

From: [PMO](#)
To: [Wylfa Newydd](#)
Subject: RE: IACC Deadline 2 Submission : Local Impact Report - Air Quality (email 21)
Date: 04 December 2018 20:13:55
Attachments: [image001.png](#)
[image002.png](#)
[image003.png](#)
[Air Quality.pdf](#)

Please note, a number of emails will follow in relation to the LIR – we will confirm the final e-mail.

Pnawn Da/ *Good afternoon,*

Gweler ynghlwm cynrychiolaeth CSYM mewn perthynas â'r uchod / *Please see IACC's representation in respect of the above.*

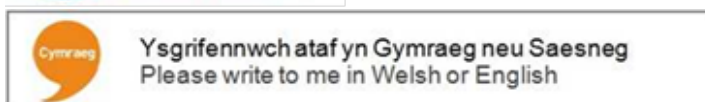
Bydd fersiwn Gymraeg yn cael ei ddarparu cyn gynted a phosib / *A Welsh version of the submission will be provided in due course.*

Cofion/ *Regards,*
Manon

Swyddfa Rhaglen Ynys Ynni /
Energy Island Programme Office
01248 752435 / 2431
PMO@ynymon.gov.uk



www.ynysynnimon.co.uk / www.angleseyenergyisland.co.uk



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Mae'r neges e-bost hon a'r ffeiliau a drosglwyddyd ynghlwm gyda hi yn gyfrinachol ac efallai bod breintiau cyfreithiol ynghlwm wrthynt. Yr unig berson sydd i'r hawl i'w darllen, eu copio a'u defnyddio yw'r person y bwriadwyd eu gyrru nhw ato. Petaech wedi derbyn y neges e-bost hon mewn camgymeriad yna, os gwelwch yn dda, rhowch wybod i'r Rheolwr Systemau yn syth gan ddefnyddio'r manylion isod, a pheidiwch datgelu na chopio'r cynnwys i neb arall.

Mae cynnwys y neges e-bost hon yn cynrychioli sylwadau'r gyrrwr yn unig ac nid o angenrheidrwydd yn cynrychioli sylwadau Cyngor Sir Ynys Môn. Mae Cyngor Sir Ynys Môn yn cadw a diogelu ei hawliau i fonitro yr holl negeseuon e-bost trwy ei rwydweithiau mewnol ac allanol.

Croeso i chi ddelio gyda'r Cyngor yn Gymraeg neu'n Saesneg. Cewch yr un safon o wasanaeth yn y ddwy iaith.

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Ynys Môn

THE ISLE OF Anglesey

Wylfa Newydd Local Impact Report

Chapter 13: Air Quality

December 2018

PINS Ref: EN010007



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1.0 Air Quality

1.1 Context

1.1.1 This LIR chapter identifies the potential impacts from the construction, operation and decommissioning of the Wylfa Newydd Project on local air quality, including dust and odour. The IACC confirms that this chapter will mainly give consideration to the potential air quality and dust effects on the human receptors which include residential properties, schools, care homes, recreational areas and Public Rights of Way including footpaths. In terms of advising on impacts on habitats and ecosystems we would refer the Examining Authority to the comments and representations of Natural Resources Wales (NRW).

1.1.2 The assessment of impacts on air quality has been published by Horizon in the following DCO application documentation which the IACC has reviewed:

- a) 6.2.5 ES Volume B – Introduction to the environmental assessments B5 Air Quality¹
- b) 6.2.18 ES Volume B – Introduction to the environmental assessments App B5-1 – Baseline Data Synopsis Report – air quality²
- c) 6.3.4 ES Volume C - Project-wide effects C4 - Air quality effects of traffic³
- d) 6.4.5 ES Volume D - WNDA Development D5 - Air quality (excluding emissions from traffic)⁴
- e) 6.4.21 ES Volume D - WNDA Development App D5-2 - Main Site Construction Phase Air Dispersion EIA - Final Modelling Report (Air Quality)⁵
- f) 6.4.22 ES Volume D - WNDA Development App D5-3 - Main Site Operational Dispersion - EIA - Dispersion Modelling Report of the Emissions to Air Arising from Operational Combustion Plant (Scenarios to Support DCO Application)⁶
- g) 6.5.5 ES Volume E - Off-Site Power Station Facilities: AECC ESL and MEEG E5 - Air quality⁷
- h) 6.6.5 ES Volume F - Park and Ride F5 - Air quality⁸
- i) 6.7.5 ES Volume G - A5025 Off-line Highway Improvements G5 - Air quality⁹
- j) 6.8.5 ES Volume H – Logistics Centre H - Air Quality¹⁰
- k) 6.9.10 ES Volume I - Cumulative effects App I4-2 - Project-wide and WNDA Development intra-project air quality assessment¹¹

1.1.3 The air quality assessment also has linkages with other chapters included in the IACC's Local Impact Report, which should also be referred to, including but not limited to historic environment.

