AtkinsRéalis

Environmental Impact Assessment Report, Volume 2 – Chapter 11 Air Quality

Uisce Éireann

October 2026
0089328DG0043

BALLINA AND LOUGH TALT WATER SUPPLY UPGRADE

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This document has 33 pages including the cover.

Document history

Document title: Environmental Impact Assessment Report, Volume 2 – Chapter 11 Air Quality

Document reference: 0089328DG0043

Revision	Purpose description	Originated	Checked	Reviewed	Authorised	Date
1.0	Draft	COC	JA	LH	DE	11/08/2026
2.0	Addressing comments	COC	JA	LH	DE	02/09/2026
3.0	Final	COC	JA	JA/DE	DL	23/10/2026

Client signoff

Client	Uisce Éireann
Proposed Development	BALLINA AND LOUGH TALT WATER SUPPLY UPGRADE
Job number	100089328

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Abbreviations

Abbreviation	Meaning
AADT	Annual Average Daily Traffic
AQAP	Air Quality Action Plan
AQMA	Air Quality Management Area
AQS	Air Quality Standards
BPS	Booster Pumping Station
BPT	Break Pressure Tank
BRE	Building Research Establishment
CCTV	Closed-Circuit Television
CAFE	Clean Air for Europe
CEMP	Construction Environmental Management Plan
DEHLG	Department of the Environment, Heritage and Local Government
DHPLG	Department of Housing, Planning and Local Government
EIA	Environmental Impact Assessment
EIAR	Environmental Impact Assessment Report
EPA	Environmental Protection Agency
ESB	Electricity Supply Board
EU	European Union
HDV	Heavy Duty Vehicle
HVAC	Heating, Ventilation and Air Conditioning
IAQM	Institute of Air Quality Management
IT3	Interim Target 3
IT4	Interim Target 4
KPH	Kilometres per Hour
NO_2	Nitrogen Dioxide
PM	Particulate Matter
PM10	Particulate Matter (<10 µm)
PM2.5	Particulate Matter (<2.5 µm)
pNHA	Proposed Natural Heritage Area
RWI&PS	Raw Water Intake and Pumping Station
SAC	Special Area of Conservation
SPA	Special Protection Area
TA-Luft	Technical Instructions on Air Quality Control

TII	Transport Infrastructure Ireland
USEPA	United States Environmental Protection Agency
WHO	World Health Organisation
WTP	Water Treatment Plant

Glossary

Term	Meaning
Air Quality Standards (AQS)	Legally defined limit values and objectives for air pollutants.
Air Quality Management Area (AQMA)	Area requiring measures to improve air quality.
Air Quality Action Plan (AQAP)	Plan of measures to improve local air quality.
Construction Environmental Management Plan (CEMP)	Environmental management framework for construction activities.
Dust Soiling	Deposition of dust on surfaces causing nuisance effects.
Dust Deposition	Settlement of airborne dust particles onto surfaces.
Fugitive Dust	Dust emissions not released from a controlled point source.
Particulate Matter (PM10)	Airborne particles with diameter less than 10 microns.
Particulate Matter (PM2.5)	Fine airborne particles with diameter less than 2.5 microns.
Nitrogen Dioxide (NO2)	Pollutant commonly associated with combustion emissions.
Sensitive Receptor	Location or feature potentially affected by air quality changes.
Ecological Receptor	Habitat, species or designated site potentially affected by air quality changes.
Background Concentration	Existing pollutant concentration from all surrounding sources.
Background Air Quality Concentration	Existing concentration of pollutants from all sources before development effects occur.
Construction Dust	Dust generated during demolition, earthworks and construction activities.
Trackout	Transfer of dust and mud from construction sites onto roads by vehicles.
Dust Emission Magnitude	Classification of the scale of dust generation potential from construction activities.
Air Dispersion Modelling	Technique used to predict distribution of air pollutants.
Ambient Air Quality	Quality of outdoor air in the surrounding environment.
Ambient Air Quality Limit Value	Legally binding concentration limit for an air pollutant in ambient air.
WHO Air Quality Guideline	Health-based guideline values published by the World Health Organization.
Air Quality Zone D	Air quality management zone covering rural areas and smaller towns in Ireland.
Special Area of Conservation (SAC)	Protected site designated under EU Habitats legislation.
Special Protection Area (SPA)	Protected site designated under EU Birds legislation.
Proposed Natural Heritage Area (pNHA)	Site proposed for national ecological protection.

11. Air Quality

11.1 Introduction

This chapter assesses the likely air quality impacts associated with the Ballina and Lough Talt Water Supply Upgrade (hereafter referred to as the 'Proposed Development') located in County Mayo and County Sligo. The Proposed Development, subject to detailed design, will consist of seven 'key locations' and five discrete sections of pipeline, as follows:

- Upgrade to the existing Wherrew Raw Water Intake & Pumping Station (RWI&PS), Wherrew, Ballina, Co. Mayo;
- Upgrade to the existing Lisglennon RWI&PS, Lisglennon, Ballina, Co. Mayo;
- Proposed Pipeline A – Lisglennon Raw Water Pumping Station to Lisglennon Water Treatment Plant (WTP);
- Upgrade to the existing Lisglennon WTP, Lisglennon, Ballina, Co. Mayo;
- Proposed Pipeline B – Lisglennon WTP to Existing River Moy Crossing;
- Proposed Pipeline C – Existing River Moy Crossing to Bonniconlon Booster Pumping Station (BPS);
- Proposed Pipeline D – Bonniconlon BPS to Windy Gap Break Pressure Tank (BPT);
- Proposed Pipeline E – Windy Gap BPT to Lough Talt WTP;
- Proposed Bonniconlon BPS located at Bonniconlon, Ballina, Co. Mayo;
- Proposed Windy Gap BPT located at the Windy Gap, Ballina, Co. Mayo;
- Repurposing the existing Lough Talt WTP, Co. Sligo;
- Proposed Treated Water Reservoir at the existing Bonniconlon Reservoir site, Co. Mayo; and,
- All permanent and temporary works, including construction compounds, access routes, pipeline corridors, and trenchless crossings.

A full description of the development is available in Chapter 3 – Project Description.

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This chapter was reviewed by Dr. Jovanna Arndt, a Principal Environmental Consultant in the Air Quality & Climate section of AWN Consulting. She holds a BSc. in Environmental Science and a Ph.D. in Atmospheric Chemistry from University College Cork. She is an Associate Member of both the Institute of Air Quality Management and the Institute of Environmental Sciences. She has been specialising in the area of air quality and climate over nine years and has prepared air quality and climate assessments for inclusion within EIARs for residential developments such as Twenties Lane (Planning Application Ref: 22713), Cherrywood T13 (Planning Application Ref: DZ23A/0028), Corballis Donabate LRD (Planning Application Ref: LRD0017/S3), commercial and industrial developments by Dublin Airport Authority, Zoetis, Ipsen, Merck Millipore, Greener Ideas Limited and Abbvie, as well as renewable energy developments such as Codling Wind Park and the Cúil Na Móna Anaerobic Digestion Facility. She also specialises in assessing air quality impacts using air dispersion modelling of transportation schemes such as BusConnects Dublin, major Highways England Road schemes and major rail infrastructure in the form of High Speed 2 (HS2 in the UK). She has prepared air dispersion modelling assessments of emissions from data centres, energy centres and the chemical industry as part of Environmental Protection Agency (EPA) Industrial Emissions Licences for Microsoft, Greener Ideas

Limited, Merck Millipore, Lilly Limerick, Chemifloc, Takeda, Kingspan and Kilshane Energy. She has also provided Air Quality Action Plan (AQAP) and Air Quality Management Area (AQMA) support to several UK councils and assessed the air quality impacts of potential Clean Air Zones in the UK.

