Addendum to the Environmental Impact Assessment Report

NISA

North Irish Sea Array

Volume 5 - Wider Schemes Chapters

Chapter 27
Air Quality

Statkraft

CIP
Copenhagen Infrastructure Partners

GoBe
APEM Group

ARUP

Contents

Tables

27. Air Quality

North Irish Sea Array Windfarm Ltd (NISA, hereafter referred to as 'the Developer') has been considering the Request for Further Information (RFI) issued by An Bord Pleanála (now An Coimisiún Pleanála) as well as the third-party submissions received following public consultation. At An Coimisiún Pleanála's behest, the Developer has also continued to consult with stakeholders in respect of the 2024 planning application throughout 2024-2026. The Developer has refined elements of the design to respond to the third-party submissions, the continued public and stakeholder consultation and the RFI. Amendments are therefore required to Chapter 27: Air Quality of the 2024 Environmental Impact Assessment Report (EIAR). Full details of consultation undertaken can be found in Appendix A1.2 in the Addendum to the EIAR.

For the purposes of clarity, this document shall be read in conjunction with the Chapter 27 submitted as part of the 2024 EIAR.

Any cross reference to a chapter, section, table, image, figure or appendix within this document is to another location within the Addendum to the EIAR unless explicitly stated otherwise. Any cross reference to anything included in the 2024 EIAR will be clearly labelled as such.

Text in bold is only used throughout this document to indicate where changes are required, and why they are required. Text in italics is text from a section of the 2024 EIAR which is deleted, or quotations from other documents (as explicitly stated). Replacement text is in normal font.

Tables which have been updated from the 2024 EIAR, or entirely new tables, have been included in the Addendum to the EIAR. These tables can be identified by the "A" prefix in the table caption. Any changes within the updated table, in comparison to tables within the 2024 EIAR, are indicated by grey shading in the relevant cell, column or row, as necessary. The exception here is where a table has been replaced in its entirety.

The sections relevant to Chapter 27 in the RFI are included below.

RFI Section	RFI	Relevance to Chapter
1 (b)	The scientific information provided as part of the planning application documentation should be based on up-to-date survey reports and data. Accordingly, the applicant is requested to confirm/provide justification/verification that the information submitted in support of the planning application remains relevant and appropriate at the point of submitting further information or to update same as required.	The timeframes associated with the RFI have necessitated a review of the datasets previously used in the 2024 EIAR to ensure any necessary updates to the baseline environment are captured. Therefore, a review of the Air Quality baseline has been undertaken to comply with RFI 1 (b). Any relevant changes are included in this report in Sections 27.2, 27.3
5	The Marine Institute in their observation raises concerns in relation to the methodology applied in the submitted cumulative effects assessment and the manner in which the information is presented, noting the lack of a standard Irish methodology in relation to CEA. The applicant is advised that guidance exists in the UK, namely Nationally Significant Infrastructure Projects: Advice on Cumulative Effects Assessment - GOV.UK, September 2024 (NSIP, 2024). The applicant is requested to revise the submitted cumulative assessment in line with NSIP (2024) and submit a standalone document to clearly demonstrate the CEA conclusions. In the interests of consistency and transparency, the applicant is requested to complete the assessment in accordance with the templates provided in the NSIP (2024), namely "Appendix 1: Matrix 1 – Identification of 'other development' for CEA" and "Appendix 2: Matrix 1 – Assessment matrix" (see attached Appendix B)…	A revised CEA, which considers the methodology and template provided in the Nationally Significant Infrastructure Projects: Advice on Cumulative Effects Assessment – GOV.UK, September 2024 (NSIP, 2024), has been prepared. The revised CEA is provided in Chapter 38 Cumulative and Inter-Related Effects, Appendix 38.1 – Onshore Long List and Appendix A38.2 Offshore Long List. The update to this chapter in relation to this, is provided in Section 27.9.

RFI Section	RFI	Relevance to Chapter
19 (c)	The applicant is requested to review section 24.3 of Chapter 24 in relation to Baseline Environment to ensure any road network upgrade works, such as the installation of active travel measures/cycle paths at Corduff NS and along the R132 (The Five Roads to Corduff), and at any other location, are reflected accurately in the baseline and subsequent assessment."	To ensure compliance with RFI Section 19 (c), updated traffic count surveys were undertaken in 2025. The results of these surveys are presented in detail in Chapter 24. The indirect air quality effects of these updated traffic count surveys have been assessed in Section 27.5.2.2. Any relevant changes are included in this report in Section 27.5

27.1 Introduction

There are no changes required to this section. Refer to Section 27.1 of Chapter 27 in the 2024 EIAR.