¹ Examination Library Reference APP-070

² Examination Library Reference APP-083

³ Examination Library Reference APP-091

⁴ Examination Library Reference APP-124

⁵ Examination Library Reference APP-140

⁶ Examination Library Reference APP-141

⁷ Examination Library Reference APP-243

⁸ Examination Library Reference APP-270

⁹ Examination Library Reference APP-308

¹⁰ Examination Library Reference APP-359

¹¹ Examination Library Reference APP-394

1.1.4 As confirmed by ES Chapter B5 – Introduction to the environmental assessments – Air Quality¹², the potential emission sources of air pollutants and dust associated with the construction of the Power Station, Off-Site Power Station Facilities and Associated Development include:

- a) Dust emissions generated by demolition, earthworks and construction related Activities. Main construction also includes emissions associated with the construction and operation of the Marine Off-Loading Facility and other marine structures.
- b) Emissions of odours from the excavation and remediation of areas containing ground contamination at the Wylfa Newydd Development Area (WNDA) and Off-Site Power Station Facilities only.
- c) Emissions of odours from the existing sewage treatment works and from a proposed package sewage treatment plant (WNDA only).
- d) Emissions of pollutants to air from construction plant, machinery (primarily non-road mobile machinery) and marine vessels.
- e) Emissions of pollutants from road vehicles (e.g. cars, vans, buses and lorries) travelling on the local road network.

1.1.5 The potential sources of air pollutants associated with the operation of the Power Station, Off-Site Power Station Facilities and Associated Development include:

- a) emissions of pollutants from the operation of combustion plant such as standby generators and steam-raising boilers; and
- b) emissions of pollutants from road vehicles travelling on the local road network.

1.1.6 The potential sources of air pollutants and dust associated with the decommissioning of the Power Station, Off-Site Power Station Facilities and Associated Developments are emissions of dust generated from decommissioning activities, including demolition of buildings and earthworks, and emissions of pollutants from plant, machinery, marine vessels and road vehicles.

1.1.7 As confirmed in paragraph 5.1.6 of ES Volume B – Introduction to the environmental assessments B5, the main air pollutants arising from the above are oxides of nitrogen (NO_x), nitrogen dioxide (NO₂), carbon monoxide (CO), sulphur dioxide (SO₂) and particulate matter to include PM₁₀ and PM_{2.5} (particulate matter with an aerodynamic diameter of 10 microns or less and 2.5 microns or less, respectively). The assessment also includes potential releases of odorous substances which may cause annoyance.

1.1.8 Paragraph 5.1.7 goes on to confirm that the term ‘dust’ refers to all particulate matter including all solid particles suspended in air, or settled and deposited onto a surface after having been suspended in air, due to activities related to construction. This includes the smaller-sized particles associated with potential health effects (i.e. PM₁₀ and PM_{2.5}), and larger particles associated with causing annoyance or affecting sensitive vegetation through deposition onto a surface.

¹² Examination Library Reference APP-070

- 1.1.9 The World Health Organisation Guidelines for particulate matter, ozone, nitrogen dioxide and sulphur dioxide (Global update 2005) begins with the statement: *“Clean air is considered to be a basic requirement of human health and well-being. However, air pollution continues to pose a significant threat to health worldwide.”*¹³
- 1.1.10 A duty is placed upon all Welsh Local Authorities to ensure that The Air Quality Standards (Wales) Regulations 2010 (thus implementing Directive 2008/50/EC on ambient air quality for Europe)¹⁴ are implemented and adhered too. These regulations detail specific target values for known pollutants such as sulphur dioxide, nitrogen dioxide, benzene, carbon monoxide, lead, PM₁₀ and PM_{2.5} amongst others.
- 1.1.11 In terms of Health and Wellbeing, the Well-being of Future Generations (Wales) Act 2015¹⁵ embraces the environment within its seven Well-being goals. Therefore, any negative moderate or major adverse impacts regarding air quality will adversely affect the well-being objectives for Ynys Môn.
- 1.1.12 In terms of existing air quality on Anglesey, as part of the Local Air Quality Management (LAQM) process, the IACC undertakes an annual review of air quality in its area which includes measuring key pollutants such as nitrogen dioxide (NO₂), and particulate matter (PM₁₀ and PM_{2.5}) to determine whether the Air Quality Objectives (AQOs) for a number of pollutants will be achieved.
- 1.1.13 As confirmed in paragraph 5.3.17 of Horizon document 6.4.5 – Air Quality (excluding emissions from traffic)¹⁶, the review of the IACC Local Air Quality Monitoring (LAQM) reports and other data by Horizon has confirmed that concentrations of air pollutants at locations representative of relevant long-term exposure locations, such as residential properties, are well within the annual mean Air Quality Objective (AQO) (although concentrations of NO₂ are elevated in very close proximity to the A55).
- 1.1.14 The IACC has not declared any Air Quality Management Areas and no detailed assessments are currently required as part of the LAQM process. Through the LAQM process, the IACC has not identified any relevant exposure areas where the AQOs are exceeded, or could potentially be exceeded in the vicinity of the WNDA, or across the island.
- 1.1.15 Figure 1 below gives an indication of the reported concentration levels of nitrogen dioxide. It is clearly evident that Anglesey and the North Wales regions all have low background concentrations of Nitrogen Dioxide.

