Development; therefore, construction-vehicle exhaust emissions have not been assessed specifically.

Dust

7.6.9 Consistent with the recommendations in the IAQM dust guidance (IAQM, 2024), a risk-based assessment has been undertaken for the Proposed Development, using the well-established source-pathway-receptor approach.

- The dust impact (the change in dust levels attributable to the development activity) at a particular receptor will depend on the magnitude of the dust source and the effectiveness of the pathway (i.e., the route through the air) from source to receptor.
- The effects of the dust are the results of these changes in dust levels on the exposed receptors, for example annoyance or adverse health effects. The effect experienced for a given exposure depends on the sensitivity of the particular receptor to dust. An assessment of the overall dust effect for the area as a whole has been made using professional judgement taking into account both the change in dust levels (as indicated by the Dust Impact Risk for individual receptors) and the absolute dust levels, together with the sensitivities of local receptors and other relevant factors for the area.

7.6.10 The dust risk categories that have been determined for each of the four activities (demolition, earthworks, construction and tracked out dust (referred to in the IAQM guidance as trackout) have been used to define the appropriate site-specific mitigation measures based on those described in the IAQM dust guidance. The guidance states that provided the mitigation measures are

successfully implemented; the resultant effects of the dust exposure will normally be "not significant".

7.6.11 This assessment does not consider the air quality impacts of dust from any contaminated land or buildings. Contaminated land is considered within Volume 2, Chapter 4: Geology, Hydrogeology and Ground Conditions of the ES.

Source (Magnitude of Impact)

7.6.12 The IAQM dust guidance gives examples of the dust emission magnitudes for demolition, earthworks and construction activities and trackout (IAQM, 2024). These example dust emission magnitudes are based on the Proposed Development, building volume, number of HDV movements generated by the activities and the materials used.

7.6.13 These example magnitudes have been combined with details of the period of construction activities to provide the ranking for the source magnitude that is set out in **Table 7.9**.

Table 7.9: Risk Allocation – Source (Dust Emission Magnitude)

Features of the Source of Dust Emissions	Dust Emission Magnitude
Demolition - building over 75,000 m^3, potentially dusty construction material (e.g. concrete), on-site crushing and screening, demolition activities > 12 m above ground level. **Earthworks** – total site area over 110,000 m^2, potentially dusty soil type (e.g. clay), >10 heavy earth moving vehicles active at any one time, formation of bunds > 6 m in height. **Construction** - total building volume over 75,000 m^3, activities include piling, on-site concrete batching, sand blasting. **Trackout** – over 50 HDV outwards movements in any one day, potentially dusty surface material (e.g. High clay content), unpaved road length > 100 m.	Large
Demolition - building between 12,000 to 75,000 m^3, potentially dusty construction material and demolition activities 6 - 12 m above ground level. **Earthworks** – total site area between 18,000 to 110,000 m^2, moderately dusty soil type (e.g. silt), 5 – 10 heavy earth moving vehicles active at any one time, formation of bunds 3 - 6 m in height. **Construction** - total building volume between 12,000 and 75,000 m^3, use of construction materials with high potential for dust release (e.g. concrete), on-site concrete batching. **Trackout** – 20 - 50 HDV outwards movements in any one day, moderately dusty surface material (e.g. High clay content), unpaved road length 50 – 100 m.	Medium
Demolition - building less than 12,000 m^3, construction material with low potential for dust release (e.g. metal cladding or timber), demolition activities < 6 m above ground, demolition during winter months. **Earthworks** – total site area less than 18,000 m^2. Soil type with large grain size (e.g. sand), < 5 heavy earth moving vehicles active at any one time, formation of bunds < 3 m in height. **Construction** - total building volume below 12,000 m^3, use of construction materials with low potential for dust release (e.g. metal cladding or timber). **Trackout** – < 20 HDV outwards movements in any one day, surface material with low potential for dust release, unpaved road length < 50 m.	Small

Pathway and Receptor (Sensitivity of Receptor)

7.6.14 Pathway means the route by which dust and particulate matter may be carried from the source to a receptor. The main factor affecting the pathway effectiveness is the distance from the receptor to the source. The orientation of the receptors to the source compared to the prevailing wind direction is a relevant risk factor for long-duration construction projects; however, short-term construction projects may be limited to a few months when the most frequent wind direction might be quite different, so adverse effects can potentially occur in any direction from the site.

7.6.15 As set out in the IAQM dust guidance, a number of attempts have been made to categorise receptors into high, medium and low sensitivity categories; however, there is no unified sensitivity classification scheme that covers the different potential effects on property and human health (IAQM, 2024).

7.6.16 **Table 7.10** and **Table 7.11** set out the IAQM basis for categorising the sensitivity of people and property to dust and PM_{10} respectively. **Table 7.12** sets out the basis for determining the sensitivity of ecological receptors to dust.

Table 7.10: Sensitivities of People and Property Receptors to Dust

Receptor	Sensitivity
Principles: • users can reasonably expect enjoyment of a high level of amenity; or • the appearance, aesthetics or value of their property would be diminished by soiling; and the people or property would reasonably be expected to be present continuously, or at least regularly for extended periods as part of the normal pattern of use of the land. **Indicative Examples:** • Dwellings. • Museums and other culturally important collections. • Medium and long-term car parks and car showrooms.	**High**
Principles: • users would expect to enjoy a reasonable level of amenity, but would not reasonably expect to enjoy the same level of amenity as in their home; or • the appearance, aesthetics or value of their property could be diminished by soiling; or • the people or property wouldn't reasonably be expected to be present here continuously; or • regularly for extended periods as part of the normal pattern of use of the land. **Indicative Examples:** • Parks. • Places of work.	**Medium**
Principles: • the enjoyment of amenity would not reasonably be expected; or • there is property that would not reasonably be expected to be diminished in appearance, aesthetics or value by soiling; or • there is transient exposure, where the people or property would reasonably be expected to be present only for limited periods of time as part of the normal pattern of use of the land. **Indicative Examples:** • Playing fields, farmland (unless commercially-sensitive horticultural). • Footpaths and roads. • Short-term car parks.	**Low**

Table 7.11: Sensitivities of People and Property Receptors to PM_{10}

Receptor	Sensitivity
Principles: • Locations where members of the public are exposed over a time period relevant to the air quality objective (in the case of the 24-hour objective for PM_{10}, a relevant location would be one where individuals may be exposed for eight hours or more in a day). **Indicative Examples:** • Residential properties. • Schools, hospitals and residential care homes.	**High**
Principles: • Locations where the people exposed are workers and exposure is over a time period relevant to the air quality objective (in the case of the 24-hour objective for PM_{10}, a relevant location would be one where individuals may be exposed for eight hours or more in a day). **Indicative Examples:** • Office and shop workers (but generally excludes workers occupationally exposed to PM_{10} as protection is covered by Health and Safety at Work legislation).	**Medium**
Principles: • Locations where human exposure is transient exposure. **Indicative Examples:** • Public footpaths. • Playing fields, parks. • Shopping streets.	**Low**

Table 7.12: Sensitivities of Ecological Receptors to Dust

Receptor	Sensitivity
Principles: • Locations with an international or national designation and the designated features may be affected by dust soiling; or • locations where there is a community of particularly dust sensitive species such as vascular species included in the Red Data List For Great Britain. **Indicative Examples:** • Special Area of Conservation designated for acid heathlands adjacent to the demolition of a large site containing concrete (alkali) buildings or for the presence of lichen.	**High**
Principles: • Locations where there is a particularly important plant species, where its dust sensitivity is uncertain or unknown; or • locations with a national designation where the features may be affected by dust deposition. **Indicative Examples:** • SSSI with dust sensitive features.	**Medium**
Principles: • Locations with a local designation where the features may be affected by dust deposition. **Indicative Examples:** • A Local Nature Reserve with dust sensitive features	**Low**

7.6.17 Dust sensitive human health receptors located within 20 m, 50 m, 100 m and 250 m of the Onshore Infrastructure Area have been considered in the air quality assessment and are shown in Volume 2, Figure 7.2. The location of ecological receptors within the air quality study area are shown in Volume 2, Figure 7.3. These distances are based on the matrices in the IAQM guidance which are reproduced in **Table 7.13** to **Table 7.15**.