27.2 Methodology

27.2.1 General

There are no changes required to this section. Refer to Section 27.2.1 of Chapter 27 in the 2024 EIAR.

27.2.2 Study Area

In accordance with RFI Section 1 (b), a review of relevant policy documentation was undertaken. The changes required to this section comprise of the updating of reference to guidance which has been revised since the publication of the 2024 EIAR.

Therefore, the following sentence in Section 27.2.2 of Chapter 27 in the 2024 EIAR is deleted:

"Sensitive receptor locations are defined by the Transport Infrastructure Ireland (TII)[1] Standard as "residential properties, hospitals, schools, care homes, gardens of residential properties, hotels and B&Bs, places of worship, sports centres, shopping areas, playing fields, cyclist and outdoor locations including car parks, bus stations, including park and rides and railway stations" (TII, 2022) i.e., locations where members of the public are likely to be regularly present."

And replaced with:

Sensitive receptor locations are defined by the Transport Infrastructure Ireland (TII)[2] Standard as "residential properties, hospitals, schools, care homes, gardens of residential properties, hotels and B&Bs, places of worship, sports centres, shopping areas, playing fields, cyclist and outdoor locations including car parks, bus stations, including park and rides and railway stations" (TII, 2025) i.e., locations where members of the public are likely to be regularly present.

There are no other changes required to this section. Refer to Section 27.2.2 of Chapter 27 in the 2024 EIAR.

27.2.3 Relevant Guidance and Policy

27.2.3.1 Overview

In accordance with RFI Section 1 (b), a review of relevant policy documentation was undertaken. The changes required to this section is the reference to updated guidance revised after the publication of the 2024 EIAR.

Therefore, the following sentence is added to Section 27.2.3.1 in Chapter 27:

[1] TII Air Quality Assessment of Proposed National Roads – Standard (TII PE-ENV-01107) (TII 2022)

[2] TII Air Quality Assessment of Proposed National Roads – Standard (TII PE-ENV-01107) (TII 2025)

Directive 2008/50/EC has been repealed and replaced by Directive 2024/2881 on ambient air quality and cleaner air for Europe, published on 23rd October 2024. Member states have two years to transpose this directive into law by 11 December 2026.

Additionally, the following guidance references from Section 27.2.3.1 in Chapter 27 of the 2024 EIAR are deleted:

"The TII Air Quality Assessment of Proposed National Roads – Standard (TII PE-ENV-01107) (TII 2022)"

"UK Highways Agency (UKHA) Design Manual for Roads and Bridges (DMRB) – LA 105 Air Quality (hereafter referred to as LA 105 Air Quality Guidance) (UKHA 2019);"

And replaced with:

The TII Air Quality Assessment of Proposed National Roads – Standard (TII PE-ENV-01107) (TII 2025)

UK Highways Agency (UKHA) Design Manual for Roads and Bridges (DMRB) – LA 105 Air Quality Version 0.1.0 (hereafter referred to as LA 105 Air Quality Guidance) (UKHA 2024).

Additionally, the following reference will be added:

The TII Air Quality Assessment of Specified Infrastructure Projects – Overarching Technical Document (TII PE-ENV-01106) (TII 2025)

There are no other changes required to this section. Refer to Section 27.2.3.1 in Chapter 27 of the 2024 EIAR.

27.2.3.2 Air Quality Standards (AQS)

In accordance with RFI Section 1 (b), a review of relevant policy and documentation was undertaken. The change required to this section is the update of the reference to the revised air quality standards due to EU Directive 2024/2881/EC which will come into force in Ireland on December 11, 2026.

Therefore, the following paragraph is deleted from Section 27.2.3.2 in Chapter 27:

"However, as the EU statutory limit values have not been updated since the release of the new WHO guidelines, the appropriate compliance limit values for the assessment of air quality impacts of the proposed development are those outlined in the Air Quality Regulations, which incorporate the cleaner air for Europe (CAFE) Directive. Therefore, the assessment considers compliance with the EU statutory limits only."