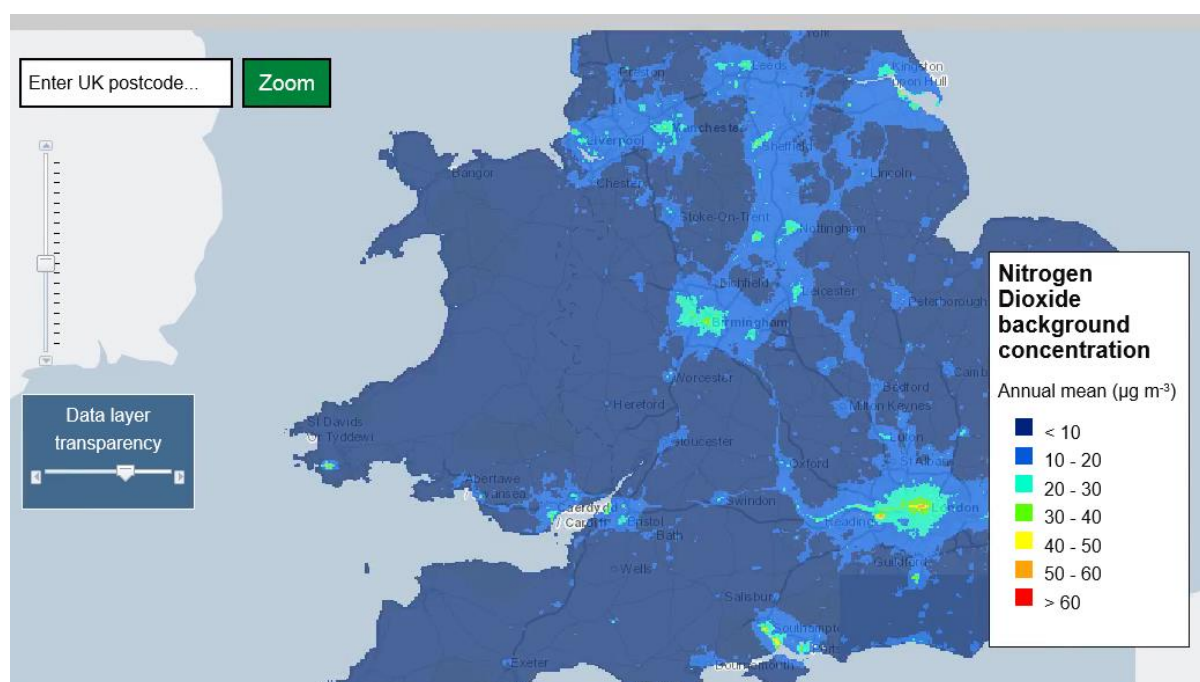
¹³ WHO Air quality guidelines for particulate matter, ozone, nitrogen dioxide and sulfur dioxide *Global update 2005 Summary of risk assessment* ([Link](#))

¹⁴ The Air Quality Standards (Wales) Regulations 2010 ([Link](#))

¹⁵ Well Being of Future Generations (Wales) Act 2015 ([Link](#))