7.6.18 The IAQM methodology (IAQM, 2024) combines consideration of the pathway and receptor to derive the '*sensitivity of the area'*. **Table 7.13** and **Table 7.14** show how the sensitivity of the area has been derived for this assessment, in accordance with the IAQM approach.

7.6.19 **Table 7.15** shows how the sensitivity of the area has been derived for this assessment.

Table 7.13: Sensitivity of the Area to Dust Soiling Effects on People and Property

Receptor Sensitivity	Number of Receptors [a]	Distance from source (m)			
		<20	<50	<100	<250
High	>100	High	High	Medium	Low
	10-100	High	Medium	Low	Low
	1-10	Medium	Low	Low	Low
Medium	>1	Medium	Low	Low	Low
Low	>1	Low	Low	Low	Low

The sensitivity of the area has been derived for demolition, construction, earthworks and trackout.

a. The total number of receptors within the stated distance has been estimated. Only the highest level of area sensitivity from the table has been recorded.

b. For trackout, the distances have been measured from the side of the roads used by construction traffic. The impact declines with distance from the site, and trackout impacts have only been considered up to 50 m from the edge of the road.

Table 7.14: Sensitivity of the Area to Human Health Impacts

Receptor Sensitivity	Annual Mean PM_{10} Concentration [a]	Number of Receptors [b, c]	Distance from source (m)			
			<20	<50	<100	<250
High	> 18 µg.m^{-3}	>100	High	High	High	Medium
		10-100	High	High	Medium	Low
		1-10	High	Medium	Low	Low
	16 - 18 µg.m^{-3}	>100	High	High	Medium	Low
		10-100	High	Medium	Low	Low
		1-10	High	Medium	Low	Low
	14 - 16 µg.m^{-3}	>100	High	Medium	Low	Low
		10-100	High	Medium	Low	Low
		1-10	Medium	Low	Low	Low
	< 14 µg.m^{-3}	>100	Medium	Low	Low	Low
		10-100	Low	Low	Low	Low
		1-10	Low	Low	Low	Low
Medium	> 18 µg.m^{-3}	>10	High	Medium	Low	Low
		1 – 10	Medium	Low	Low	Low

Receptor Sensitivity	Annual Mean PM_{10} Concentration [a]	Number of Receptors [b, c]	Distance from source (m)			
			<20	<50	<100	<250
	16 – 18 µg.m^{-3}	> 10	Medium	Low	Low	Low
		1-10	Low	Low	Low	Low
	< 16 µg.m^{-3}	>1	Low	Low	Low	Low
Low	-	>1	Low	Low	Low	Low

The sensitivity of the area has been derived for demolition, construction, earthworks and trackout.

a. This refers to the background concentration derived from the assessment of baseline conditions later in this report.

b. The total number of receptors within the stated distance has been estimated. Only the highest level of area sensitivity from the table has been recorded.

c. For high sensitivity receptors with high occupancy (such as schools or hospitals), the approximate number of occupants has been used to derive an equivalent number of receptors.

d. For trackout, the distances have been measured from the side of the roads used by construction traffic. The impact declines with distance from the site, and trackout impacts have only been considered up to 50 m from the edge of the road.

Table 7.15: Sensitivity of the Area to Ecological Impacts

Receptor Sensitivity	Distance from source (m) [a]	
	<20	<50
High	High	Medium
Medium	Medium	Low
Low	Low	Low

The sensitivity of the area has been derived for demolition, construction, earthworks and trackout and for each designated site.

a. Only the highest level of area sensitivity has been recorded.

7.6.20 The IAQM dust guidance lists the following additional factors that can potentially affect the sensitivity of the area and, where necessary, professional judgement has been used to adjust the sensitivity allocated to a particular area:

- any history of dust generating activities in the area;
- the likelihood of concurrent dust generating activity on nearby sites;
- any pre-existing screening between the source and the receptors;
- any conclusions drawn from analysing local meteorological data which accurately represent the area; and if relevant the season during which the works will take place;
- any conclusions drawn from local topography;
- duration of the potential impact, as a receptor may become more sensitive over time; and
- any known specific receptor sensitivities which are considered to go beyond the classifications given in the table above.

7.6.21 The sensitivity of the surrounding area and the magnitude of risk have been combined in the matrices provided in **Table 7.16** below to assign the level of risk for each activity type required during the construction of the Proposed Development.

Table 7.16: Risk of Dust Impacts

Receptor Sensitivity	Dust Emission Magnitude		
	Large	Medium	Small
Demolition			
High	High Risk	Medium Risk	Medium Risk
Medium	High Risk	Medium Risk	Low Risk
Low	Medium Risk	Low Risk	Negligible
Earthworks			
High	High Risk	Medium Risk	Low Risk
Medium	Medium Risk	Medium Risk	Low Risk
Low	Low Risk	Low Risk	Negligible
Construction			
High	High Risk	Medium Risk	Low Risk
Medium	Medium Risk	Medium Risk	Low Risk
Low	Low Risk	Low Risk	Negligible
Trackout			
High	High Risk	Medium Risk	Low Risk
Medium	Medium Risk	Medium Risk	Low Risk
Low	Low Risk	Low Risk	Negligible

Significance of Effect

7.6.22 The dust risk categories that have been determined for each of the activities (earthworks, construction and trackout) have been used to define the appropriate site-specific mitigation measures outlined in **Table 7.16** based on those described in the IAQM dust guidance. The guidance states that provided the mitigation measures are successfully implemented, the resultant effects of the dust exposure will normally be 'not significant'. For those cases where the risk category is 'negligible', no mitigation measures are required.

Assumptions and Limitations of the Assessment

7.6.23 The background PM_{10} concentration has been drawn from the highest measured concentration at the nearest background monitoring location. Whilst this does not provide a site-specific concentration, it provides a sufficient level of detail to enable the assessment of the impact risk arising from dust generated during construction of the Proposed Development to be predicted robustly. This is because PM_{10} concentrations are relatively evenly distributed across the UK due to the wide range of sources and the contribution of secondary particulate matter.

7.7 Baseline Environment

Introduction

7.7.1 This section reviews the existing air quality conditions within the air quality study area.

7.7.2 For this air quality assessment, the background air quality has been characterised by drawing upon information provided in the local authority Annual Status Reports (Torridge District Council, 2024; North Devon District Council, 2023), data from Defra air quality monitoring networks and Defra projections of pollutant concentrations for years from 2018 to 2030 for each km grid square in the UK (Defra, 2018).

7.7.3 A detailed description of how the baseline air quality within the air quality study area has been derived for this air quality assessment is summarised in the following sections of this chapter.

Review and Assessment Process

7.7.4 There are no designated AQMAs by Torridge District Council within the district, indicating that air quality in the area is generally good and the nearest AQMAs are located over 40 km away.

Local Urban Background Monitoring

7.7.5 Torridge District Council does not undertake any particulate matter monitoring. The Barnstaple automatic monitoring site is part of the UK Automatic Urban and Rural Network (AURN) that is run by the Environment Agency. The most recently measured annual-mean PM_{10} concentrations are presented in **Table 7.17**. Concentrations in 2020 and 2021 have not been considered to avoid the temporary air quality effects associated with reduced traffic and activity during the COVID-19 pandemic.

Table 7.17: Automatically Monitored Annual-Mean PM_{10} Concentrations

Monitor Code	Monitor Name	Concentration ($\mu g.m^{-3}$)					
		2016	2017	2018	2019	2022	2023*
Barnstaple 1	AURN – Barnstaple A39	16.9	15.6	14.9	16.6	12.7	14.8

*Data for 2023 has not been published within the local authority Annual Status Reports, however, the concentration for 2023 has been downloaded directly from https://uk-air.defra.gov.uk/.