And replaced with:
The appropriate compliance limit values for the assessment of air quality impacts of the proposed development are those outlined in the current Air Quality Regulations (S.I. No. 739/2022), which incorporate the cleaner air for Europe (CAFE) Directive (2008/50/EC).

On the 10th of December 2024, EU Directive 2024/2881/EC on ambient air quality and cleaner air for Europe came into force. This Directive (2024/2881/EC) repeals and replaces of the preceding Directives 2004/107/EC and 2008/50/EC and must be implemented into law by each member state within two years. The 2024/2881/EC Directive sets new limit values for pollutants that EU Member States must comply with by 2030.

Given that the three-year construction phase of the proposed development is expected to commence in 2027/2028 and that air quality impacts are only anticipated to arise during construction (due to the operational nature of the proposed development), the 2030 limit values are applied on a conservative basis and are set out in Table A27.1.

Table A27.1 Air Quality Regulations 2030 Limit Values

Pollutant	For the protection of	Averaging period	Limit value (µg/m^3) by 2030	Basis of application of limit value
NO_2	Human Health	1-hour	200	≤ 3 exceedances p.a.
		1-day	50	≤ 18 exceedances p.a.
		Calendar year	20	Annual mean
PM_{10}	Human Health	1-day	45	≤ 18 exceedances p.a.
		Calendar year	20	Annual mean
$PM_{2.5}$	Human Health	1-day	25	≤ 18 exceedances p.a.
		Calendar year	10	Annual mean
SO_2	Human health and Vegetation natural ecosystems	1-hour	350	≤ 3 exceedances p.a.
		1-day	50	≤ 18 exceedances p.a.
		Calendar year	20	Annual mean
NO_x	Vegetation and natural ecosystems	Calendar year	30	Annual mean

There are no other changes required to this section. Refer to Section 27.2.3.2 in Chapter 27 of the 2024 EIAR.

27.2.3.3 National Air Emission Targets

There are no changes required to this section. Refer to Section 27.2.3.3 of Chapter 27 in the 2024 EIAR.

27.2.3.4 Transport Infrastructure Ireland (TII) and Institute of Air Quality Management (IAQM) Guidelines

The change required in this section is the reference to guidance revised after the publication of the 2024 EIAR, in accordance with RFI Section 1 (b) and correction of a minor referencing error.

The following sentence is deleted from Section 27.2.3.4 in Chapter 27:

"(refer to Section 24.5.3 of Chapter 25 Traffic & Transport)."

And, replaced with:

(refer to Section 24.5.3 of Chapter 24 Traffic & Transport).

Additionally, the following sentence is deleted:

"This assessment has been undertaken with regard to the TII (2022) Air Quality Assessment of Proposed National Roads - Standard (TII Standard) and IAQM (2024) Guidance on the assessment of dust from demolition and construction (IAQM Guidance)."

And replaced with:

This assessment has been undertaken with regard to the TII (2025) *Air Quality Assessment of Proposed National Roads - Standard* (TII Standard), TII (2025) *Air Quality Assessment of Specified Infrastructure Projects – Overarching Technical Document* and IAQM (2024) *Guidance on the assessment of dust from demolition and construction* (IAQM Guidance).

There are no other changes required to this section. Refer to Section 27.2.3.4 in Chapter 27 of the 2024 EIAR.

27.2.3.5 National Marine Planning Framework

There are no changes required to this section. Refer to Section 27.2.3.5 of Chapter 27 in the 2024 EIAR.

27.2.4 Data Collection and Collation

In accordance with RFI Section 1 (b), the change required to this section is the update of data sources.

Therefore, the reference to the following guidance is deleted from Section 27.2.4 in Chapter 27:

- *Environmental Protection Agency (2020). Air Quality in Ireland 2019- Indicators of Air Quality; and*
- *Environmental Protection Agency (2019). Air Quality in Ireland 2018- Indicators of Air Quality.*

And replaced with:

- Environmental Protection Agency (2025). Air Quality in Ireland 2024- Indicators of Air Quality; and
- Environmental Protection Agency (2024). Air Quality in Ireland 2023- Indicators of Air Quality.

There are no other changes required to this section. Refer to Section 27.2.4 in Chapter 27 of the 2024 EIAR.

27.2.5 Assessment Methodology

There are no changes required to this section. Refer to Section 27.2.5 of Chapter 27 in the 2024 EIAR.