¹⁶ Examination Library Reference APP-124

Figure 1 - Annual mean concentrations of NO₂ expressed as µg⁻³ in 2015



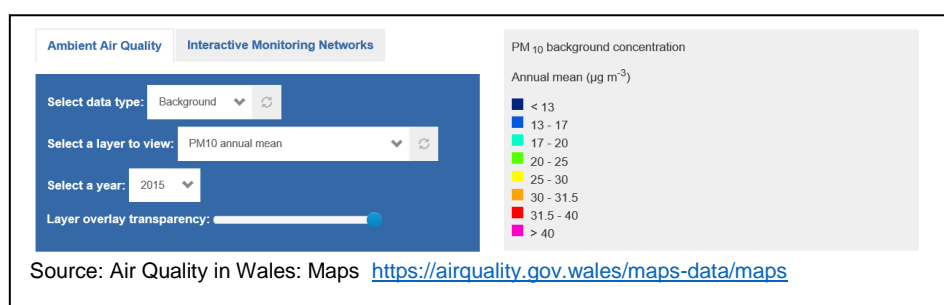
(Source <https://uk-air.defra.gov.uk/data/gis-mapping>) ¹⁷

1.1.16 Figure 2 below indicates that the PM₁₀ levels are below 13 µg/m³ upon Anglesey. The 2015 progress report stated that the results from monitoring equipment have consistently been below the Welsh Government's 24 hour mean objective of 50µg/m⁻³ (not exceeded on more than 35 days per year) and the annual mean of 40µg/m⁻³.¹⁸

¹⁷ DEFRA Background Mapping data for local authorities – 2015 ([Link](#))

¹⁸ National air quality objectives contained in the Air Quality (Wales) Regulations 2000, as amended by the Air Quality (Wales) (Amendment) Regulations 2002 ([Link](#))

Figure 2 Annual mean concentrations of Particulate Matter (PM₁₀) expressed as $\mu\text{g}/\text{m}^3$ for 2015¹⁹



1.1.17 In order to further characterise the environmental baseline, an air quality monitoring survey was initiated by Horizon, with the IACC in February 2016. The survey focused on NO₂ and comprised diffusion measurements in locations in the vicinity of the WNDA as confirmed in Table D5-3 of Horizon document 6.4.5 – Air Quality. The data confirmed that the measured annual mean concentrations are well within the annual mean AQO of 40 $\mu\text{g}/\text{m}^3$.

1.1.18 The IACC as confirmed by paragraph 5.3.21 of Horizon document 6.4.5 – Air Quality²⁰ has undertaken measurements of PM₁₀ and PM_{2.5} at the WNDA between March 2013 and January 2014 and at Felin Cafnan, a location adjacent the WNDA in 2016. As confirmed in paragraph 5.3.22 of the same

¹⁹ Source: Air Quality in Wales: Maps (Link)

²⁰ Examination Library Reference APP-124

document, the measured concentrations are well within the relevant annual mean AQOs for both PM₁₀ and PM_{2.5} at the WNDA.

- 1.1.19 As confirmed in paragraph 5.3.38 of Horizon document 6.4.5 – Air Quality, in the absence of the Wylfa Newydd project, it is likely that future baseline concentrations of PM₁₀ and PM_{2.5} would continue to decrease slightly, or stabilise at the existing concentrations. Over the long term, it is likely that the concentrations of NO₂ at roadside locations would decrease as the proportion of newer Euro 6/VI and other low or zero emission vehicles (e.g. electric vehicles) on the road increased, replacing older vehicles with higher emissions.
- 1.1.20 Dust deposition measurements recorded in the vicinity of the WNDA are representative of the relatively low levels found in rural, open country locations, and these would be broadly representative of the dust deposition in most rural locations on Anglesey which are not close to specific sources of dust.

2.0 Impacts and Evidence Base

- 2.1 The following section sets out the impacts which have been identified by the IACC. The need to sustain and improve the overall health and well-being of the communities within the immediate vicinity of the main site during construction of the Wylfa Newydd Project is a key issue.
- 2.2 The IACC considers that there are unlikely to be any positive impacts in relation to air quality arising from the construction, operation and decommissioning of the Wylfa Newydd Project.
- 2.3 Horizon confirms that with the mitigation measures applied as specified in the air quality management strategies included in the Wylfa Newydd CoCP²¹ and Main Power Station site sub- CoCP²² that the likely dust emissions on human health and amenity during construction is concluded to be not significant. The IACC cannot currently agree with this conclusion as the air quality management strategies are lacking in detail.
- 2.4 As confirmed in ES Chapter B5²³, IACC has consistently raised concerns regarding potential increases from the project on PM_{2.5} concentrations and the use by Horizon in its assessments of the annual averaged air quality objective of 25µg/m³ as the assessment criteria
- 2.5 Welsh Government's 'StatWales' confirmed an annual averaged PM_{2.5} level of 5µg/m³ for Anglesey in 2016 – and this was the lowest level in Wales during this year²⁴. This is also considerably lower than the annual averaged WHO guideline value of 10µg/m³, and significantly lower than the annual averaged Air Quality Standards (Wales) Regulations 2010 of 25µg/m³.