Defra Mapped Concentration Estimates

7.7.6 Defra's total annual-mean PM_{10} concentration estimates have been collected for the 1 km grid squares of the monitoring site and the Proposed Development, which are summarised in **Table 7.18**.

Table 7.18: Defra Mapped Annual-Mean Background PM_{10} Concentration Estimates

Monitor Code	Monitor Name	Approximate distance from the Order Limits	Concentration ($\mu g.m^{-3}$)	
			Range of Monitored	Estimated Defra Mapped
-	Proposed Development	-	-	11.8*
Barnstaple 1	AURN – Barnstaple A39	9.2	12.7-16.9	11.3

*11.8 $\mu g.m^{-3}$ is the maximum Defra mapped concentration of all the 1 km grid squares the Proposed Development passes through.

7.7.7 For PM_{10}, the Defra mapped background concentration estimate is smaller than the range of the results from monitoring and the use of these data would not be conservative. Automatically monitored annual-mean PM_{10} concentrations at the Barnstaple 1 monitor range from 12.7 to 16.9 $\mu g.m^{-3}$. To ensure the assessment is conservative, the background annual-mean PM_{10} concentration has been derived from the highest concentration of 16.9 $\mu g.m^{-3}$, monitored in 2016.

Designated Sites

7.7.8 All designated sites within the study area and qualifying interest features that could be affected by the construction and decommissioning phases of the Proposed Development are set out in **Table 7.19**.

Table 7.19: Designated sites and relevant qualifying interests

Designated Site	Distance to the Proposed Development (nearest point)	Relevant Qualifying Interest
Kynoch's Foreshore LNR	0 m	Features sensitive to dust.
Torridge Estuary CWS	0 m	Features sensitive to dust.
Abbotsham Cliff CWS	0 m	Features sensitive to dust.
Hallsannery CWS	0 m	Features sensitive to dust.
Haddacott Moor CWS	0 m	Features sensitive to dust.
Lodge Plantation UWS	0 m	Features sensitive to dust.
Littlecroft CWS*	0 m	Features sensitive to dust.
Bowood Farm UWS	42 m	Features sensitive to dust.

*Littlecroft CWS is not located within 50 m of the Onshore Infrastructure Area. However, the wildlife site is situated adjacent to the AIL route within 250 m of the site access. Therefore, it is considered as a receptor for trackout, which may occur on roads up to 250 m from the Onshore Infrastructure Area.

Future Baseline Conditions

7.7.9 Baseline pollutant concentrations are expected to reduce over time as cleaner, less polluting vehicle become a larger proportion of the fleet. For the purpose of this assessment and to remain conservative, no reduction is baseline concentrations have been applied.

7.7.10 With UK-wide initiatives such as those set out in the Clean Air Strategy, air quality is likely to improve over time. As such, to ensure that the assessment presents conservative results, no reduction in the background concentration has been assumed in future years.

Key Receptors

7.7.11 **Table 7.20** identifies the receptors taken forward into the assessment. Furthermore, Figure 7.2 (see Volume 2, Figures) and Figure 7.3 (see Volume 2, Figures) present the location of ecological and human health receptors within the air quality study area.

Table 7.20: Key receptors taken forward to assessment

Receptor	Description	Sensitivity/Value
Human health receptors	All human health receptors within 250 m of the Onshore Infrastructure Area.	Outlined in **Table 7.10** and **Table 7.11**.
Designated ecological receptors	All designated ecological receptors within 50 m of the Onshore Infrastructure Area, or within 50 m of the AIL routes up to 250 m from the site accesses.	Outlined in **Table 7.12**.

7.8 Mitigation Measures Adopted as Part of the Proposed Development

7.8.1 For the purposes of the EIA process, the term *'measures adopted as part of the Proposed Development'* is used to include the following types of mitigation measures (adapted from IEMA, 2016). These measures are set out in Volume 1, Appendix 3.1: Commitments Register of the ES.

- Embedded mitigation. This includes the following.
  - Primary (inherent) mitigation - measures included as part of the Proposed Development design. IEMA describes these as '*modifications to the location or design of the development made during the pre-application phase that are an inherent part of the project and do not require additional action to be taken'*. This includes modifications arising through the iterative design process. These measures will be secured through the consent itself through the description of the project and the parameters secured in the DCO and/or marine licences. For example, a reduction in footprint or height.
  - Tertiary (inexorable) mitigation. IEMA describes these as '*actions that would occur with or without input from the EIA feeding into the design process. These include actions that will be undertaken to meet other existing legislative requirements, or actions that are considered to be standard practices used to manage commonly occurring environmental effects*'. It may be helpful to secure such measures through a Construction Environmental Management Plan or similar.
- Secondary (further) mitigation. IEMA describes these as '*actions that will require further activity in order to achieve the anticipated outcome'*. These include measures required to reduce the significance of environmental effects (such as lighting limits) and may be secured through environmental management plan.

7.8.2 In addition, where relevant, measures have been identified that may result in enhancement of environmental conditions. Such measures are clearly identified

within Volume 1, Appendix 3.1: Commitments Register of the ES. The measures relevant to this chapter are summarised in **Table 7.21**.

7.8.3 Embedded measures that will form part of the final design (and/or are established legislative requirements/good practice) have been taken into account as part of the initial assessment presented in **section 7.10** to **section 7.12** below (i.e., the initial determination of impact magnitude and significance of effects assumes implementation of these measures). This ensures that the measures to which the Applicant is committed are taken into account in the assessment of effects.

7.8.4 Where an assessment identifies likely significant adverse effects, further or secondary mitigation measures may be applied. These are measures that could further prevent, reduce and, where possible, offset these effects. They are defined by IEMA as actions that will require further activity in order to achieve the anticipated outcome and may be imposed as part of the planning consent, or through inclusion in the ES (referred to as secondary mitigation measures in IEMA, 2016). For further or secondary measures both pre-mitigation and residual effects are presented.

7.8.5 A number of measures have been adopted as part of the Proposed Development to reduce the potential for impacts on air quality, which are outlined within **Table 7.22** and included within the Outline Onshore Construction Environmental Management Plan (On-CEMP) (document reference 7.7). These measures are based on the measures that are highly recommended by the IAQM for sites with high dust risk. These will be implemented for construction activities on site.

Table 7.21: Mitigation measures adopted as part of the Proposed Development

Commitments Number	Measure Adopted	How the Measure Will be Secured
Embedded Measures		
ONS06	A Dust Management Plan (DMP) would be incorporated within the On-CEMP(s) and measures in relation to air quality and dust management, as outlined in the Institute of Air Quality Management guidance (IAQM, 2024). A DMP assists in the appropriate management techniques to limit dust soiling from construction and decommissioning activities as far as reasonably practicable. Air quality and dust management measures, as outlined in IAQM guidance (IAQM, 2024) would be included. An Outline DMP has been provided as an appendix to the Outline On-CEMP as part of the application for development consent (document reference 7.7, Appendix C).	DCO Schedule 2, Requirement 7 (Management Plans)
ONS05	An Outline Construction Traffic Management Plan (CTMP) has been submitted with the application for development consent (document reference 7.12). CTMP(s) will be developed in accordance with the Outline CTMP prior to commencement of construction and agreed with relevant stakeholders. The CTMP(s) will set out reasonably practicable measures that include: • Managing the numbers and routing of HGVs during the construction phase; • Managing the movement of construction worker traffic during the construction phase;	DCO Schedule 2, Requirement 8 (Construction Traffic Management Plan)