11.2 Characteristics of the Proposed Development

The purpose of this section is to provide an overview of the key relevant details of the construction and operational phases of the Proposed Development. During the construction phase, construction dust emissions have the potential to impact air quality. Dust emissions will primarily occur as a result of site preparation works, earthworks and the movement of trucks on site and exiting the site. There is also the potential for engine emissions from site vehicles and machinery to impact air quality. Construction phase impacts will be short-term in duration.

Engine emissions from vehicles accessing the site have the potential to impact air quality during the operational phase of the development through the release of nitrogen dioxide (NO_2) and particulate matter (as PM_{10} and $PM_{2.5}$). Operational phase impacts will be long-term in duration.

11.2.1 Scoped Out Impacts

A number of impacts have been scoped out of this assessment, summarised as follows:

- Engine emissions nitrogen dioxide (NO_2) and particulate matter (as PM_{10} and $PM_{2.5}$) from site vehicles and machinery during construction – see section 11.3.2.2 for details.
- Engine emissions nitrogen dioxide (NO_2) and particulate matter (as PM_{10} and $PM_{2.5}$) from vehicles accessing the site during the operational phase – see Section 11.3.3.1 for details.
- The construction details, operational procedures and controls for the Proposed Development have been examined to identify potential sources of air pollution. Regarding odours, our assessment found that water treatment plants do not generate odours. Solids produced during the water treatment process will be contained in covered skips and frequently taken off site for disposal. Hence odours will not cause a likely significant effect on air quality during operation and therefore odour has been screened out of this assessment.

11.3 Assessment Methodology

11.3.1 Criteria for Rating of Impacts

11.3.1.1 Human Health

11.3.1.1.1 Ambient Air Quality Standards

In order to reduce the risk to health from poor air quality, national and European statutory bodies have set limit values in ambient air for a range of air pollutants. These limit values or 'Air Quality Standards' (AQS) are health or environmental-based levels for which additional factors may be considered. For example, natural background levels, environmental conditions and socio-economic factors may all play a part in the limit value which is set.

Air quality significance criteria are assessed on the basis of compliance with the appropriate standards or limit values. The applicable standards in Ireland are set out in Directive (EU) 2024/2881 *of the European Parliament*

and of the Council of 23 October 2024 on ambient air quality and cleaner air for Europe (recast). This directive supersedes EU Directive 2008/50/EC *of the European Parliament and of the Council of 21 May 2008 on ambient air quality and cleaner air for Europe* (CAFE Directive). Directive (EU) 2024/2881 sets out air quality standards for pollutants to be reached by 2026 and by 2030 which are more closely aligned with the World Health Organisation (WHO) air quality guidelines.

The ambient air quality limit values for pollutants are set out in Annex I of Directive (EU) 2024/2881. Table 1 of Annex I in Directive (EU) 2024/2881 sets out the updated air quality limit values for pollutants to be achieved by 1 January 2030, which are more closely aligned with the WHO air quality guidelines. Table 2 of Annex I in Directive (EU) 2024/2881 sets out the limit values for air pollutants which are to be achieved by 11th December 2026 and are also applicable up to 2030. The limit values in Table 2 of Annex I are the same as the limits set under Directive 2008/50/EC and the Air Quality Standards Regulations 2022.

The Ambient Air Quality Standards Regulations 2022 (S.I. 739 of 2022) (the Air Quality Standards Regulations 2022) further transposed the CAFE Directive and revoked the Air Quality Standards Regulations 2011, as amended. With the adoption of Directive (EU) 2024/2881, Ireland must transpose this directive into national law, i.e. update the Air Quality Standards Regulations, before December 2026.

The ambient air quality standards applicable for particulate matter (as PM_{10} and $PM_{2.5}$) are outlined in Table 11-1. These pollutants are of relevance to the Proposed Development. The limit values set out in Directive (EU) 2024/2881 will need to be achieved by 2030, with the limit values set out in the Air Quality Standards Regulations 2022 (and future updated regulations) applicable until 2030.

Table 11-1 — Ambient Air Quality Limit Values

Pollutant	**Limit Type**	**Limit Value** (to be attained by 2026 and applicable until 2030)	**Limit Type**	**Limit Value** (to be attained by 2030)
Particulate Matter (as PM_{10})	24-hour limit for protection of human health - not to be exceeded more than 35 times/year	50 µg/m^3	24-hour limit for protection of human health - not to be exceeded more than 18 times/year	45 µg/m^3
	Annual limit for protection of human health	40 µg/m^3	Annual limit for protection of human health	20 µg/m^3
Particulate Matter (as $PM_{2.5}$)	n/a	n/a	24-hour limit for protection of human health - not to be exceeded more than 18 times/year	25 µg/m^3
	Annual limit for protection of human health	25 µg/m^3	Annual limit for protection of human health	10 µg/m^3

11.3.1.1.2 WHO Air Quality Guidelines & Clean Air Strategy

In April 2023, the Government of Ireland published the Clean Air Strategy for Ireland (Government of Ireland, 2023), which provides a high-level strategic policy framework needed to reduce air pollution. The strategy commits Ireland to achieving the 2021 WHO Air Quality Guidelines Interim Target 3 (IT3) by 2026 (shown in Table 11-2), the IT4 targets by 2030 and the final targets by 2040 (shown in Table 11-2). The strategy notes that a significant number of EPA monitoring stations observed air pollution levels in 2021 above the WHO targets; 80% of these stations would fail to meet the final $PM_{2.5}$ target of 5 µg/m^3. The strategy also

acknowledges that "*meeting the WHO targets will be challenging and will require legislative and societal change, especially with regard to both $PM_{2.5}$ and NO_2*".

Annex II of Directive (EU) 2024/2881 gives assessment thresholds which align with the clean air strategy final 2040 WHO targets. Directive (EU) 2024/2881 states that *"Member States shall endeavour to achieve and preserve the best ambient air quality and a high level of protection of human health and the environment, with the aim of achieving a zero-pollution objective as referred to in Article 1(1), in line with WHO recommendations, and below the assessment thresholds laid down in Annex II."*

These assessment thresholds relate to monitoring of ambient air quality by Member States, where *"exceedances of the assessment thresholds specified in Annex II shall be determined on the basis of concentrations during the previous 5 years where sufficient data are available. An assessment threshold shall be deemed to have been exceeded if it has been exceeded during at least 3 separate years out of those previous 5 years*."

Table 11-2 — WHO Air Quality Guidelines 2021

Pollutant	Limit Type	IT3 (2026)	IT4 (2030)	Final Target (2040)
NO_2	24-hour limit for protection of human health	-	-	25 µg/m^3
	Annual limit for protection of human health	20 µg/m^3	-	10 µg/m^3
PM (as PM_{10})	24-hour limit for protection of human health	75 µg/m^3	50 µg/m^3	45 µg/m^3
	Annual limit for protection of human health	30 µg/m^3	20 µg/m^3	15 µg/m^3
PM (as $PM_{2.5}$)	24-hour limit for protection of human health	37.5 µg/m^3	25 µg/m^3	15 µg/m^3
	Annual limit for protection of human health	15 µg/m^3	10 µg/m^3	5 µg/m^3

The applicable air quality limit values for the purposes of this assessment are those set out in Table 11-1. The limit values stipulated under Table 2 of Annex I in Directive (EU) 2024/2881 and the Air Quality Standards Regulations 2022 are applicable for the Proposed Development as it will be constructed and operational prior to 2030.