²¹ Examination Library Reference APP-414

²² Examination Library Reference APP-415

²³ Examination Library Reference APP-070

²⁴ Air Quality Indicators by Local Authority 2016, StatWales, Welsh Government ([Link](#))

- 2.6 Horizon's Air Quality ES Chapter B5 recognises that national air quality policy guidance refers to a growing body of research²⁵ ²⁶suggesting that NO₂ and particulates such as PM_{2.5}, are closely associated with health impacts, and that there is a lack of evidence to indicate that there is a concentration below which health impacts do not occur.
- 2.7 The Health Impact Assessment Report²⁷ also raises concern over the potential for health effects due to increases in NO₂ and particulate (PM_{2.5} and PM₁₀) concentrations, which considers the non-threshold effects of these pollutants.
- 2.8 The Local Air Quality Management in Wales Policy Guidance describes that NO₂ and particulates (PM_{2.5} and PM₁₀) currently have no safe threshold defined and the lower concentration of these pollutants the lower the risks of adverse health effects. It states *"Therefore, while compliance with the national air quality objectives is essential, it is desirable to keep levels of pollution as low as reasonable practicable."* and emphasises that *"Local Authorities are expected to work towards reducing emissions and concentrations of PM_{2.5} in their local area as practicable"*.²⁸
- 2.9 ES Chapter B5 – Air Quality confirms at paragraph 5.4.135 that *'In line with the accepted air quality assessment guidance [RD11] [RD12], the air quality assessment, and determination of significance, was based on compliance with the AQOs as these represent the current legislative position on health risks associated with air pollution in Wales. To acknowledge that there are potential health risks associated with concentrations of NO₂, PM_{2.5} and PM₁₀ below the AQO concentrations, the predicted changes in air quality due to activities associated with the Wylfa Newydd Project have also been assessed as part of the Health Impact Assessment Report (Application Reference Number: 8.19). Consideration of the potential health risks, particularly those associated with emissions of dust and particulates (PM_{2.5} and PM₁₀), are also taken into account in the proposed mitigation as set out in the Wylfa Newydd CoCP (Application Reference Number: 8.6) and sub -CoCPs (Application Reference Numbers: 8.7 to 8.12) with the aim of keeping concentrations of these pollutants to as low a level as is reasonably practicable (in line with the aim of the policy guidance [RD8])'*.
- 2.10 The IACC acknowledges the proposed good practice mitigation included in the Wylfa Newydd CoCP and sub Co-Cps that is intended to keep concentrations of these pollutants, including PM_{2.5}, to as low a level as is reasonably practicable, which accords with the LAQM policy guidance. The mitigation includes commitment to undertake continuous monitoring and the setting of appropriate alert thresholds and mechanisms for identifying areas or activities emitting particulates and taking further action to prevent or reduce emissions.
- 2.11 The IACC requests that Horizon adopts the annual averaged World Health Organisation (WHO) Guideline Value of 10µg/m³ as a threshold for monitoring

²⁵ Part IV of the Environment Act 1995, Local air quality management in Wales, Policy guidance, PG(W)(17), [\(Link\)](#)

²⁶ Local Air Quality Management Policy Guidance (PG16). April 2016 Defra: London. [\(Link\)](#)

²⁷ Examination Library Reference App-429

²⁸ Local Air Quality Management Policy Guidance (PG16). April 2016 Defra: London. [\(Link\)](#)

exceedance of PM_{2.5} levels. This is to ensure that PM_{2.5} levels are kept as low as reasonable practicable in order to comply with the vision of the latest Welsh policy guidance.