Commitments Number	Measure Adopted	How the Measure Will be Secured
	• Details of measures to manage the safe passage of HGV traffic via the local highway network; and • Details of localised road improvements if and where these may be necessary to facilitate the safe use of the existing road network.	
ONS04	An Outline Decommissioning Strategy has been submitted as part of the application for development consent (document reference 7.17), which details that onshore and offshore decommissioning plans will be prepared in accordance with the principles set out in the Outline Decommissioning Strategy, if decommissioning of the Proposed Development is required at the end of the Proposed Development's operational life. The onshore decommissioning plan(s) will be developed in consultation with the relevant authority and in line with the latest available guidance, legislation and any new technologies available at the time of the Proposed Development's decommissioning. The onshore decommissioning plan(s) will include an assessment of the need to remove above ground infrastructure and the decommissioning of below ground infrastructure and include details relevant to flood risk (e.g. maintenance/reinstatement of existing land drainage), pollution prevention and avoidance of ground disturbance. The onshore decommissioning plan(s) will also include provision for the protection (during decommissioning) of any significant archaeological remains within the Onshore Infrastructure Area which were identified and protected from harm during construction.	DCO Schedule 2, Requirement 16 (Decommissioning Strategy)

Table 7.22: Details of IAQM dust control measures

Measure Adopted	How the Measure Will be Secured
Communications • Develop and implement a stakeholder communications plan that includes community engagement before work commences on site. • Display the name and contact details of person(s) accountable for air quality and dust issues on the Order Limits. This may be the environment manager/engineer or the site manager. • Display the head or regional office contact information	Dust control measures to be included within a DMP, as an appendix to the final CEMP(s) which are secured via a DCO requirement - DCO Schedule 2, Requirement 7 (Management Plans)
Dust Management Plan • Develop and implement a DMP (which may include measures to control other emissions). The level of detail will depend on the risk and should include as a minimum the highly recommended measures in this document. The desirable measures should be included as appropriate for the site. The DMP may include monitoring of dust.	
Site Management • Record all dust and air quality complaints, identify cause(s), take appropriate measures to reduce emissions in a timely manner, and record the measures taken.	

Measure Adopted	How the Measure Will be Secured
• Make the complaints log available to the local authority when asked. • Record any exceptional incidents that cause dust and/or air emissions, either on- or off- site, and the action taken to resolve the situation in the log book. • Hold regular liaison meetings with other high risk construction sites within 500 m of the Order Limits, to ensure plans are co-ordinated and dust and particulate matter emissions are minimised. It is important to understand the interactions of the off-site transport/deliveries which might be using the same strategic road network routes.	
Monitoring • Undertake daily on-site and off-site inspection, where receptors (including roads) are nearby, to monitor dust, record inspection results, and make the log available to the local authority when asked. This should include regular dust soiling checks of surfaces such as street furniture, cars and window sills within 100 m of the Order Limits. Cleaning requirements will be discussed and agreed with relevant stakeholders where deemed appropriate. • Carry out regular dust soiling checks of surfaces such as street furniture, cars and window sills within 100 m of the Order Limits. • Increase the frequency of site inspections by the person accountable for air quality and dust issues on site when activities with a high potential to produce dust are being carried out and during prolonged dry or windy conditions. • Where deemed reasonably necessary in consultation with the relevant local planning authority, dust deposition, dust flux or real-time PM10 continuous monitoring locations will be agreed. Commence baseline monitoring at least three months before work commences on site or, if it a large site, before work on a phase commences. A shorter monitoring period or concurrent upwind and downwind monitoring may be agreed by the relevant local planning authority. Further guidance is provided by IAQM on monitoring during demolition, earthworks and construction (IAQM, 2012).	
Preparing and Maintaining the Site • Plan site layout so that machinery and dust causing activities are located away from receptors, as far as is possible. Use screening intelligently where possible – e.g., locating site offices between potentially dusty activities and the receptors. • Where deemed reasonably required, erect solid screens or barriers around the work site. • Where reasonably practicable, fully enclose site or specific operations where there is a high potential for dust production and the site is active for an extended period. • Avoid site runoff of water or mud. • Keep site fencing, barriers and scaffolding clean. • Remove materials that have a potential to produce dust from site as soon as possible, unless being re-used on site. If they are being re-used on-site, ensure they are appropriately covered. • Depending on the duration that stockpiles will be present and their size - cover, seed, fence or water to prevent wind whipping.	
Operating Vehicle/machinery and Sustainable Travel • Ensure all vehicles switch off engines when stationary – no idling vehicles.	

Measure Adopted	How the Measure Will be Secured
• Avoid the use of diesel or petrol powered generators and use mains electricity or battery powered equipment where practicable. • Impose and signpost a maximum-speed-limit of 15 mph on surfaced and 10 mph on un-surfaced haul roads and work areas (if long haul routes are required these speeds may be increased with suitable additional control measures provided, subject to the approval of the nominated undertaker and with the agreement of the local authority, where appropriate) • Produce a Construction Logistics Plan to manage the sustainable delivery of goods and materials. • Implement a Construction Travel Plan that supports and encourages sustainable travel (public transport, cycling, walking, and car-sharing).	
Operations • Only use cutting, grinding or sawing equipment fitted or in conjunction with suitable dust suppression techniques such as water sprays or local extraction, e.g., suitable local exhaust ventilation systems. • Ensure an adequate water supply on the site for effective dust/particulate matter suppression/mitigation, using non-potable water where possible. • Use enclosed chutes, conveyors and covered skips, where practicable. • Minimise drop heights from conveyors, loading shovels, hoppers and other loading or handling equipment and use fine water sprays on such equipment wherever appropriate. • Ensure equipment is readily available on site to clean any dry spillages and clean up spillages as soon as reasonably practicable after the event using wet cleaning methods.	
Waste Management • Avoid bonfires and burning of waste materials.	
Medium Risk Measures Specific to Construction • Ensure sand and other aggregates are stored in bunded areas and are not allowed to dry out, unless this is required for a particular process, in which case ensure that appropriate additional control measures are in place.	
High Risk Measures Specific to Trackout • Avoid dry sweeping of large areas. • Ensure vehicles entering and leaving sites are covered to prevent escape of materials during transport. • Inspect on-site haul routes for integrity and instigate necessary repairs to the surface as soon as practicable. • Record all inspections of haul routes and any subsequent action in a site log book. • Install hard surfaced haul routes, which are regularly damped down with fixed or mobile sprinkler systems, or mobile water bowsers and regularly cleaned. • Implement a wheel washing system (with rumble grids to dislodge accumulated dust and mud prior to leaving the site). • Ensure there is an adequate area of hard surfaced road between the wheel wash facility and the site exit, wherever site size and layout permits. • Access gates to be located at least 10 m from receptors where possible	

7.8.6 The IAQM dust guidance states that with the recommended dust mitigation measures in place, the residual effect will normally be "not significant", and recommends the mitigation is secured by for example planning conditions, a legal obligation, or by legislation.

7.9 Key Parameters for Assessment

Maximum Design Scenario

7.9.1 The maximum design scenarios identified in **Table 7.23** have been selected as those having the potential to result in the greatest effect on an identified receptor or receptor group. These scenarios have been selected from the information provided in Volume 1, Chapter 3: Project Description of the ES. Effects of greater adverse significance are not predicted to arise should any other development scenario, based on details within the Project Design Envelope (e.g. different infrastructure layout), to that assessed here be taken forward in the final design. Therefore, this comprises a conservative assessment of a worst-case scenario.