27.2.5.1 Overview

There are no changes required to this section. Refer to Section 27.2.5.1 of Chapter 27 in the 2024 EIAR.

27.2.5.2 Construction Traffic Significance Criteria

There are no changes required to this section. Refer to Section 27.2.5.2 of Chapter 27 in the 2024 EIAR.

27.2.5.3 Construction Phase Activities

There are no changes required to this section. Refer to Section 27.2.5.3 of Chapter 27 in the 2024 EIAR.

27.2.5.4 Operational Phase

There are no changes required to this section. Refer to Section 27.2.5.4 of Chapter 27 in the 2024 EIAR.

27.3 Baseline Environment

In accordance with RFI Section 1 (b), this section requires an update in relation to references to legislation, guidance and baseline air quality data issued after the publication of the 2024 EIAR.

Therefore, the following sentence from Section 27.3 in Chapter 27 of the 2024 EIAR is deleted:

"The site falls within Zones A, C and D. Background pollutant levels from 2022, 2021, 2020, 2019 and 2018 air quality monitoring of NO_2, NO_x, $PM_{2.5}$ and PM_{10} are listed for Zone A, C and D, as provided by the EPA, and are presented in Table 27.12 to Table 27.14."

And replaced with:

The site falls within Zones A, C and D. Background pollutant levels from 2024, 2023, 2022, 2021 and 2020 air quality monitoring of NO_2, NO_x, $PM_{2.5}$ and PM_{10} are listed for Zone A, C and D, as provided by the EPA, and are presented in Table A27.2 to Table A27.4.

Additionally, the following is deleted:

"This is in accordance 2008/50/EC which specifies that any site used for assessment purposes must comply with 90% data capture."

And replaced with:

This is in accordance with Directive (EC) 2024/2881 which specifies that any site used for assessment purposes must comply with 90% data capture.

Similarly, the following sentence from Section 27.3 in Chapter 27 of the 2024 EIAR is deleted:

"The most recent annual report on air quality, Air Quality in Ireland 2022 (EPA 2023) details the range and scope of monitoring undertaken throughout Ireland."

And replaced with:

The most recent annual report on air quality, Air Quality in Ireland 2024 (EPA 2025) details the range and scope of monitoring undertaken throughout Ireland.

In line with the above, Table 27.12, Table 27.13 and Table 27.14 are updated to include 2023 and 2024 data. For the purposes of clarity, Table 27.12, Table 27.13, and Table 27.14 from Chapter 27 of the 2024 EIAR shall be deleted in their entirety and replaced with Table A27.2,Table A27.3 and Table A27.4

Additionally, Table A27.5 will be added to present the estimated future background pollutant concentrations for each zone, in accordance with the TII Technical Document PE-ENV-01106 (2025), which was published after the publication of the 2024 EIAR.

Table A27.2 Annual Mean Background Pollutant Concentrations for Zone A (replaces Table 27.12)

Year	Annual Average NO_2 (µg/m³)	Annual Average PM_{10} (µg/m³)	Annual Average $PM_{2.5}$ (µg/m³)	Annual Average NO_x (µg/m³)
2030 Limit	**20 µg/m³**	**20 µg/m³**	**10 µg/m³**	**30 µg/m³**
2020	17.4	13.1	7.6	39.0
2021	20.4	12.7	7.7	39.2
2022	20.3	13.5	7.7	40.7
2023	20.2	12.3	6.8	42.3
2024	19.6	12.7	7.3	41.1
Maximum	20.4	13.5	7.7	42.3

Table A27.3 Annual Mean Background Pollutant Concentrations for Zone C (replaces Table 27.13)

Year	Annual Average NO_2 (µg/m³)	Annual Average PM_{10} (µg/m³)	Annual Average $PM_{2.5}$ (µg/m³)	Annual Average NO_x (µg/m³)
2030 Limit	20 µg/m³	20 µg/m³	10 µg/m³	30 µg/m³
2020	11.4	14.4	9.5	21.6
2021	11.6	13.1	8.8	22.7
2022	11.9	13.3	9.5	21.6
2023	10.7	11.8	7.7	21.1
2024	12.4	12.7	8.2	26.4
Maximum	12.4	14.4	9.5	26.4

Table A27.4 Annual Mean Background Pollutant Concentrations for Zone D (replaces Table 27.14)