- 2.12 The IACC propose that monitoring is undertaken throughout the construction period and where levels in the vicinity of Wylfa Newydd exceed the World Health Organisation annual mean of 10µg/m³ for PM_{2.5}, then the IACC and Horizon would firstly jointly investigate the cause of that exceedance. Where Horizon's activities are considered to have contributed to the exceedance, Horizon shall then prepare an action plan setting out all reasonable actions which could be taken to reduce PM_{2.5} emissions and implement those. Where monitoring following implementation of the action plan shows continuing exceedances, then the action plan would be reviewed to see if additional or alternative actions can be identified. Reviews would be required no more frequently than once per annum.
- 2.13 IACC has advised that consideration be given within the assessment of road traffic emissions to relevant short-term exposure locations close to the A55. Road traffic on the A55 is expected to increase as it forms part of the project's prioritised route. Following advice from the IACC, a layby on the A55 at Llanfairpwll was included as a receptor within Horizon's air quality assessment.
- 2.14 As confirmed in the ES, Chapter B5, NO₂ concentrations have shown a general decline since 2010, which could be linked to decrease in traffic flows on the A55, which have been decreasing since 2007.
- 2.15 As confirmed in ES Volume C4 Air Quality effects of traffic, the IACC has measured annual mean NO₂ concentrations of 39.7µg/m³ at a layby off the A55 at Llanfair Pwllgwyngyll in 2016 (close to receptor R36). The predicted future baseline concentration at the edge of the layby closest to the A55 carriageway in 2020 is 39.4µg/m³, and this is predicted to increase to 40.8µg/m³ due to the Wylfa Newydd Project road traffic emissions (R36). Horizon's Assessment states that these values are considerably lower than the empirically derived value of 60µg/m³ and have therefore concluded that an exceedance of the one-hour mean AQO is very unlikely.
- 2.16 IACC is requesting that Horizon commits to the installation of monitoring systems at the layby location (monitoring location A15) to allow the one hour mean AQO for NO₂ be monitored in real-time for exceedances as a result of additional traffic. The IACC will use these monitoring results in considering whether measures need to be implemented in this location as part of its ongoing air quality responsibilities. The IACC proposes that this monitoring is undertaken by AQ Mesh type of monitoring device. Such monitoring data can be made available in near-real time. Diffusion tubes, providing a robust measure of monthly means, should be collocated with the AQ Meshes.
- 2.17 Horizon's air quality assessments also confirm that measurements undertaken at a layby location very close to the kerbside of the A55 (east bound carriageway) to the southeast of the Britannia Bridge indicate that annual mean concentrations

could exceed $60\mu\text{g}/\text{m}^3$ (ES Vol.C)²⁹. On this basis, there is the possibility that the one-hour mean AQO value of $200\mu\text{g}/\text{m}^3$ could be exceeded more than the permitted 18 times in the year at this short-term exposure location. The ES confirms that a further consultation meeting with Gwynedd Council is planned to review the full monitoring dataset once 12 months of data have been recorded and to agree further monitoring and assessment work. The IACC would wish to ensure that the monitoring proposals for each layby location is consistent including use of monitoring equipment and requires confirmation of the details.

- 2.18 During the initial period of earthworks and Marine works (year 1 to Year 2), as represented by the Year 2 earthworks and Marine works scenario, the risk of significant effects is based on predicted concentrations of NO_2 at individual receptors, and additional mitigation is proposed to directly address the identified effect, identified in section 5.6 of 6.4.5 ES D5 Air Quality which includes that a comprehensive air quality management, monitoring and reporting scheme would be developed by Horizon in discussion with IACC and NRW, including agreement of thresholds and additional achievement criteria to ensure compliance with the appropriate environmental standards. It is confirmed that this would include additional modelling and assessment where required.
- 2.19 The IACC acknowledges that brief detail of the proposed monitoring strategy is included within the Main Power Station Site sub-CoCP Doc Ref. IACC requires further detail to be set out in the CoCP and sub CoCPs with regards to the detail of the monitoring strategy including further details of the following:
- a) Further detail of the real-time we-based environmental system including data management and access
 - b) The proposed location of monitoring equipment for PM_{10} , $\text{PM}_{2.5}$, NO_x , NO_2 and dust deposition
 - c) Confirmation of the thresholds and exceedance trigger levels for dust, NO_2 , NO_x , $\text{PM}_{2.5}$ and PM_{10} , and frequency of reporting (including amber and red trigger levels)
 - d) The process of investigating trigger exceedance and how this will be reported to the IACC
 - e) Further detail of the process of receiving, investigating and responding to complaints
 - f) Further detail of the proposed Community Liaison Groups including frequency of meetings. The IACC considers that these meetings should be monthly until First Nuclear Concrete
- 2.20 During SoCG meetings the IACC have discussed the above detail with Horizon and requested that it is detailed in updated versions of the Wylfa Newydd CoCP and sub CoCPS and submitted into the examination process.
- 2.21 In addition during SoCG meetings the IACC have commented on Horizon's additional mitigation proposals that include a commitment to use a higher percentage of newer construction plant that conform to stricter emissions requirements. The IACC has requested that this additional mitigation to be

²⁹ Wylfa Newydd Project 6.3.4 ES Volume C - Project-wide effects C4 - Air quality effects of traffic
Examination Library Reference APP-091

detailed in updated versions of the CoCPs and sub CoCPS and submitted into the examination process.