Table 7.23: Maximum design scenario considered for the assessment of impacts

Potential Impact	Phase[1]			Maximum Design Scenario	Justification
	C	O	D		
The impact of dust soiling (annoyance) on property arising from dust emissions generated by onsite construction and decommissioning activities.	✓	×	✓	**Construction Phase** **Converter Site** • Earthworks to establish development platforms, screening bunds and export of surplus material. • Combined footprint of the two converter stations is 130,000 m^2, including two converter hall buildings, associated buildings and equipment. • Temporary converter site construction compound is 20,000 m^2 (additional to permanent footprint of buildings). • Duration of construction would be 72 months. **HVAC Cable Corridor** • Open cut trenching: The maximum number of trenches would be four, with an approximate depth of 1.4 m. There would be two trenches per bipole, which would form separate corridors prior to convergence at the Alverdiscott Substation Site. • The working area will include a construction corridor width of 32.5 m per Bipole (65 m combined). The length of HVAC Cable Corridors would be up to 1.2 km. • The construction and installation of the HVAC Cables (per Bipole) would occur over two separate periods of 6 months with a space between these construction periods. **Onshore HVDC Cables** • Open cut trenching: The maximum number of trenches would be two, with an approximate depth of 1.4 m. Width includes a haul road. There would be a total of 34 joint bays and 34 link boxes, with 140 m^3 and 3.15 m^3 of material excavated for each joint bay and link box, respectively. • The working area will include a construction corridor width of 65 m. The length of the HVDC Cable Corridor is up to 14.5 km. Duration of up to 36 months. • The maximum number of Horizontal Directional Drilling (HDD) locations is six. Each major HDD location will have two compounds, measuring up to 10,000 m^2. • The main construction compound at Gammaton Moor would measure up to 63,000 m^2. The duration of this compound would be 72 months, as it would also support the construction of the Converter Site.	The maximum design scenario presents the greatest area required for the construction of the propsed development; the greatest size of the temporary working areas; the movement of construction vehicles; and the longest duration of construction which represents the greatest potential for dust soiling generated by construction and decommissioning activities.
The impact of increases in suspended particulate matter on human receptors arising from dust emissions generated by onsite construction and decommissioning activities.	✓	×	✓		

Potential Impact	Phase[1]			Maximum Design Scenario	Justification
	C	O	D		
				• The secondary construction compound (A39 compound) would measure up to 48,000 m^2, and have a duration of 36 months. **Landfall** • The maximum number of transition joint bays would be two. The volume of excavated material per transition joint bay would be 1,875 m^3. • HDD: The maximum number of power cables will be four HVDC cables, with a maximum HDD length of 2,110 m from the Offshore Cable Corridor to the transition joint bays. • Landfall would include a compound of 10,000 m^2. • Duration of landfall installation would be 18 months initially, with a further six months following a break in works. The total duration of the Landfall compound would be 36 months. • HDD will pass beneath the designated site, Mermaid's Pool to Rowden Gut SSSI. **Highway Improvements** • Road improvement works at along Gammaton Road and unnamed road north of Gammaton Crossroads (towards the Converter Site). • Site access creation/improvements: – Sewage Treatment Works access road: expanded junction and widened private track. – A39 West: A compound access will be created off the unnamed road to Abbotsham approximately 120m west of the A39 Abbotsham Cross roundabout. – A39 East: A site access will be created on the unnamed road towards Littleham approximately 165m south of Clovelly Road. – A386: this includes the improvement of an existing junction along the A386 with an unnamed road towards Littleham. – Gammaton Road Compound: a new access will be created approximately 70 m east of Tennacott Lane. **Decommissioning** • Decommissioning is likely to operate within the parameters identified for construction (i.e., any activities are likely to occur within the construction working areas and to requires no greater amount or duration of activity than assessed for construction).	

[1] C=construction, O=operation and maintenance, D=decommissioning

7.10 Assessment of Construction Effects

Overview

7.10.1 The impacts of the construction of the Proposed Development have been assessed. The potential impacts arising from the construction phase of the Proposed Development are listed in **Table 7.23**, along with the maximum design scenario against which each impact has been assessed.

7.10.2 The type of activities that could cause fugitive dust emissions includes: demolition, earthworks; handling and disposal of spoil; wind-blown particulate material from stockpiles; handling of loose construction materials; and movement of vehicles, both on and off site.

7.10.3 The level and distribution of construction dust emissions will vary according to factors such as the type of dust, duration and location of dust-generating activity, weather conditions and the effectiveness of suppression methods.

7.10.4 The main effect of any dust emissions, if not mitigated, could be annoyance due to soiling of surfaces, particularly windows, cars and laundry. However, it is normally possible, by implementation of proper control, to ensure that dust deposition does not give rise to significant adverse effects, although short-term events may occur (for example, due to technical failure or exceptional weather conditions). The following assessment, using the IAQM methodology, predicts the risk of dust impacts and the level of mitigation that is required to control the residual effects to a level that is "not significant".

Risk of Dust Impacts

Source (Magnitude of Impact)

7.10.5 The total volume of structures to be demolished is less than 12,000 m^3. Therefore, the dust emission magnitude for demolition is classified as **small**.

7.10.6 The area of the Proposed Development is greater than 110,000 m^2. Therefore, the dust emission magnitude for the earthworks phase is classified as **large**.

7.10.7 The total volume of the structures to be constructed would be greater than 75,000 m^3 and the dust emission magnitude for the construction phase is classified as **large**.

7.10.8 At the peak of activity, the maximum number of daily outward HGV movements generated by the construction activity will be between greater than 50 and the dust emission magnitude for trackout would be classified as **large**.

Table 7.24: Dust Emission Magnitude for Demolition, Earthworks, Construction and Trackout

Demolition	Earthworks	Construction	Trackout
Small	Large	Large	Large

Pathway and Receptor (Sensitivity of Receptor)

7.10.9 All demolition, earthworks and construction activities are assumed to occur within the Onshore Infrastructure Area. As such, receptors at distances within 20 m, 50 m, 100 m and 250 m of the Onshore Infrastructure Area and along AIL routes up to 250 m from site accesses have been identified and are illustrated in Figure 7.1 (See Volume 2, Figures). The sensitivity of the area has been classified and the results are provided in **Table 7.25** below.

Table 7.25: Sensitivity of the Surrounding Area for Demolition, Earthworks and Construction

Potential Impact	Sensitivity of the Surrounding Area	Reason for Sensitivity Classification
Dust Soiling	Medium	Residential receptors within 20 m of the Order Limits. 1 – 10 high sensitivity receptors located within 20 m of the Onshore Infrastructure Area (**Table 7.13**)
Human Health	Low	Approx. 1 - 10 residential properties within 20 m of the Order Limits. Background PM_{10} concentrations for the assessment = 16.9 µg.m^{-3}. 1 – 10 high sensitivity receptors located within 20 m of the Onshore Infrastructure Area and PM_{10} concentrations <24 µg.m^{-3} (**Table 7.14**).
Ecology	Low	There are several dust sensitive ecological receptors located within 50 m of the Onshore Infrastructure Area: • Kynoch's Foreshore LNR (low sensitivity). • Torridge Estuary CWS (low sensitivity). • Abbotsham Cliff CWS (low sensitivity). • Hallsannery CWS (low sensitivity). • Haddacott Moor CWS (low sensitivity). • Lodge Plantation UWS (low sensitivity). • Bowood Farm UWS (low sensitivity).

7.10.10 The Dust Emission Magnitude for trackout is classified as **large** and trackout may occur on roads up to 250 m from the Onshore Infrastructure Area. The sensitivity of the area has been classified and the results are provided in **Table 7.26**.

Table 7.26: Sensitivity of the Surrounding Area for Trackout

Potential Impact	Sensitivity of the Surrounding Area	Reason for Sensitivity Classification
Dust Soiling	High	>10 residential properties aligning roads up to 250 m from the Onshore Infrastructure Area and site accesses. >10 high sensitivity receptors located within 20 m of the roads (**Table 7.13**)
Human Health	Low	Between 10 – 100 residential properties aligning roads up to 250 m from the Onshore Infrastructure Area and site accesses. Background PM_{10} concentrations for the assessment = 16.9 $\mu g.m^{-3}$. 10 – 100 high sensitivity receptors located within 20 m of the roads and PM_{10} concentrations <24 $\mu g.m^{-3}$ (**Table 7.14**).
Ecology	Low	There are several dust sensitive ecological receptors located within 50 m of the Onshore Infrastructure Area: • Kynoch's Foreshore LNR (low sensitivity). • Torridge Estuary CWS (low sensitivity). • Abbotsham Cliff CWS (low sensitivity). • Hallsannery CWS (low sensitivity). • Haddacott Moor CWS (low sensitivity). • Lodge Plantation UWS (low sensitivity). • Bowood Farm UWS (low sensitivity). Additionally, Littlecroft CWS (low sensitivity) is located within 50 m of the AIL routes, up to 250 m from the site access.