Year	Annual Average NO_2 ($\mu g/m^3$)	Annual Average PM_{10} ($\mu g/m^3$)	Annual Average $PM_{2.5}$ ($\mu g/m^3$)	Annual Average NO_x ($\mu g/m^3$)
2030 Limit	20 **$\mu g/m^3$**	20 **$\mu g/m^3$**	10 **$\mu g/m^3$**	**30 $\mu g/m^3$**
2020	7.6	11.2	7.8	15.9
2021	7.5	11.9	8.7	14.2
2022	7.4	12.7	8.4	14
2023	6.9	10.7	7.1	12.0
2024	7.1	11.6	7.4	12.0
Maximum	7.6	12.7	8.7	15.9

Background pollutant concentration factors for future years from the TII Technical Document (2025), based on a baseline year of 2024 (most recent year with available background concentration data) and a projected future year of 2027 (earliest potential construction year), were applied. Additionally, in accordance with the TII Technical Document (2025), conservative scenario projection factors were adopted. Refer to Table A27.5 for factored background concentrations.

Table A27.5: Factored Background Pollutant Concentrations (based on TII future year factors)

Zone	Pollutant	Maximum Background Concentration ($\mu g/m^3$)	TII Projection Factor	Factored Background Concentration ($\mu g/m^3$)
Zone A	PM_{10}	13.5	0.970	13.1
	NO_2	20.4	0.916	18.7
Zone C	PM_{10}	14.4	0.966	13.9
	NO_2	12.4	0.918	11.4
Zone D	PM_{10}	12.7	0.967	12.3
	NO_2	7.6	0.899	6.8
Note 1: It should be noted that NO_x projection factors were applied to estimate corresponding NO_2 factored background concentrations.				

Additionally, the following is deleted:

"The background concentrations are within the air quality standards for all pollutants in Zone A, except for NO_x which exceeded its Air Quality limit."

And replaced with:

The factored future background concentrations are within the limits for all pollutants in all zones, except for NO_2 and NO_x which exceeded the respective 2030 limits as set out in Directive 2024/2881/EC in Zone A.

There are no other changes required to this section. Refer to Section 27.3 in Chapter 27 of the 2024 EIAR.

27.4 Characteristics of the Proposed Development

There are no changes required to this section. Refer to Section 27.4 of Chapter 27 in the 2024 EIAR.

27.5 Potential Effects

27.5.1 Do-Nothing Scenario

There are no changes to the introductory text in this section. Refer to Section 27.5.1 of Chapter 27 in the 2024 EIAR.

27.5.2 Construction Phase

27.5.2.1 Direct Effects

There are no changes required to this section. Refer to Section 27.5.2.1 of Chapter 27 in the 2024 EIAR. Therefore, the direct impact on air quality during the construction phase remains unchanged and, prior to mitigation, has the potential to be negative, significant, and short-term in proximity to the works.

27.5.2.2 Indirect effects

As noted above, new baseline traffic surveys have been undertaken in response to RFI Section 19 (c). The results of these surveys are presented in Section 24.3 of Chapter 24.

Updates to the traffic surveys has resulted in amendments to predicted construction traffic volumes as outlined in Chapter 24 of the 2024 EIAR. This has required the re-assessment of construction traffic-related air quality impacts. In addition, the AADT have been computed to account for the specific durations of the diversions, for example, where an increase in traffic arises over a 3-week period, the AADT is based on 3 weeks of increased traffic and 49 weeks of normal traffic volumes.

Additionally, a typographical error is corrected (distance to the nearest sensitive receptor on each affected link). It was stated that this distance was 10m from the road centre line rather than 6m. The more conservative distance of 6m was used in the modelling. However, this does not change the outcome of the overall assessment.

In line with the changes outlined above, Section 27.5.2.2 of Chapter 27 of the 2024 EIAR, including Table 27.18 to Table 27.20 is deleted and replaced in its entirety with the text below and Table A27.6 to A27.8.

The predicted change in concentrations of NO_2 and PM_{10}, due to the changes in construction phase traffic movements are presented in Table A27.6 at the nearest sensitive receptor on each affected link (assumed to be 6m from the road edge). Refer to Table 27.5 for impact rating criteria and Table 2.3 in Chapter 2, EIA and Methodology for the preparation of an EIAR, for the duration of effects description.

No links are projected to experience increases in total AADT of greater than 1,000. However, three links are projected to result in an increase of HDV of greater than 200 requiring detailed assessment.