11.3.1.1.3 Dust Deposition Guidelines

The concern from a health perspective is focused on particles of dust that are less than 10 microns (PM_{10}) and less than 2.5 microns ($PM_{2.5}$). The EU ambient air quality standards outlined in Table 11-1 have set ambient air quality limit values for PM_{10} and $PM_{2.5}$.

With regards to larger dust particles that can give rise to nuisance dust, there are no statutory guidelines regarding the maximum dust deposition levels that may be generated during the construction phase of a development in Ireland. Furthermore, no specific criteria have been stipulated for nuisance dust in respect of this development.

With regard to dust deposition, the German TA-Luft standard for dust deposition (non-hazardous dust) (German VDI, 2002) sets a maximum permissible emission level for dust deposition of 350 mg/m^2/day averaged over a one-year period at any receptors outside the site boundary. The TA-Luft standard has been applied for the purpose of this assessment based on recommendations from the EPA in Ireland in the document titled '*Environmental Management Guidelines - Environmental Management in the Extractive Industry (Non-Scheduled Minerals)*' (EPA, 2006). The document recommends that the TA-Luft limit of 350 mg/m^2/day be applied to the site boundary of quarries. This limit value can be implemented with regard to dust impacts from construction of the Proposed Development.

11.3.2 Construction Phase

11.3.2.1 Construction Dust Assessment

The Institute of Air Quality Management in the UK (IAQM) guidance document '*Guidance on the Assessment of Dust from Demolition and Construction*' (IAQM, 2024) outlines an assessment method for predicting the impact of dust emissions from construction activities based on the scale and nature of the works and the sensitivity of the area to dust impacts. The IAQM methodology has been applied to the construction phase of this development in order to predict the likely risk of dust impacts in the absence of mitigation measures and to determine the level of site-specific mitigation required. The use of UK guidance is recommended by Transport Infrastructure Ireland (TII) in their guidance document *Air Quality Assessment of Specified Infrastructure Projects – PE-ENV-01106* (TII, 2022).

The major dust generating activities are divided into four types within the IAQM guidance (2024) to reflect their different potential impacts. These are:

- Demolition;
- Earthworks;
- Construction; and,
- Trackout (transport of dust and dirt from the construction site onto the public road network).

The magnitude of each of the four categories is divided into Large, Medium or Small scale depending on the nature of the activities involved. The criteria for determining the category for the works involved are outlined in Table 11-3, these are based on the IAQM guidance (2024). The magnitude of each activity is combined with the overall sensitivity of the area to determine the risk of dust impacts from site activities. This allows the level of site-specific mitigation to be determined.

Table 11-3 — IAQM Criteria to Determine Dust Emissions Magnitude

Dust Emission Magnitude		
Small	**Medium**	**Large**
Demolition		

Dust Emission Magnitude		
Small	**Medium**	**Large**
▪ total building volume <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 wetter months	▪ total building volume 12,000 – 75,000 m^3 ▪ potentially dusty construction material ▪ demolition activities 6 to 12 m above ground level	▪ total building volume >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 <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 ▪ earthworks during wetter months	▪ total site area 18,000 m^2 to 110,000 m^2 ▪ moderately dusty soil type (e.g. silt) ▪ 5 to 10 heavy earth moving vehicles active at any one time ▪ formation of bunds 3 to 6 m in height	▪ total site area >110,000 m^2 ▪ potentially dusty soil type (e.g. clay, which will be prone to suspension when dry due to small particle size) ▪ >10 heavy earth moving vehicles active at any one time ▪ formation of bunds >6 m in height
Construction		
▪ total building volume <12,000 m^3 ▪ construction material with low potential for dust release (e.g. metal cladding or timber)	▪ total building volume 12,000 to 75,000 m^3 ▪ potentially dusty construction material (e.g. concrete) ▪ on-site concrete batching	▪ total building volume >75,000 m^3 ▪ on-site concrete batching ▪ sandblasting
Trackout (truck movements)		
▪ <20 HDV (>3.5 t) outward movements in any one day ▪ surface material with low potential for dust release ▪ unpaved road length <50 m	▪ 20 to 50 HDV (>3.5 t) outward movements in any one day ▪ moderately dusty surface material (e.g. high clay content) ▪ unpaved road length 50 to 100 m	▪ >50 HDV (>3.5 t) outward movements in any one day ▪ potentially dusty surface material (e.g. high clay content) ▪ unpaved road length >100 m

Once the dust emission magnitude has been determined the next step, according to the IAQM guidance (2024), is to establish the level of risk by combining the magnitude with the overall sensitivity of the area to dust soiling, human health and ecological effects. The level of risk associated with each activity is determined using the criteria in Table 11-4.

Table 11-4 — IAQM Criteria to Determine Risk of Dust Impacts

Sensitivity of Area	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

11.3.2.2 Construction Phase Traffic Assessment

Construction phase traffic also has the potential to impact air quality. The TII guidance Air Quality Assessment of Specified Infrastructure Projects – PE-ENV-01106 (TII, 2022), states that road links meeting one or more of the following criteria can be defined as being 'affected' by a Proposed Development and should be included in the local air quality assessment:

- Annual average daily traffic (AADT) changes by 1,000 or more;
- Heavy duty vehicle (HDV) AADT changes by 200 or more;
- Daily average speed change by 10 kph or more;
- Peak hour speed change by 20 kph or more; and/or,
- A change in road alignment by 5 m or greater.

While the guidance is specific to infrastructure projects, the approach can be applied to any development that causes a change in traffic. AtkinsRéalis have prepared a Traffic and Transport Impact Assessment for the Proposed Development presented in Chapter 15 – Roads, Traffic and Transport of this EIAR. As per Chapter 15, it has been determined by AtkinsRéalis that the construction stage traffic will not increase by 1,000 AADT, or 200 HDV AADT, or that the development will not result in speed changes or changes in road alignment. Therefore, the construction phase traffic associated with the Proposed Development does not meet the TII screening criteria for inclusion in a detailed air quality assessment. While short-term, localised emissions from construction traffic and plant will occur, these effects will be temporary in nature and will be managed through standard construction management and mitigation measures. On this basis, a detailed quantitative assessment

of construction stage traffic emissions has been scoped out, as there is no potential for likely significant effects on human health or ecological receptors.

11.3.3 Operational Phase

11.3.3.1 Operational Phase Traffic Assessment

Operational phase traffic has the potential to impact local air quality as a result of increased vehicle movements associated with the Proposed Development. The TII scoping criteria detailed in Section 11.3.2.2 were used to determine if any road links are affected by the Proposed Development and require inclusion in a detailed air dispersion modelling assessment. AtkinsRéalis have prepared a Traffic and Transport Impact Assessment for the Proposed Development presented in Chapter 15 – Roads, Traffic and Transport. The Proposed Development will not result in the operational phase traffic increasing by more than 1,000 AADT or 200 HDV AADT. In addition, there are no proposed changes to the traffic speeds or road alignment. Therefore, no road links impacted by the Proposed Development satisfy the screening criteria (Section 11.3.2.2). As none of the TII screening criteria are exceeded during the operational phase, no road links are considered to be affected by the Proposed Development in air quality terms. Consequently, a quantitative air dispersion modelling assessment has not been undertaken. The operational phase of the Proposed Development is not predicted to result in any material change to baseline air quality conditions, and no likely significant effects on human health or ecological receptors are anticipated.