Overall Dust Risk (Significance of Effect)

7.10.11 The Dust Emission Magnitude has been considered in the context of the Sensitivity of the Area to give the Dust Impact Risk. **Table 7.27** summarises the Dust Impact Risk for the four activities.

Table 7.27: Dust Impact Risk for Earthworks, Construction and Trackout

Source	Demolition	Earthworks	Construction	Trackout
Dust Soiling	Low	Medium	Medium	High
Human Health	Negligible	Low	Low	Low
Ecology	Negligible	Low	Low	Low
Risk	**Low**	**Medium**	**Medium**	**High**

7.10.12 Based on the dust emission magnitudes and the receptor sensitivities in the area, and in the absence of the dust control measures to be included as part of the DMP (see **Table 7.22**), the dust impact risk for demolition is **low**, for earthworks and construction is **medium**, and for trackout is **high**. Therefore, taking the Onshore Infrastructure Area and the AIL routes (up to 250 m from site accesses) as a whole, the overall risk is deemed to be **high**.

7.10.13 However, The IAQM dust guidance states that:

'For almost all construction activity, the aim should be to prevent significant effects on receptors through the use of effective mitigation. Experience shows that this is normally possible. Hence the residual effect will normally be "not significant".'

7.10.14 The IAQM dust guidance recommends that significance is only assigned to the effect after the activities are considered with mitigation in place.

7.10.15 The mitigation measures appropriate to a level of risk for the site as a whole and for each of the phases are set out in **section 7.8**. Provided this package of mitigation measures is implemented, the residual construction dust effects will not be significant.

7.10.16 Therefore, following the implementation of dust control measures recommended for **high** risk sites (see **section 7.8**), the dust impact risk for demolition, construction, earthworks and trackout associated with construction of the Proposed Development is categorised as **negligible**, which is not significant in EIA terms. In addition, the potential effects of construction dust are predicted to be of local spatial extent, intermittent in frequency and mostly reversible.

Further Mitigation

7.10.17 Impacts during construction, such as dust generation and plant vehicle emissions, are predicted to be of short duration and only relevant during the construction phase. The results of the risk assessment of construction dust impacts undertaken using the IAQM dust guidance, indicates that before the implementation of mitigation and controls, the risk of dust impacts will be high. Implementation of the "highly recommended" mitigation measures described in the IAQM construction dust guidance should reduce the residual dust effects to a level categorised as "not significant" and therefore, no further mitigation will be required.

Future Monitoring

7.10.18 Following the implementation of appropriate recommended mitigation measures (IAQM, 2024) set out in **section 7.8**, the air quality effects are not expected to be significant, and no future monitoring is proposed.

7.11 Assessment of Operational Effects

7.11.1 Once operational, the converter stations would provide jobs for 30 full time equivalent employees. Furthermore, access would be required for staff to undertake inspection, maintenance, repairs and make adjustments.

7.11.2 Vehicle trips once the development is operational could potentially impact local air quality. The EPUK & IAQM Land-Use Planning & Development Control: Planning for Air Quality document (EPUK & IAQM, 2017) indicates that air quality assessments should include developments that increase annual average daily LDV traffic flows by more than 100 within or adjacent to an AQMA and more than 500 elsewhere. These criteria are highly unlikely to be exceeded. The EPUK & IAQM states that:

"If none of the criteria are met then there should be no requirement to carry out an air quality assessment for the impact of the proposed development on the local area, and the impacts can be considered to have insignificant effects."

7.11.3 No other sources of air pollution during the operational phase have been identified. On that basis, the air quality effects are considered to be not significant.

Further Mitigation

7.11.4 No further mitigation will be required once the Proposed Development is operational.

Future Monitoring

7.11.5 No future monitoring will be required once the Proposed Development is operational.

7.12 Assessment of Decommissioning Effects

7.12.1 Although the Proposed Development is not time-limited and consent is not sought for decommissioning, the impacts of a possible future decommissioning phase have been assessed in this EIA for completeness. Assumptions about the potential impacts that may arise from any future decommissioning the Proposed Development are listed in **Table 7.23**, along with the maximum design scenario against which each impact has been assessed

7.12.2 The application is seeking consent for the installation, operation and maintenance of two converter stations and associated development including transmission infrastructure and highways improvements.

7.12.3 The converter stations would be designed, manufactured and installed for a minimum operational lifetime, which is currently assumed to be 50 years. The operational lifetime of the onshore and offshore electricity cables (including both HVDC and HVAC) would exceed that of the converter stations. The highways improvements will not have a forecast end of life and will not be decommissioned.

7.12.4 For the electricity infrastructure only, the end of the operational lifetime is estimated at 50 years from date of full commissioning. Subject to relevant additional consents and legislative requirements, it is anticipated that potential refurbishment and operational life extension of the Proposed Development may occur. This potential refurbishment and extension of operational life would be considered closer to the end of the initial operational lifetime.

7.12.5 In the event that the operational lifetime of the Proposed Development is not extended, decommissioning would take place. The decommissioning sequence will generally be the reverse of the construction sequence and involve similar types and numbers of vehicles, vessels and equipment. Therefore, it is likely that the effects of decommissioning on the environment would be no worse than those effects identified during the construction phase.

7.12.6 Therefore, if the same mitigation measures are implemented as listed in **section 7.8**, the residual construction dust effects will not be significant. The IAQM dust guidance states that:

'For almost all construction activity, the aim should be to prevent significant effects on receptors through the use of effective mitigation. Experience shows that this is normally possible. Hence the residual effect will normally be 'not significant'.

7.12.7 The IAQM dust guidance recommends that significance is only assigned to the effect after the activities are considered with mitigation in place. These mitigation measures will be included in the Onshore Decommissioning Plan where relevant.

7.13 Cumulative Environmental Assessment

7.13.1 The Cumulative Effects Assessment (CEA) takes into account the impact associated with the Proposed Development together with other projects and plans. The projects and plans selected as relevant to the CEA presented within this chapter are based upon the results of a screening exercise (see Volume 1, Appendix 5.3: Cumulative Effects Assessment Screening Matrix). Each project has been considered on a case-by-case basis for screening in or out of this chapter's assessment based upon data confidence, effect-receptor pathways and the spatial/temporal scales involved.

7.13.2 The Air Quality CEA methodology has followed the methodology set out in Volume 1, Chapter 5: EIA Methodology of the ES. As part of the assessment, all projects and plans considered alongside the Proposed Development have been allocated into 'tiers' reflecting their current stage within the planning and development process.

- Tier 1.
  - Under construction.
  - Permitted application.
  - Submitted application.
  - Those currently operational that were not operational when baseline data were collected, and/or those that are operational but have an ongoing impact.
- Tier 2.
  - Scoping report has been submitted.
- Tier 3.
  - Scoping report has not been submitted.
  - Identified in the relevant Development Plan.
  - Identified in other plans and programmes.

7.13.3 This tiered approach is adopted to provide a clear assessment of the Proposed Development alongside other projects, plans and activities.

7.13.4 The CEA also considers the Proposed Development and the anticipated Alverdiscott Substation Connection Development (which will be implemented by National Grid Electricity Transmission and thus, does not form part of the Proposed Development) together. This is because the Alverdiscott Substation Connection Development will be required for the connection of the Proposed Development to the national grid.

7.13.5 The specific projects, plans and activities scoped into the CEA, are outlined in **Table 7.28**. The locations of such projects, plans and activities are presented on Volume 2, Figure 7.4 of the ES.