Of these three links, the R132 Jordanstown and Lissenhall Road links are located within Air Quality Zone D and the R132 link is situated in Zone A. Therefore, Zone D and A factored background data is applied to calculate total predicted annual concentrations, respectively.

The predicted PM_{10} and NO_2 concentrations based on predicted construction traffic volumes for 2027 have been calculated incorporating projected background data corresponding to 2027 – the earliest potential construction year. Subsequently, predicted pollutant concentrations for 2027 are compared to 2030 limits as set out in Directive 2024/2881/EC as a conservative assessment. It should be noted that 2030 limits are more stringent than those limits likely to be applicable during the construction phase of the proposed development. Thus, a conservative approach is taken is taken in this assessment of compliance with limits. Refer to Table A27.6 for assessment results.

Table A27.6 Predicted change in AADT and associated change in NO_2 and PM_{10} concentrations (Replaces Table 27.18 of the 2024 EIAR)

Link	Predicted change in HDV	Pollutant	Predicted total annual conc. (µg/m³) including background		% total conc. relative to 2030 limit	% change in conc. relative to 2030 limit	Impact rating
			Without Development	With Development			
R132 Jordanstown	+592 (HDV)	NO_2	10.4	10.4	52.2	0.3	Neutral
		PM_{10}	17.4	17.6	88.0	1.2	Neutral
Lissenhall Road Overpass	+589 (HDV)	NO_2	10.4	10.4	52.2	0.3	Neutral
		PM_{10}	17.4	17.6	88.1	1.2	Neutral
R132	+480 (HDV)	NO_2	22.2	22.2	111.2	0.2	Moderate adverse
		PM_{10}	18.1	18.3	91.6	0.9	Neutral

Predicted PM_{10} concentrations at receptors at all links and predicted NO_2 concentrations at receptors at links R132 Jordanstown and Lissenhall Road Overpass are in compliance with 2030 limits. Based on the significance criteria outlined in Table 27.5, a neutral and short-term impact is predicted to occur at sensitive receptors due to construction phase traffic on those links.

Predicted NO_2 concentrations including background concentrations at the nearest sensitive receptor to link R132 exceed the 2030 limits as set out in Directive 2024/2881/EC. Based on significance criteria outlined in Table 27.5, there is a potential for a moderate adverse and short-term impact to occur at the nearest sensitive receptors due to additional construction phase traffic accessing this link. This is primarily due to the future elevated background NO_2 concentrations in Zone A, which exceed the 2030 limits. However, it should be noted that only a 0.2% increase in concentration relative to the 2030 limits is anticipated due to the additional construction traffic and this impact will be short-term in nature.

The Rogerstown SAC and pNHA are located in proximity to the R132 and the Malahide Estuary SAC, SPA and pNHA are located in proximity to the R132 Jordanstown link. The nearest air quality monitoring station to both sites is situated in Swords. Thus, the maximum background concentration of NO_X from the last five years in Swords is considered most representative of the baseline air quality at the sites and is used to calculate the factored background pollutant concentrations and total predicted concentrations of NO_x, refer to Table A27.7

Table A27.7 Predicted change in traffic and associated change in NO_x concentrations (Replaces Table 27.19 of the 2024 EIAR)

Site	Link(s)	Predicted change in AADT and HDV	Factored Max. Back. NO_x annual conc. (µg/m³)	Predicted total annual conc. (µg/m³) including background		% total conc. relative to 2030 limit	% change in conc. relative to 2030 limit	Impact rating
				Without Dev.	With Dev.			
Rogerstown Estuary SAC and pNHA (Site code 000208)	R132 Jordans-town (Junction 16)	+592 (HDV) +862 (total AADT)	16.3	22.9	23.0	76.6	0.4	Neutral
Malahide Estuary SAC and pNHA (Site code 000205) Malahide Estuary SPA (Site code 004025)	R132 (Junction 15)	+480 (HDV) +710 (total AADT)	16.3	16.4	16.4	54.7	0.03	Neutral

Based on the significance criteria outlined in Table 27.5, there is a potential for neutral and short-term effects at the most affected ecological sites. Due to the minimal change in nitrogen oxides concentrations at the affected ecological sites, no further assessment of ammonia or nitrogen deposition is required.