11.4 Existing Receiving Environment

11.4.1 Meteorological Data

A key factor in assessing temporal and spatial variations in air quality are the prevailing meteorological conditions. Depending on wind speed and direction, individual receptors may experience very significant variations in pollutant levels under the same source strength (i.e. traffic levels) (WHO, 2021). Wind is of key importance in dispersing air pollutants and for ground level sources, such as traffic emissions, pollutant concentrations are generally inversely related to wind speed. Thus, concentrations of pollutants derived from traffic sources will generally be greatest under very calm conditions and low wind speeds when the movement of air is restricted. In relation to PM_{10}, the situation is more complex due to the range of sources of this pollutant. Smaller particles (less than $PM_{2.5}$) from traffic sources will be dispersed more rapidly at higher wind speeds. However, fugitive emissions of coarse particles ($PM_{2.5}$ to PM_{10}) will actually increase at higher wind speeds. Thus, measured levels of PM_{10} will be a non-linear function of wind speed.

The nearest representative weather station collating detailed weather records is Knock Airport meteorological station, which is located approximately 19.2 km south-east of the site. Knock Airport met data has been examined to identify the prevailing wind direction and average wind speeds over a five-year period (see Figure 11-1). For data collated during five representative years (2021 to 2025), the predominant wind direction is westerly to south-westerly (Met Éireann, 2026).

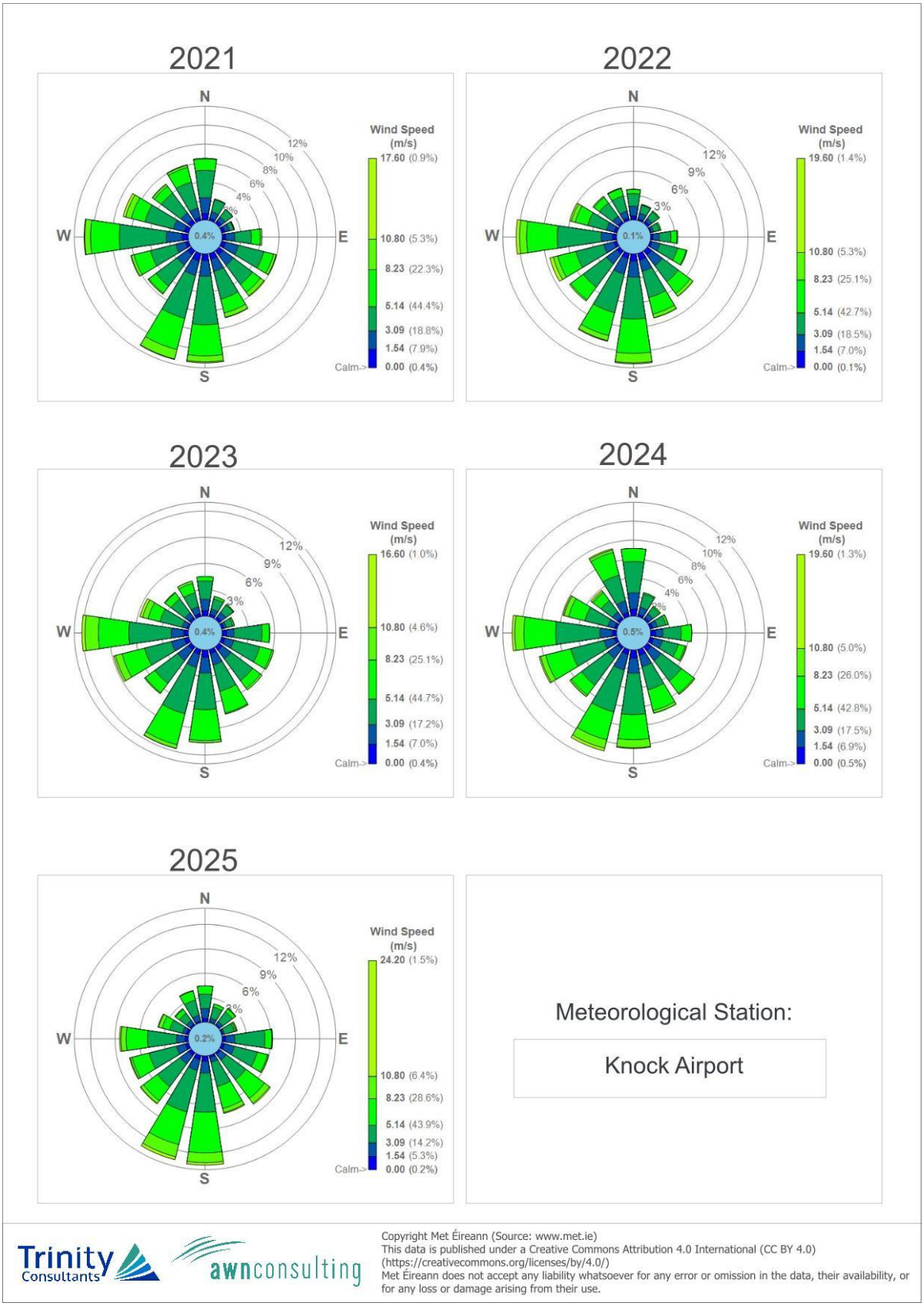


Figure 11-1 — Wind Roses for Knock Airport Meteorological Station (source: Met Éireann, 2026)

11.4.2 Baseline Air Quality

Air quality monitoring programs have been undertaken in recent years by the EPA. The most recent annual report on air quality in Ireland is "*Air Quality in Ireland 2024*" (EPA, 2025). The EPA website details the range and scope of monitoring undertaken throughout Ireland and provides both monitoring data and the results of previous air quality assessments.

As part of the implementation of the Air Quality Standards Regulations 2022 (S.I. No. 739 of 2022) four air quality zones have been defined in Ireland for air quality management and assessment purposes (EPA, 2025). Dublin is defined as Zone A and Cork as Zone B. Zone C is composed of 23 towns with a population of greater than 15,000. The remainder of the country, which represents rural Ireland but also includes all towns with a population of less than 15,000, is defined as Zone D.

A background concentration is added to the modelled process contribution to account for emission sources not included in the dispersion model. The background concentration accounts for all emission sources in the vicinity of the Proposed Development (e.g. natural sources, industry, traffic, home heating etc.). The long-term monitoring data available from the EPA (EPA, 2025) has been used to determine background concentrations for the key pollutants in the region of the Proposed Development.

In terms of air monitoring and assessment, the Proposed Development site is within Zone D (EPA, 2025) and this has been taken into account when estimating the background concentrations in the area. The Proposed Development site is located in a rural area and is predominantly surrounded by agricultural land. Rural background monitoring sites are therefore considered most representative of the Proposed Development site.

11.4.2.1 Particulate Matter (PM_{10})

Continuous PM_{10} monitoring was carried out at the representative Zone D rural background locations from 2020 to 2024; Kilkitt, Claremorris and Askeaton. Annual average PM_{10} concentrations across the sites ranged from 7 to 10 µg/m^3 over the 2020 to 2024 period (see Table 11-5). There were no exceedances of the daily limit of 50 µg/m^3 in 2024 (35 exceedances are permitted per year) (EPA, 2025). The five year average annual mean PM_{10} concentration for the Zone D locations is 8 µg/m^3.

Based on the EPA data, an estimate of the current background PM_{10} concentration in the region of the Proposed Development is 8 µg/m^3.