Table 7.28: List of cumulative developments considered within the CEA

Project	Status	Distance from Onshore Infrastructure Area (nearest point, km)	Description	Dates of Construction (if available)	Dates of Operation (if available)	Overlap with the Proposed Development?
Tier 1						
1/1130/2020/FULM	Operational	Partially within the Onshore Infrastructure Area	Extension to operational life. Construction of photovoltaic (PV) solar array and associated works (Variation of condition 3 of planning permission 1/0997/2012/FULM). The application area relates to 10.1 ha of land with a generation capacity of approximately 4.7 MW. The application 1/0997/2012/FULM included an LVIA assessment, ecological assessment, archaeological assessment and geophysical report, and flood risk assessment.	Not Available	Operational (2024)	Yes
1/1256/2021/REMM	Permitted	0.1	Reserved matters application for details of appearance, landscaping, layout and scale in respect of a proposal for 276 no. dwellings, associated infrastructure and open space pursuant outline planning permission 1/0039/2014/OUTM (Amended Plans)	Not Available	Not Available	Yes
1/0896/2019/DIS	Permitted	Adjacent to the Onshore Infrastructure Area	Business letting units, car parking lots, access, drainage and landscaping. This application forms plot 3 of the previous planning application 1/116/2007/FUL - Bideford Business Park. The application consists of a lorry park and units for letting purposes, the amount being: • Plot 3A: 1,065 sq m; • Plot 3B: 501 sq m; • Plot 3C: 501 sq m; and • Plot 3D: 145 sq m. Each building would have a ridge height of 9.1 m.	Not Available	Not Available	Yes

Project	Status	Distance from Onshore Infrastructure Area (nearest point, km)	Description	Dates of Construction (if available)	Dates of Operation (if available)	Overlap with the Proposed Development?
1/1141/2022/LA	Permitted	Adjacent to the Onshore Infrastructure Area	Erection of building for the processing of household recycling materials and food waste, provision of vehicle workshop, office and welfare and all ancillary facilities including access roadway - EX39 4QE	Not Available	Not Available	Yes
1/1057/2021/FULM	Permitted	Partially within the Onshore Infrastructure Area	The application includes the installation and operation of a Solar Farm together with all associated works, equipment and necessary infrastructure, with a lifetime of 40 years. The application site is divided into three parcels of land comprising a series of agricultural fields, extending to approximately 156.37 acres. The development included solar PV panels, seven switchgear substations, 14 inverters, 14 transformers, a 132 kV substation, a storage container, a monitoring and communications buildings, security fencing and an internal access track.	Not Available	Not Available	Yes
1/0028/2012/EXTM	Permitted	0.1	Extension of time of Planning Permission 1/1140/2008/FUL - Industrial letting units for B1 B2 and B8 uses - Plot 6, within the Bideford Business Park Development area.	Not Available	Not Available	Yes
1/0380/2024/LA	Pending	0.2	Application includes a proposed Operational Services Centre as a hub for Council vehicles and services.	Not Available	Not Available	Yes
1/1256/2021/REMM	Permitted	0.1	The application site forms part of a larger area for which outline planning permission comprising up to 550 dwellings, a 1.9 ha primary school site (including neighbourhood building), highway accesses (including the rerouting of Littleham Lane), public open space	Not Available	Not Available	Yes

Project	Status	Distance from Onshore Infrastructure Area (nearest point, km)	Description	Dates of Construction (if available)	Dates of Operation (if available)	Overlap with the Proposed Development?
			and other associated infrastructure. The outline application was subject to an Environmental Statement. This application is for the second phase of development which comprises a total of 276 new dwellings, highways, open space which includes areas of play, attenuation features and a sports pitch.			
1/1266/2022/REMM	Pending	0.1	The application site forms part of the BID01 allocation. The application includes a development of 61 dwellings including associated works. A new access is proposed onto Clovelly Road.	Not Available	Not Available	Yes
1/0252/2022/OUTM	Permitted	0.9	The application relates to the allocated site NOR02. The site covers some 14.6ha and comprises agricultural land. The outline application seeks planning permission for the erection of up to 400 dwellings, associated open space, landscaping and infrastructure works on the land.	Not Available	Not Available	Yes
1/0523/2021/REMM	Permitted	0.2	This proposal is situated within the Development Plan Allocation BID03. The reserved matters application includes 225 homes and associated infrastructure and public open space. The principal highways access will be provided off Manteo Way. A secondary highways access will be provided off Alverdiscott Road, just east of Kingsley House. New public open space will also be provided including: • Local Area of Play 150 m2 in area.	Not Available	Not Available	Yes

Project	Status	Distance from Onshore Infrastructure Area (nearest point, km)	Description	Dates of Construction (if available)	Dates of Operation (if available)	Overlap with the Proposed Development?
			• Local Equipped Area of Play 400 m2 in area. • 1 km fitness trail circuit and fixed gym equipment together totalling 2,500 m2 in area. • Amenity space.			
1/0110/2023/REMM	Pending	0.3	Application for approval of Reserved Matters pursuant to 1/0947/2020/OUTM (layout, scale, appearance, and landscaping) for 200 dwellings and associated infrastructure.	Not Available	Not Available	Yes
1/0656/2020/OUTM	Permitted	0.7	The application includes up to 211 dwellings, circa 3.2 ha of employment uses, public open space and associated infrastructure highways, footpaths and drainage.	Not Available	Not Available	Yes
Tier 3						
Alverdiscott Substation Connection Development	Unknown	Within Onshore Infrastructure Area	Works required at the existing Alverdiscott Substation Site, which is envisaged to include development of a new 400 kV substation, and other extension modification works to be confirmed by National Grid Electricity Transmission.	Not Available	Not Available	Yes
Development Plan Allocation - BID04: Site South of East-the-Water	N/A	Adjacent to the Onshore Infrastructure Area	A site of about 34 hectares south of East-the-Water, as defined on the Policies Map 2, is allocated to deliver a sustainable, high quality mixed use development that includes: (a) approximately 600 dwellings, providing a mix of housing types and size to reflect local need, including affordable housing, of which approximately 430 are expected to be delivered in the plan period;	Not Available	Not Available	Yes

Project	Status	Distance from Onshore Infrastructure Area (nearest point, km)	Description	Dates of Construction (if available)	Dates of Operation (if available)	Overlap with the Proposed Development?
			(b) a 420 place primary school, including a nursery and a children's centre delivery base; (c) a hill top park; and (d) strategic planting along the site's southern and eastern boundaries.			
Development Plan Allocation - BID09: South of Clovelly Road	N/A	Adjacent to the Onshore Infrastructure Area	Land at Adjavin Farm, south of Clovelly Road, extending to 41 hectares and as defined on Policies Map 2, is allocated for residential and associated development, that includes: (a) approximately 700 dwellings including affordable homes, with an emphasis on providing a mix of housing types and sizes that reflects local needs; (b) integrated social and community infrastructure, including a neighbourhood community centre; (c) on site provision of sport and recreation facilities, including sports pitches adjoining Clovelly Road/Atlantic Village; (d) a vehicular link forming part of a wider distributor link to the south of Clovelly Road connecting with the Caddsdown Industrial Park Extension, allocated by Policy BID05; and (e) strategic planting along the site's southern boundary and western boundaries.	Not Available	Not Available	Yes
Development Plan Allocation - BID08: Former Bideford to Appledore Railway	Unknown	Partially within the Onshore Infrastructure Area	In association with landowners, voluntary organisations, the Highway Authority, and other interested parties, Torridge District Council will seek the establishment of a trail, following where possible the route of the former Bideford to Appledore Railway from Northam Road to Westward Ho!	Not Available	Not Available	Yes