A number of strategic and local road diversions will occur during the construction phase as a result of road closures to accommodate works. These diversions will be temporary in nature and managed on a rolling basis, typically limited to periods of several weeks at a time. Thus, the assessment is limited to those routes experiencing the maximum total AADT and maximum change in AADT (Table A27.8), as these are considered to represent the worst-case potential temporary impacts.

For the purposes of the local and strategic diversion route assessment, the AADT values were derived using an alternative methodology to reflect the temporary nature of the diversions. For each diversion route, the predicted increase in AADT resulting from diverted traffic onto the link was multiplied by the anticipated duration of the diversion and averaged across the calendar year. This approach ensures the assessment reflects the temporary use of the diversion routes while remaining consistent with annual-based metrics.

The R132 (local diversion – Route Section 10.1) and the R139 (strategic diversion – Route Section 12) links are predicted to experience the highest total AADT among all links affected by diversions. The Colecot (local diversion – Route Section 5) and Mantua Road (strategic diversion – Route Section 10.2) links are expected to experience the highest change in AADT among all diversion links as a result of construction traffic. Refer to Appendix 24.1 of Chapter 24 for the locations of these diversion routes.

The associated predicted change in pollutant concentrations as a result of construction of the proposed development are outlined in Table A27.8 The impact rating is determined based on criteria provided in Table 27.5.

Table A27.8 Assessment of diversion routes and associated change in pollutant concentrations (Replaces Table 27.20 of the 2024 EIAR)

Link	Predicted maximum total AADT / change in AADT	Pollutant	Predicted total annual conc. (µg/m^3) including background		% total conc. relative to 2030 limit	% change in conc. relative to 2030 limit	Impact rating
			Without Development	With Development			
Assessment of Local Diversion Routes							
R132 (Route Section 10.1)	Maximum Total AADT: 32,344	NO_2	22.1	22.1	110.7	0.05	Moderate adverse
		PM_{10}	18.0	18.0	89.9	0.1	Neutral
Colecot (Route Section 5)	Maximum Change in Total AADT: +156.5%	NO_2	6.9	6.9	34.6	0.2	Neutral
		PM_{10}	12.4	12.4	62.0	0.2	Neutral
Assessment of Strategic Diversion							
R139 (Route Section 12)	Maximum Total AADT: 53,423	NO_2	22.9	22.9	114.5	0.2	Moderate adverse
		PM_{10}	19.2	19.2	96.1	0.2	Slight adverse
Mantua Road (Route Section 10.2)	Maximum Change in Total AADT: +113%	NO_2	19.4	19.5	97.5	0.5	Slight adverse
		PM_{10}	14.1	14.2	70.9	0.6	Slight adverse

Based on significance criteria outlined in Table 27.5, there is a potential for a maximum impact rating of Slight Adverse and temporary on PM_{10} concentrations to occur at the most affected receptors. Additionally, based on significance criteria outlined in Table 27.5, there is a potential for a maximum impact of Moderate Adverse and temporary on NO_2 concentrations at the most affected receptors.

It should be noted that a Moderate Adverse impact on NO_2 concentrations predicted at receptors on the R132 (Route Section 10.1) and R139 (Route Section 12) links is primarily due to the elevated background NO_2 concentrations in Zone A, which exceed the 2030 limits.

Refer to Section 24.5 of Chapter 24 Traffic and Transportation, for further details on potential traffic impacts.

27.5.3 Operational Phase

27.5.3.1 Direct Effects

There are no changes required to this section. Refer to Section 27.5.3.1 of Chapter 27 in the 2024 EIAR. Therefore, the direct effect remains unchanged, and the proposed development will have a positive, moderate, and long-term impact on air quality during the operational phase.

27.5.3.2 Indirect Effects

There are no changes required to this section. Refer to Section 27.5.3.2 of Chapter 27 in the 2024 EIAR. Therefore, the indirect effect remains unchanged with no indirect adverse air quality effects predicted during the operational phase.

27.5.4 Decommissioning

There are no changes required to this section. Refer to Section 27.5.4 of Chapter 27 in the 2024 EIAR. Therefore, the potential impact remains unchanged prior to mitigation, with a negative, slight and short-term impact expected in proximity to the works.