Table 11-5 — Baseline Air Quality - PM_{10}

Station	Averaging Period	Year				
		2020	2021	2022	2023	2024
Kilkitt	Annual Mean PM_{10} (µg/m^3)	8	8	9	7	7
	24-hr Mean > 50 µg/m^3 (days)	0	-	0	0	0
Claremorris	Annual Mean PM_{10} (µg/m^3)	10	10	8	8	8
	24-hr Mean > 50 µg/m^3 (days)	0	0	0	0	0
Askeaton	Annual Mean PM_{10} (µg/m^3)	7	9	9	-	8
	24-hr Mean > 50 µg/m^3 (days)	0	0	0	-	0

11.4.2.2 Particulate Matter ($PM_{2.5}$)

The results of $PM_{2.5}$ monitoring at the representative Zone D rural background locations over the period 2020 to 2024 ranged from 4 to 8 µg/m^3 (EPA, 2025). Long-term average $PM_{2.5}$ concentrations measured at this location were significantly lower than the annual average limit value of 25 µg/m^3. The five year average annual mean $PM_{2.5}$ concentration for the Zone D locations is 6 µg/m^3.

Based on this information, a background $PM_{2.5}$ concentration of 6 µg/m^3 has been used in the assessment.

Table 11-6 — Baseline Air Quality – $PM_{2.5}$

Station	Averaging Period	Year				
		2020	2021	2022	2023	2024
Claremorris	Annual Mean $PM_{2.5}$ (µg/m^3)	5	8	6	5	5
Shannon Estuary/Askeaton, Co. Limerick	Annual Mean $PM_{2.5}$ (µg/m^3)	4	6	5	5	5

11.4.3 Sensitive Receptors

11.4.3.1 Construction Phase

In line with the UK Institute of Air Quality Management (IAQM) guidance document '*Guidance on the Assessment of Dust from Demolition and Construction'* (IAQM, 2024) prior to assessing the impact of dust from a Proposed Development, the sensitivity of the area must first be assessed as outlined below, and using the IAQM criteria shown in Table 11-7. Both receptor sensitivity and proximity to proposed works areas are taken into consideration. For the purposes of this assessment, high sensitivity receptors are regarded as residential properties where people are likely to spend the majority of their time. Commercial properties and places of work are regarded as medium sensitivity while low sensitivity receptors are places where people are present for short periods or do not expect a high level of amenity.

In terms of receptor sensitivity to dust soiling, there are between 10 and 100 residential properties within 20 m of the Proposed Development Red Line Boundary (see Figure 11-2 and Figure 11-3). Based on these receptor numbers and using the IAQM criteria in, the sensitivity of the area to dust soiling impacts from the Proposed Development is medium.

In addition to sensitivity to dust soiling, the IAQM (2024) guidelines also outline the assessment criteria for determining the sensitivity of the area to human health impacts. The criteria take into consideration the current annual mean PM_{10} concentration, receptor sensitivity based on type (residential receptors are classified as high sensitivity) and the number of receptors affected within various distance bands from the construction works. A conservative estimate of the current annual mean PM_{10} concentration in the vicinity of the Proposed Development is 8 µg/m^3. There are greater than 100 high sensitivity residential receptors within 20 m of the Proposed Development planning application boundary (see and). Based on the IAQM criteria outlined in Table 11-7 the worst-case sensitivity of the area to dust-related human health effects is low.

The IAQM (2024) guidelines also outline the assessment criteria for determining the sensitivity of the area to dust-related ecological impacts. Dust emissions can coat vegetation leading to a reduction in the photosynthesising ability of the plant, as well as other effects. The guidance states that dust impacts to vegetation can occur up to 50 m from the site, and 50 m from site access roads, up to 250 m for the site entrance. The sensitivity of the area is determined based on the distance to the source, the designation of the site,

(European, National or local designation) and the potential dust sensitivity of the ecologically important species present. Killala Bay/Moy Estuary Special Area of Conservation (SAC)/Special Protection Area (SPA)/proposed Natural Heritage Area (pNHA), River Moy SAC and Lough Hoe Bog pNHA/SAC are all ecological sites within 20 m of the site. Base on the IAQM criteria outlined in Table 11-7 the worst-case sensitivity of the area of ecology is considered high.

Table 11-7 — Sensitivity of the Area to Construction Dust

Sensitivity of the Area to Dust Soiling Effects on People and Property					
Receptor Sensitivity	**Number of Receptors**	**Distance from Source (m)**			
		<20	**<50**	**<100**	**<250**
High	>100	High	High	Medium	Low
	10 to 100	High	Medium	Low	Low
	1 to 10	Medium	Low	Low	Low
Medium	>1	Medium	Low	Low	Low
Low	>1	Low	Low	Low	Low

Sensitivity of the Area to Human Health Impacts						
Receptor Sensitivity	**Annual Mean PM_{10} Concentration**	**Number of Receptors**	**Distance from Source (m)**			
			<20	**<50**	**<100**	**<250**
High	<24 µg/m^3	>100	Medium	Low	Low	Low
		10 to 100	Low	Low	Low	Low
		1 to 10	Low	Low	Low	Low
Medium	<24 µg/m^3	>10	Low	Low	Low	Low
		1 to 10	Low	Low	Low	Low
Low	<24 µg/m^3	>1	Low	Low	Low	Low

Sensitivity of the Area to Ecological Impacts			
Receptor Sensitivity	**Distance from Source (m)**		
	<20	**<50**	
High	High	Medium	
Medium	Medium	Low	
Low	Low	Low	