Project	Status	Distance from Onshore Infrastructure Area (nearest point, km)	Description	Dates of Construction (if available)	Dates of Operation (if available)	Overlap with the Proposed Development?
Development Plan Allocation - ABS01: Land at The Glebe	N/A	0.1	Land at the Glebe, as shown on Policies Map 27, is allocated for residential development that includes: (a) approximately 23 dwellings, including affordable homes, with a focus on providing a mix of housing types and sizes to reflect local need.	Not Available	Not Available	Yes
Development Plan Allocation - BID02: Cleave Wood	N/A	0.2	Land at Cleave Wood, extending to about 13 hectares and as defined on Policies Map 2, is allocated as a mixed use development that includes: (a) approximately 250 dwellings including affordable homes, with an emphasis on providing a mix of housing types and sizes that reflects local needs; (b) health care facilities, including related car parking on a site of about 0.6 hectares; and (c) a neighbourhood community centre, including a Children's Centre base and satellite youth facilities.	Not Available	Not Available	Yes
Development Plan Allocation - BID03: Land adjoining Manteo Way	Unknown	0.4	Land adjoining Manteo Way, extending to 17 hectares, as defined on Policies Map 2, is allocated for residential and associated development, that includes: (a) approximately 310 dwellings, providing a mix of housing types and size to reflect local need, including affordable housing; and (b) a 2.5 hectare site for open space and recreation facilities.	Not Available	Not Available	Yes

Project	Status	Distance from Onshore Infrastructure Area (nearest point, km)	Description	Dates of Construction (if available)	Dates of Operation (if available)	Overlap with the Proposed Development?
Development Plan Allocation - NOR02: Site West of Buckleigh Road	Unknown	0.5	Land to the west of Buckleigh Road, extending to about 30 hectares and as defined on Policies Map 8A, will be comprehensively planned to deliver a sustainable, high quality mixed use development that includes: (a) approximately 740dwellings, providing a mix of housing type and size to reflect local need, including those of the area's elderly population and affordable housing; and (b) a local centre, including facilities to accommodate community and retail uses.	Not Available	Not Available	Yes

Scope of Cumulative Effects Assessment

7.13.6 The cumulative effects presented and assessed in this section have been based on the Project Design Envelope set out in Volume 1, Chapter 5: Project Description of the ES as well as the information available on other projects and plans. The maximum design scenario as described for the Proposed Development (see **Table 7.23**) has been assessed cumulatively with the cumulative projects identified within **Table 7.28**.

7.13.7 The CEA has considered the Proposed Development, alongside the Alverdiscott Substation Connection Development to be developed at the existing Alverdiscott Substation Site. The assessed design of the substation has been based upon a combination of reasonable worst-case parameters, as detailed within Volume 1, Chapter 3: Project Description of the ES. The development area for the substation would comprise up to 3.8 ha of land. Within that area it is assumed that the substation itself would occupy a footprint of approximately 2.8 ha, with a maximum height of 15 m, excluding connecting tower structures.

Cumulative Effects Assessment

7.13.8 A description of the significance of cumulative effects upon air quality receptors arising from construction, operation and maintenance and decommissioning is given below.

Construction Phase

7.13.9 There is potential for cumulative effects to occur with other projects (including the Tier 1 and Tier 3 projects) within 500 m of the Onshore Infrastructure Area during construction of the Proposed Development. This distance is two times the relevant study area of the Proposed Development (250 m) and allows for any overlap between the Proposed Development and another cumulative scheme.

7.13.10 However, on the basis that other proposed developments implement suitable *primary and tertiary mitigation*, as recommended in the Guidance on the assessment of dust from demolition and construction (IAQM, 2024), it is considered that cumulative effects arising during construction are **not significant**.

Operation and Maintenance Phase

7.13.11 The potential impacts with respect to air quality arising from operations and maintenance of the Proposed Development have been scoped out of the assessment.

Decommissioning Phase

7.13.12 The potential impacts during decommissioning of the Proposed Development are expected to be similar to the impacts during demolition, earthworks, construction and trackout. Therefore, it is considered that cumulative effects arising during decommissioning of the Proposed Development are **not significant**.

7.14 Transboundary Effects

7.14.1 A screening of transboundary impacts has been carried out and has identified that there was no potential for significant transboundary effects with regard to air quality from the Proposed Development upon the interests of other states (See Volume 1, Appendix 5.2: Transboundary Screening, of the ES)

7.15 Inter-related Effects

7.15.1 Inter-relationships are the impacts and associated effects of different aspects of the Proposed Development on the same receptor. These are as follows.

- Project lifetime effects: Assessment of the scope for effects that occur throughout more than one phase of the Proposed Development (construction, operation and maintenance, and decommissioning), to interact to potentially create a more significant effect on a receptor than if just assessed in isolation in these three phases.
- Receptor led effects: Assessment of the scope for all relevant effects (including inter-relationships between environmental topics) to interact, spatially and temporally, to create inter-related effects on a receptor.

7.15.2 The potential impacts associated with construction and decommissioning of the Proposed Development include an increase in suspended particulate matter and deposited dust that has fallen out of the air onto surfaces, which do not interact.

7.15.3 This chapter has scoped out the impact of air emissions generated by vehicles, based upon traffic flows that do not exceed EPUK & IAQM air quality thresholds, provided by the client, and which are assessed in Volume 2, Chapter 5: Traffic and Transport, of the ES. The air quality assessment has taken into account effects in relation to human and ecological receptors. Effects on human health are further considered in Volume 4, Chapter 4: Human Health.

7.15.4 A description of the likely interactive effects arising from the Proposed Development on air quality is provided in Volume 4, Chapter 5: Inter-related effects of the ES.

7.16 Summary of Impacts, Mitigation Measures and Monitoring

7.16.1 Information on air quality within the study area was collected through desktop review and consultation.

7.16.2 **Table 7.29** presents a summary of the impacts, measures adopted as part of the Proposed Development and residual effects in respect to air quality. The impacts assessed include:

- the potential impact of dust soiling on dust sensitive receptors arising from demolition, earthworks, construction and trackout;
- the impact of an increase in suspended particulate matter on people arising from dust emissions generated by onsite construction and decommissioning activities; and
- the impact on ecological receptors arising from dust emissions generated by onsite construction activities.

7.16.3 Overall, it is concluded that there will be no significant effects arising from the Proposed Development during the construction, operation and maintenance or decommissioning phases.

7.16.4 Overall, it is concluded that there will be no significant cumulative effects from the Proposed Development alongside other projects/plans.

7.16.5 No potential transboundary impacts have been identified in regard to effects of the Proposed Development.

Table 7.29: Summary of environmental effects

Description of Impact	Phase[a]			Embedded Mitigation	Sensitivity of receptor	Magnitude of impact	Significance of Effect	Further Mitigation	Residual Effect	Proposed Monitoring
	C	O	D							
Increase in suspended particulate matter and deposited dust on People and Property	✓	×	✓	ONS06 (see measures listed in **Table 7.22**).	C: High D: High	C: Large D: Large	C: Negligible D: Negligible (Not Significant)	None proposed	C: Negligible D: Negligible (Not Significant)	Monitoring is outlined in **Table 7.22**.
Increase in suspended particulate matter and deposited dust on ecology (Kynoch's Foreshore LNR, CWSs, and UWSs)	✓	×	✓	ONS06 (see measures listed in **Table 7.22**).	C: Low D: Low	C: Large D: Large	C: Negligible D: Negligible (Not Significant)	None proposed	C: Negligible D: Negligible (Not Significant)	None proposed

Table 7.30: Summary of cumulative environmental effects

Description of Impact	Phase[a]			Embedded Mitigation	Sensitivity of receptor	Magnitude of impact	Significance of Effect	Further Mitigation	Residual Effect	Proposed Monitoring
	C	O	D							
Tier 1										
Increase in suspended particulate matter and deposited dust on People and Property	✓	×	✓	ONS06 (see measures listed in **Table 7.22**).	C: High D: High	C: Large D: Large	C: Negligible D: Negligible (Not Significant)	None proposed	C: Negligible D: Negligible (Not Significant)	Monitoring is outlined in **Table 7.22**.
Increase in suspended particulate matter and deposited dust on ecology (Kynoch's Foreshore LNR, CWSs, and UWSs).	✓	×	✓	ONS06 (see measures listed in **Table 7.22**).	C: Low D: Low	C: Large D: Large	C: Negligible D: Negligible (Not Significant)	None proposed	C: Negligible D: Negligible (Not Significant)	None proposed

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