27.6 Mitigation and Monitoring Measures

There are no changes to the introductory text in this section. Refer to Section 27.6 of Chapter 27 in the 2024 EIAR. However, the Developer has identified an administrative error in the 2024 EIAR which did not include section numbering for Operational and Decommissioning Phase mitigation and monitoring measures. Therefore, the sections below have been corrected with the correct numbering for ease of reference.

27.6.1 Construction Phase

The change required in this section is to include reference to construction traffic mitigation measures to mitigate against the moderate adverse impact identified in the updated assessment in Section 27.5.2.2.

Additionally, the following mitigation measure relating to construction traffic is added:

A Construction Traffic Management Plan (CTMP) will be developed to mitigate potential construction traffic impacts. This will also have the effect of reducing air quality impacts. Refer to Chapter 24, Traffic and Transportation and Appendix A of Appendix A9.1 for further details.

27.6.2 Operational Phase

There are no changes required to this section. Refer to Section 27.6.2 of Chapter 27 of the 2024 EIAR.

27.6.3 Decommissioning

There are no changes required to this section. Refer to Section 27.6.3 of Chapter 27 of the 2024 EIAR.

27.7 Residual Effects

There are no changes required to the introductory text in this section. Refer to Section 27.7 of Chapter 27 in the 2024 EIAR.

27.7.1 Construction Phase

There are no changes required to this section. Refer to Section 27.7.1 of Chapter 27 of the 2024 EIAR.

Therefore, the residual construction phase effects remain unchanged from the 2024 EIAR and are negative, slight to moderate and temporary.

27.7.2 Operational Phase

There are no changes required to this section. Refer to Section 27.7.2 of Chapter 27 in the 2024 EIAR.

Therefore, the residual operational phase effects remain unchanged from the 2024 EIAR and are positive, moderate and permanent.

27.7.3 Decommissioning

There are no changes required to this section. Refer to Section 27.7.3 of Chapter 27 in the 2024 EIAR. Therefore, the residual decommissioning phase effects remain unchanged from the 2024 EIAR which is that there are no significant effects to air quality expected during decommissioning.

27.8 Transboundary Effects

There are no changes required to this section. Refer to Section 27.8 of Chapter 27 in the 2024 EIAR.

27.9 Cumulative Effects

The Cumulative Effects Assessment (CEA) is presented in Volume 6, Chapter 38: Cumulative and Inter-Related Effects. In response to RFI Section 5, the CEA has been updated to align with the UK Guidance document *Nationally Strategic Infrastructure Projects (NSIP) Advice on Cumulative Effects Assessment*. However, it should be noted that the overall conclusions of the CEA from an air quality perspective remain unchanged from the 2024 EIAR (as stated below).

Therefore, the entirety of Section 27.9 of Chapter 27 of the 2024 EIAR shall be deleted and replaced with the text herein:

A long list of "other existing and/or approved developments" which were deemed to be potentially relevant for inclusion in the cumulative impact assessment was compiled (refer to Volume 6, Chapter 38: Cumulative and Inter-related Effects (hereafter referred to as 'Chapter 38')). A screening exercise of the "long list" was carried out in order to determine whether each of those "other existing and/or approved developments" has the potential to give rise to likely significant cumulative effects with the proposed development from an air quality perspective. Many of the "other existing and/or approved developments" were screened out for a number of reasons including their location, scale and nature of the project. Those projects which were "screened in" were carried forward for assessment. The results of the assessment are presented in Section 38.2.3.18 of Chapter 38.

The assessment concluded that following the implementation of mitigation measures, no significant adverse residual cumulative effects are anticipated during construction, operation or decommissioning of the proposed development.

Cumulatively with other identified renewable energy projects, a positive and long-term impact is anticipated during the operational phase on air quality due to the reduction in pollution from non-renewable power generation.

27.10 References

The change required to this section is the addition of references used in the updating of Chapter 27 of the 2024 EIAR.

Therefore, the following additional references are added:

EPA (2024) Air Quality in Ireland 2023.

EPA (2025) Air Quality in Ireland 2024.

EPA (2025) Air Quality Guidance Note 4. Available at: Technical Report template, embedded Dublin.

TII (2025) Air Quality Assessment of Proposed National Roads – Standard [PE-ENV-01107].

TII (2025) Air Quality Assessment of Specified Infrastructure Projects – Overarching Technical Document [PE-ENV-01106].

There are no other changes required to this section. Refer to Section 27.10 in Chapter 27 of the 2024 EIAR for the complete list of references pertaining to the chapter.