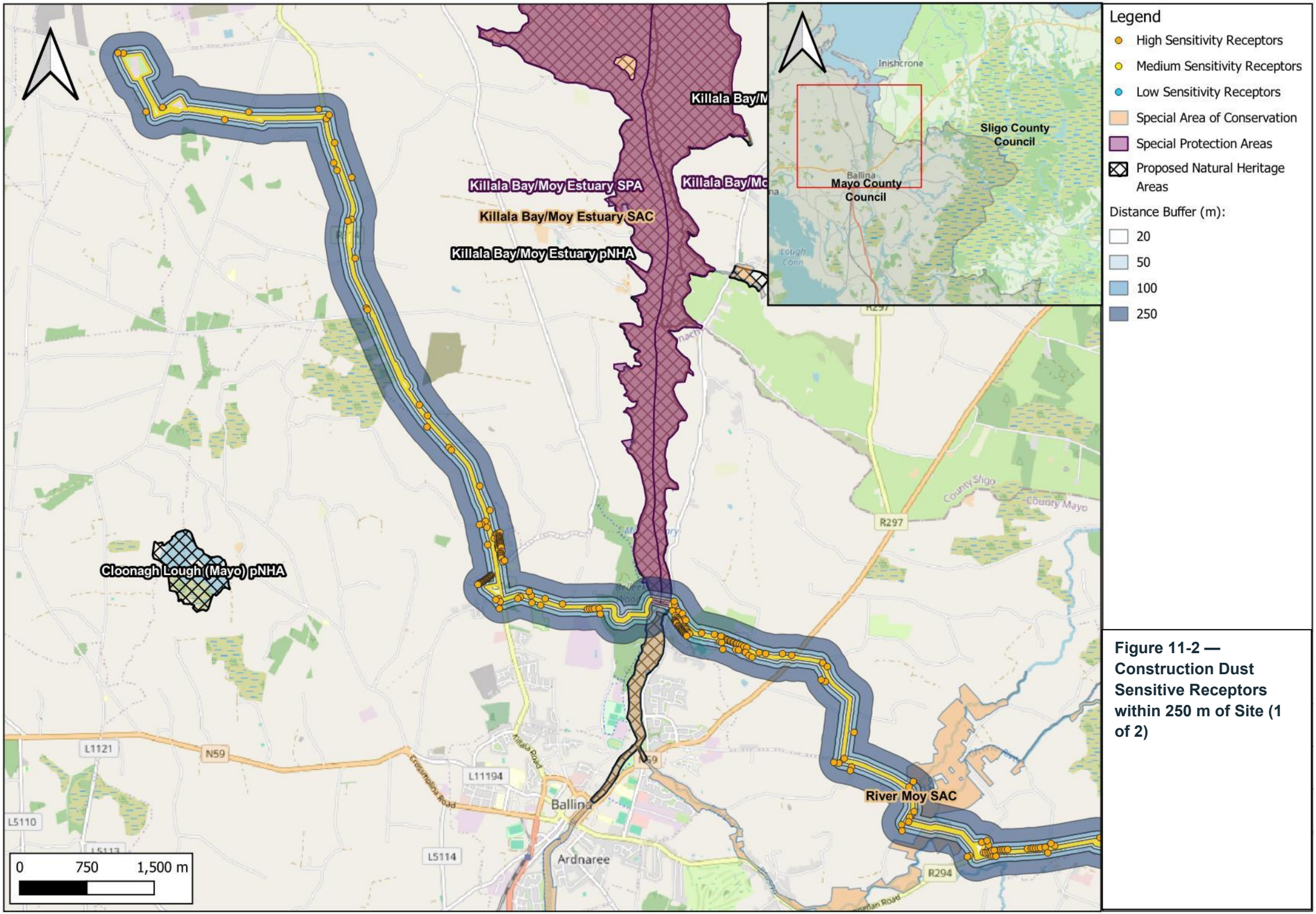


Figure 11-2 — Construction Dust Sensitive Receptors within 250 m of Site (1 of 2)

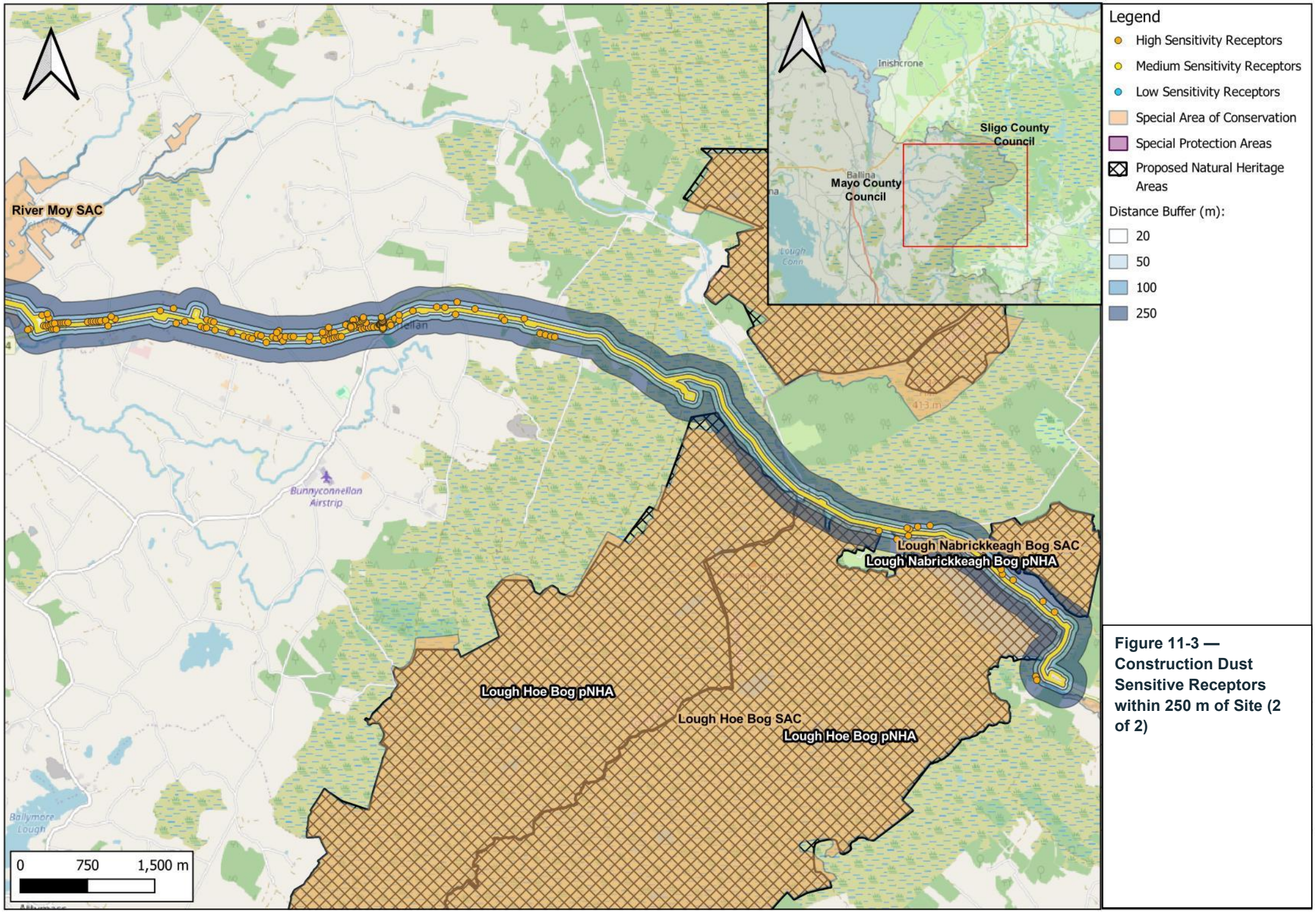


Figure 11-3 — Construction Dust Sensitive Receptors within 250 m of Site (2 of 2)

11.5 Potential Effects of Proposed Development

11.5.1 Construction Phase

11.5.1.1 Construction Dust Assessment

The greatest potential impact on air quality during the construction phase of the Proposed Development is from construction dust emissions and the potential for nuisance dust. While construction dust tends to be deposited within 250 m of a construction site, the majority of the deposition occurs within the first 50 m (IAQM, 2024). The extent of any dust generation depends on the nature of the dust (soils, peat, sands, gravels, silts etc.) and the nature of the construction activity. In addition, the potential for dust dispersion and deposition depends on local meteorological factors such as rainfall, wind speed and wind direction. A review of Knock Airport meteorological data indicates that the prevailing wind direction is westerly to south-westerly and wind speeds are generally moderate in nature (see Section 11.4.1). In addition, dust generation is considered negligible on days where rainfall is greater than 0.2 mm. A review of historical 30-year average data for Belmullet meteorological station, the closest meteorological monitoring site with recent 30-year average data, indicates that on average 257.5 days per year have rainfall over 0.2 mm (Met Eireann, 2025) and therefore it can be determined that 70.5% of the time dust generation will be reduced due to natural meteorological conditions.

To determine the level of dust mitigation required during the proposed works, the potential dust emission magnitude for each dust generating activity needs to be taken into account, in conjunction with the previously established sensitivity of the area (see Section 11.4.3.1). The major dust generating activities are divided into four types within the IAQM (2024) guidance to reflect their different potential impacts. These are: demolition, earthworks, construction and trackout (movement of heavy vehicles).

Dust generating activities across the full extent of the Proposed Development have been considered, to ensure the assessment is comprehensive and conservative, and that dust mitigation appropriate for the Proposed Development as a whole is identified.