- 2.22 The IACC has requested that the Community Liaison Group meets on a monthly basis rather than quarterly as proposed by Horizon from commencement of site activities up to when First Nuclear concrete is poured, which is the period when effects from air quality and noise are most likely to be significant. The IACC considers that this is the forum to ensure that the local community is kept fully up to date of the site activities including having an understanding of planned works and to be informed of any activities that will potentially affect their daily life and routines.
- 2.23 A separate Air Quality Management Strategy will need to be agreed for the decommissioning stage which would include relevant good practice measures and guidelines that would be applicable at the time of decommissioning.
- 2.24 The results from monitoring of dust deposition will be retrospective (due to the time taken to sample (one month) and obtain results from the laboratory). Dust deposited on the gauge could have occurred from between approximately two and six weeks earlier. Horizon feels the dust thresholds should be set off the rural 'open country' level from Vallack & Shillito rather than lower trigger values suggested by the IACC. Therefore, owing to this time delay in dust deposition monitoring and reporting, it shall be expected that Horizon shall implement a web based environmental monitoring system at several locations surrounding the WNDA that shall provide real-time data to overcome this retrospective monitoring. Such data shall be made available to the IACC upon request and web-based access shall be provided to the IACC to enable regulatory monitoring for exceedances of any such air quality standards associated with this development.

3.0 Policy Position

- 3.1 Criterion 1 of Policy PS 9 Wylfa Newydd and related development, which is the overarching Policy for the Wylfa Newydd Project, expects the proposal to be shaped by any relevant Policies in the Plan and any relevant supplementary planning guidance.
- 3.2 Based on the issues raised in this Chapter of the LIR, the requirements set out in criteria 8, 13 and 16 of Policy PS 9 are of particular relevance:
- 3.3 Criterion 8 expects the scheme's layout and design to avoid, minimize, mitigate or compensate for a range of impacts on the local and wider area, in the short and longer term. The range of impacts includes ecological impacts.
- 3.4 Criterion 13 sets out an expectation that communities are compensated for the burden and disturbance imposed on them by hosting the project.
- 3.5 Criterion 16 sets out an expectation that the developer provides a review mechanism in order to monitor the full range of impacts, to review the adequacy of mitigation or compensation measures and to make adjustments as necessary.

- 3.6 In light of the issues raised in this Chapter of the LIR, the requirements of the following Policies need to be considered:
- a) Criterion 7 of Policy PCYFF 2, which sets out the presumption against development that would have an unacceptable adverse impact on the health, safety or amenity of occupiers of local residences, other land and property uses or characteristics of the locality due to increased activity, disturbance, vibration, noise, dust, fumes, litter, drainage, light pollution, or other forms of pollution or nuisance.
 - b) Policy ISA 1 Infrastructure provision sets out an expectation that a financial contribution would be made to secure improvements (subject to the relevant tests), including related works, where they are necessary to make proposals acceptable.
 - c) The SPG provides detailed advice about the application of Policies in the JLDP in relation to the Wylfa Newydd project. The following objective and Guiding Principles (GP) are of particular relevance within the context of this Chapter:
 - d) Objective 4 of the Wylfa Newydd SPG confirms a need to ensure that the Wylfa Newydd Project supports improvements to the quality of life (including health, housing, well-being and amenity) of the Island's residents, visitors and workers during its construction and operation.
 - e) Paragraph 3.2.5 goes on to expand that this will be achieved by (i) Ensuring measures are implemented to minimise noise, vibration, visual amenity and air quality impacts arising from the construction and operation of the Wylfa Newydd Project through appropriate mitigation;
 - f) GP7 Protecting health, which clarifies the expectations in relation to mitigation measures that are of particular relevance to the issues raised in this Chapter of the LIR:
 - i. The provision of information on health risks to local communities, visitors and businesses;
 - ii. The physical design of new development (including consideration of screening, containment and layout to minimise impacts on sensitive receptors);
 - ii. Mitigation for affected receptors (including insulation to reduce noise impacts) or compensation where mitigation is not practicable;
 - iv. Measures including the restriction of working hours and traffic management for both construction and operational phases;
 - v. Monitoring of potential impacts including in respect of noise, air quality and light pollution;
 - vi. Directly or indirectly supporting the provision of new, or enhancement of existing, health services in line with GP6.
 - g) Other elements of GP7 are also of particular relevance, and relate to the health and amenity of construction workers on the main site, and the IACC's expectations relating to DCO requirements/ conditions to address any potential adverse impacts on health. A schedule of potential requirements/ conditions is provided:

- i. Restrictions on total number of daily vehicle movements and movements during peak periods;
 - ii. Weight limits on construction traffic;
 - iii. Routing of traffic;
 - iv. Construction/ operation hours;
 - v. Sequencing of construction operations;
 - vi. Noise, dust and odour management; and
 - vii. Community consultation on issues/activities likely to significantly impact upon amenity (including light pollution).
- h) Potential measures to ensure the health and well- being of workers, include a corporate health policy and dissemination of health and safety information to workers.
- i) GP26 Implementation and monitoring, which sets an expectation for a robust monitoring framework that will include monitoring the light levels experienced by sensitive receptors, such as residents and ecological receptors.