11.5.1.1.1 Determining the Potential Dust Emission Magnitude

The magnitude of the works under each category can be classified as either small, medium or large depending on the scale of the works involved. The magnitude of each activity (Table 11-8) has been determined below for the Proposed Development using the IAQM criteria in Table 11-3.

Table 11-8 – Potential Dust Emission Magnitude

Activity	Dust Emission Magnitude	Justification
Demolition	N/A	Total demolition volume will be less than 12,000 m^3
Earthworks	Medium	Total site area is between 18,000 m^2 – 110,000 m^2
Construction	Small	Total building volume will be less than 12,000 m^3
Trackout	Medium	20 to 50 outward HDV movements per day

11.5.1.1.2 Determining the Sensitivity of the Area

As determined in Section 11.4.3, there are between 10 and 100 residential properties within 20 m of the Proposed Development boundary. As also detailed in Chapter 7 – Biodiversity, Killala Bay/Moy Estuary SAC/SPA/pNHA, River Moy SAC and Lough Hoe Bog pNHA/SAC are all ecological receptors present within 20 m of the Proposed Development boundary. The sensitivity of the area to dust soiling, human health impacts and ecological impacts from dust are shown in Table 11-9.

11.5.1.1.3 Determining the Risk of Dust Impacts

As detailed in Table 11-4, the predicted dust emission magnitude has been combined with the defined sensitivity of the area to determine the risk of impacts during the construction phase, prior to mitigation.

Table 11-9 below provides a summary of the risk of dust impacts for the Proposed Development.

There is at most a medium risk of dust soiling impacts, a low risk of dust-related human health effects and a medium risk of ecological impacts associated with the proposed works. Without mitigation in place, construction dust will have a ***direct, short-term, negative*** and ***slight*** effect on air quality in terms of human health and ecology. As a result, best practice dust mitigation measures will be implemented to ensure there are no significant effects at nearby sensitive receptors (see Section 11.7).

Table 11-9 – Risk of Dust Impacts used to Define Site-Specific Mitigation

Potential Impact	Receptor Sensitivity	Dust Emission Magnitude	Risk of Dust-Related Impacts
Demolition			
Dust Soiling	High	n/a	n/a
Human Health	Low		n/a
Ecological	High		n/a
Earthworks			
Dust Soiling	High	Medium	Medium Risk
Human Health	Low		Low Risk
Ecological	High		Medium Risk
Construction			
Dust Soiling	High	Small	Low Risk
Human Health	Low		Negligible Risk
Ecological	High		Low Risk
Trackout			
Dust Soiling	High	Medium	Medium Risk
Human Health	Low		Low Risk
Ecological	High		Medium Risk

11.5.2 Operational Phase

A detailed air quality assessment was scoped out for the operational stage of the development as per the TII

screening criteria (see Section 11.3.3.1). No significant operational stage effects of traffic on air quality are therefore predicted.

11.5.3 Do-Nothing Scenario

In the Do-Nothing Scenario no construction works will take place and the identified impacts of fugitive dust and particulate matter emissions will not occur at the subject site. The air quality baseline will continue to develop in line with current trends.

The Do-Nothing scenario associated with the operational phase of the development is assessed within Section 11.3.3.1 and it was found to be 'direct', 'long-term', 'negative' and 'slight' which is overall 'not significant'.

11.6 Cumulative Impacts

Cumulative construction dust impacts may occur if other large-scale developments within 500 m of the site are under construction simultaneously, as per the IAQM guidance (IAQM, 2024).

A review of the planned and permitted projects within the last ten years within 500 m of the site, with the potential for overlapping construction periods, was undertaken to identify developments with the potential for cumulative construction phase impacts. There is the potential for the construction phase of the Proposed Development to coincide with that of the following developments as illustrated in Table 11-10.

Table 11-10 – Summary of Developments with Potential for Cumulative Construction Dust Effects

Reference No	Development Description
317560	Proposed windfarm development including 13 wind turbines in Bunnyconnellan, Co. Mayo and hydrogen plant in Castleconnor, Co. Sligo.
18358/ 2560108	A battery storage facility within a total site area of up to 1.18 ha, to include 55 self contained battery container units with associated Heating, Ventilation and Air Conditioning (HVAC) cooling units, 15 converter and 15 set up transformer container units, associated compound cabling and ducting, a grid transformer, a single storey substation/control building with welfare facilities, a cable route grid connection to the existing Electricity Supply Board (ESB) substation building, maintenance lighting, security fencing, a Close-Circuit Television (CCTV) monitoring system, landscaping works and all associated ancillary infrastructure on lands within the Tawnaghmore generation station.
2360134	A nominal 50 megawatt electricity generating station, combusting woody biomass chips (domestic and imported) as well as a small proportion of fuel oil for boiler start-up. The total site area is 19.0 ha of which approximately 7 ha will be developed.
2360266	The Proposed Development will consist of a Hydrogen Plant and an Energy Centre. The Proposed Development includes the demolition and removal of the existing Asahi Plant buildings, foundations, as well as decommissioning and removal of the existing overhead, above ground drainage system and underground services. The Proposed Development will also include Resurfacing, Repair and Improvement of Existing Site Entrance and new Internal Access Roads which in turn opens onto the existing entrance road to the Ballina/Killala regional road (R314). The provision for 23 car parking spaces, footpaths, street lighting, external lighting, CCTV cameras, signage, security fencing, construction compound, and all other associated site development plant and equipment and other works including, utilities connections, potable water, stormwater, sewage, and

Reference No	Development Description
	foul wastewater drainage infrastructure, within a total overall application boundary of 6.88 ha.
2460699	The Proposed Development will consist of the following works: (a) Demolition of part of existing adjoining building to make provision for future extension as part of this application. (b) Demolition of temporary prefabricated buildings. (c) Construction of a fully serviced extension to side of existing building which will create additional production area for the existing facility, external plant mezzanine area and the construction of a two-storey office / admin block to the front of the development. (d) Alterations to elevations of existing building to include new wall cladding and windows, etc.

No significant effects on air quality as a result of construction dust were identified during the construction phases of the proposed and permitted developments in Table 11-10. As part of their respective impact assessments, and similar dust mitigation measures are required as per their planning conditions to ensure there are no significant effects (i.e. construction works must be carried out with dust mitigation applied or the development will be in breach of its planning conditions).

The dust mitigation measures outlined in Section 11.7.1 will be applied during the construction phase of the Proposed Development which will avoid significant effects on air quality.

In combination, the Proposed Development and considered permitted developments will not have a significant effect on air quality due to the required application of dust mitigation measures for each development. The predicted cumulative effects on air quality, in terms of human health and ecology, associated with the construction phase of the Proposed Development is ‘short-term’, ‘direct’, ‘negative’ and ‘not significant’.

11.7 Mitigation Measures

11.7.1 Construction Phase Mitigation

The Proposed Development has been assessed as having a medium risk of dust soiling effects, a low risk of dust related human health effects, and a high risk of ecological effects during the construction phase as a result of earthworks, construction and trackout activities (see Section 11.5.1). Therefore, the dust mitigation measures detailed in Table 11-11 will be implemented during the construction phase of the Proposed Development. These measures are appropriate for sites with a high risk of dust impacts, as recommended by the IAQM construction dust guidance, and aim to ensure that no significant nuisance occurs at nearby sensitive receptors.

These measures will be incorporated into the overall Construction Environmental Management Plan (CEMP) prepared for the site. The measures are divided into different categories for different activities.

Table 11-11 – Construction Phase Dust Mitigation Measures

Category	Mitigation Measure
Communications	▪ Develop and implement a stakeholder communications plan that includes community engagement before work commences on site. ▪ The name and contact details of person(s) accountable for air quality and dust issues will be displayed in a public location at the active construction site. This may be the environment manager/engineer or the site manager. ▪ Display the head or regional office contact information.

Category	Mitigation Measure
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. ▪ 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 offsite, and the action taken to resolve the situation in the log book.
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. ▪ Erect solid screens or barriers around dusty activities or the site boundary that are at least as high as any stockpiles on site. ▪ Fully enclose site or specific operations where there is a high potential for dust production and the site is active for an extensive period. ▪ Avoid site runoff of water or mud. ▪ Keep site fencing, barriers and scaffolding clean using wet methods. ▪ 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 cover as described below. ▪ Cover, seed or fence stockpiles to prevent wind whipping.
Operating vehicle/machinery and sustainable travel	▪ Ensure all vehicles switch off engines when stationary – no idling vehicles. ▪ 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 25 kph on surfaced and 15 kph on unsurfaced 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). ▪ Implement a 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 and appropriate. ▪ Use enclosed chutes and conveyors and covered skips. ▪ 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	▪ Bonfires and burning of waste materials are legally prohibited.

Category	Mitigation Measure
Measures Specific to Earthworks	▪ Re-vegetate earthworks and exposed areas/soil stockpiles to stabilise surfaces as soon as practicable ▪ Use Hessian, mulches or trackifiers where it is not possible to re-vegetate or cover with topsoil, as soon as is practicable. ▪ Only remove the cover in small areas during work and not all at once.
Measures Specific to Construction	▪ Avoid scabbling (roughening of concrete surfaces) if possible. ▪ 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.
Measures Specific to Trackout	▪ Use water-assisted dust sweeper(s) on the access and local roads, to remove, as necessary, any material tracked out of the site. This may require the sweeper being continuously in use. ▪ 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 reasonably practicable. ▪ Record all inspections of haul routes and any subsequent action in a site log book. ▪ Implement a wheel washing system (with rumble grids to dislodge accumulated dust and mud prior to leaving the site where reasonably practicable).

11.7.2 Operation Phase Mitigation

There is no mitigation required for the operational phase of the Proposed Development as effects to air quality are predicted to be ‘not significant’ (see Section 11.5.2).

11.8 Residual Effects

11.8.1 Construction Phase

To minimise dust emissions during construction, a series of mitigation measures have been prepared as outlined in Section 11.7.1. Provided the dust minimisation measures are adhered to, the predicted residual air quality effects during the construction phase are ‘short-term’, ‘direct’, ‘negative’, ‘localised’ and ‘not significant’.

Best practice mitigation measures are proposed for the construction phase of the Proposed Development, which will focus on the proactive control of dust and other air pollutants, to minimise generation of emissions at source. The mitigation measures that will be put in place during construction will ensure that emissions are effectively controlled and that there are no exceedances of applicable ambient air quality standards (set out in Directive (EU) 2024/2881), which are based on the protection of human health (Table 11-1). Therefore, the predicted residual, dust-related, human health effects of the construction phase of the Proposed Development is ‘short-term’, ‘direct’, ‘negative’, ‘localised’ and ‘not significant’.

11.8.2 Operational Phase

No significant residual effects are predicted for the operational phase of the Proposed Development.

11.9 Worst-Case Scenario

Reasonable worst-case estimates have been used as part of this assessment. Accordingly, the residual impacts identified in Section 11.8 represent the reasonable worst-case effects of the Proposed Development.

11.10 Monitoring

11.10.1 Construction Phase

The following monitoring measures are required during the construction phase, as per the IAQM guidance (IAQM, 2024):

- 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 will include regular dust soiling checks of surfaces such as street furniture, cars and window sills within 100 m of site boundary, with cleaning to be provided if necessary.
- Carry out regular site inspections to monitor compliance with the CEMP, record inspection results, and make an inspection log available to the local authority when asked.
- The potential for dust generation increases when rainfall is less than 0.2 mm/day (millimetres per day) and at wind speeds of greater than 10 m/s (metres per second). To determine if these conditions are likely to affect the site, the weather forecast will be consulted daily, specifically the hourly forecasts for wind speeds as well as the 12-hour rainfall radar showing anticipated amounts of precipitation in mm.
- 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.

11.10.2 Operational Phase

No operational phase monitoring is required.

11.11 Difficulties encountered during preparation of this chapter

There were no difficulties encountered when compiling this assessment.

11.12 Interactions

11.12.1 Air Quality and Human Health and Population

11.12.1.1 Construction Phase

An adverse air quality impact during the construction phase can cause health and dust nuisance issues. There is a low risk of dust-related human health effects during the construction phase of the Proposed Development. Best practice mitigation measures will be implemented during the construction phase to ensure that the impact of the Proposed Development complies with all ambient air quality legislative limits. Therefore, the predicted effect is direct, short-term, negative, localised and not significant with respect to Population and Human Health during the construction phase.

11.12.1.2 Operational Phase

Vehicles accessing the site will emit pollutants which may impact Air Quality and Human Health. However, the increased number of vehicles associated with the Proposed Development will not cause a significant change in air pollutant emissions in the locality. It has been assessed that emissions will be in compliance with the ambient air quality standards which are set for the protection of human health. Effects will be long-term, localised, direct, and not significant.

11.12.2 Air Quality and Climate

Air Quality and Climate have interactions as the emissions from the burning of fossil fuels during the construction, and operational phases generate both air quality and climate impacts. There is no significant impact on climate arising from air quality emissions associated with the Proposed Development. However, the sources of impacts on air quality and climate are strongly linked.

11.12.3 Air Quality and Land, Soils and Hydrogeology

11.12.3.1 Construction Phase

Construction phase activities such as land clearing, excavations, stockpiling of materials etc. have the potential for interactions between Air Quality and Land and Soils in the form of dust emissions. With the appropriate mitigation measures to prevent fugitive dust emissions, it is predicted that there will be no significant interactions between air quality and land and soils during the construction phase.

11.12.3.2 Operational Phase

There are no potentially significant interactions identified between Air Quality, and Land and Soils during the operational phase.

11.12.4 Air Quality and Biodiversity

11.12.4.1 Construction Phase

Dust generation can occur during extended dry weather periods due to traffic along haul routes and activities such as excavations and infilling works. Dust emissions can coat vegetation leading to a reduction in the photosynthesising ability as well as other effects. A high level of dust mitigation is proposed to ensure no

significant effects occur. With the implementation of these mitigation measures dust emissions will be minimised and effects will be direct, short-term, negative, localised and not significant with respect to biodiversity.

11.12.4.2 Operational Phase

There are no potentially significant interactions identified between Air Quality and Biodiversity during the operational phase.

11.12.5 Air Quality and Material Assets – Traffic & Transport

11.12.5.1 Construction Phase

Interactions between Air Quality and Traffic have been considered. With increased traffic movements and reduced engine efficiency, i.e. due to congestion, the emissions of vehicles increase. The effects of the Proposed Development on air quality are assessed by reviewing the change in annual average daily traffic on roads close to the site. In this assessment, the effect of the interactions between Traffic and Air Quality are considered to be direct, short-term, neutral, localised and not significant during the construction phase.

11.12.5.2 Operational Phase

The effect of the interactions between Traffic and Air Quality are considered to be long-term, direct, negative and not significant during the operational phase.

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