4.0 Gaps in information

- 4.1 Based upon the IACCs knowledge of the site and its surroundings, the existing baseline and the information provided by Horizon within its assessment, a number of information gaps have been identified as set out below;
- a. The IACC requests that a revised Wylfa Newydd CoCP and sub CoCPs are prepared and submitted during the examination process. The detailed CoCP and sub CoCPs should include the following information:
 - i. Further detail of the real-time web-based environmental system including data management and access
 - ii. The proposed locations of monitoring equipment for PM₁₀, PM_{2.5}, NO_x, NO₂ and dust deposition
 - iii. Confirmation of the thresholds and exceedance trigger levels for dust, NO₂, NO_x, PM_{2.5} and PM₁₀, and frequency of reporting (including amber and red trigger levels)
 - iv. The process of investigating trigger exceedance in consultation with the IACC
 - v. Further detail of the process of receiving, investigating and responding to complaints
 - vi. Further detail of the proposed Community Liaison Groups including frequency of meetings. The IACC considers that these meetings should be monthly until First Nuclear Concrete
 - a) In addition during SoCG meetings the IACC have commented on Horizon's additional mitigation proposals that include a commitment to use a higher percentage of newer construction plant that conform to stricter emissions requirements. The IACC has requested that this additional mitigation to be detailed in updated versions of the CoCPs and sub CoCPS and submitted into the examination process
 - b) Horizon shall implement a web based environmental monitoring system at several locations surrounding the WNDA that shall provide real-time data to overcome the retrospective dust monitoring

- c) The Wylfa Newydd CoC P to confirm that a separate Air Quality Management Strategy will need to be agreed for the decommissioning stage, which would include relevant good practices measures and guidelines that would be applicable at the time of decommissioning.
- d) The IACC requests that Horizon adopts the annual averaged World Health Organisation (WHO) Guideline Value of $10\mu\text{g}/\text{m}^3$ as a threshold for monitoring exceedance of $\text{PM}_{2.5}$ levels. This is to ensure that $\text{PM}_{2.5}$ levels are kept as low as reasonable practicable in order to comply with the vision of the latest Welsh policy guidance. The IACC propose that monitoring is undertaken throughout the construction period and where levels in the vicinity of Wylfa Newydd exceed the World Health Organisation annual mean of $10\mu\text{g}/\text{m}^3$ for $\text{PM}_{2.5}$, then the IACC and Horizon would firstly jointly investigate the cause of that exceedance. Where Horizon's activities are considered to have contributed to the exceedance, Horizon shall then prepare an action plan setting out all reasonable actions which could be taken to reduce $\text{PM}_{2.5}$ emissions and implement those. Where monitoring following implementation of the action plan shows continuing exceedances, then the action plan would be reviewed to see if additional or alternative actions can be identified. Reviews would be required no more frequently than once per annum.
- e) IACC is requesting that Horizon commits to the installation of monitoring systems at the layby location (monitoring location A15) to allow the one hour mean AQO for NO_2 be monitored in real-time for exceedances as a result of additional traffic.
- f) The IACC has requested that the Community Liaison Group meets on a monthly basis rather than quarterly as proposed by Horizon from commencement of site activities up to when First Nuclear concrete is poured, which is the period when effects from air quality and noise are most likely to be significant. The IACC considers that this is the forum to ensure that the local community is kept fully up to date of the site activities including having an understanding of planned works and to be informed of any activities that will potentially affect their daily life and routines.

5.0 DCO Obligations and requirements

- 5.1 IACC will be required to meet the environmental monitoring functions necessary for this complex and diverse development. Such functions shall include, but are not limited to attending community liaison meetings, responding to complaints in relation to air quality and dust; either made directly to IACC by residents or businesses, analysing air quality and dust data and reports associated with any environmental monitoring systems and assisting Horizon with air quality and dust complaints made directly to them. Given the diverse nature, scale and scope of the Wylfa Newydd development across Anglesey, the potential demand upon the Public Protection department to facilitate such assistance shall create an increased burden upon the department.
- 5.2 A financial contribution to the funding of the monitoring of the impacts of the development by Horizon is sought for the duration of the Wylfa Newydd construction phase in order to fund:
 - a) 1x FTE Environmental Health Officer and

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