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# Morlais Project

## Air Quality Response

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## Morlais Project - Air Quality Response

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### Introduction

A Transport and Works Act Order (TWAO) application was submitted for the Morlais Project, which will provide a consented area for the installation and commercial demonstration of multiple arrays of tidal energy devices, to a maximum installed capacity of 240 Megawatts (MW).

Two comments were received on the application with regard to air quality, as follows:

*"A.69 We note that the updated Chapter 4 Project Description includes reference to marine vessels associated with the device and cable installation, maintenance and decommissioning. However, no further information on likely vessel movements, numbers or associated emissions has been included in the Traffic Clarification Note. We therefore seek clarification on this as aerial emissions from boat-based transport are likely to require consideration within the ES air quality assessment."*

*"A.70 Considering the Wealden case and the Dutch Nitrogen European Court of Justice rulings, we maintain our advice that further evidence is required as to why an incombination air quality assessment is not considered necessary."*

The response to these questions of clarification is provided below.

### Air Quality Response

#### Query A.69

Offshore emissions from vessel activity were scoped out of the assessment based on the limited potential for significant air quality effects; this was agreed by the Planning Inspectorate in the scoping opinion.

However, as stated in the response A.69, additional detail has been provided with regard to vessel movements in Chapter 4 Project Description. For the device and cable installation, the number of vessel movements and duration of vessels on site per year is provided for each installation activity. Of these activities, the majority would be undertaken out to sea, at a distance of between approximately 500 m – 3 km by two to four vessels at a time; vessels associated with the installation of the tidal devices would be on site continuously throughout the year, and vessels associated with the inter-array cable installation and hub installation would be on site for 111 days per year and 190 days per year respectively. Given the distance from these working areas to landside receptors (both human and designated ecological sites), the low number of vessels in operation and the low proportion of the year during which most vessels would be operating, no significant impacts are predicted to occur. Furthermore, pollutant concentrations on Holy Island are well below the relevant air quality Objectives and Critical Levels for the protection of ecosystems, due to the rural nature of the area; as such, no exceedances of the UK air quality Objectives are predicted.

The cable tail installation, export cable installation and export cable protection installation would be undertaken by vessels closer to land during the periods that the cables near landfall are worked on. The number of vessels and the likely duration of these vessels on site are summarised in **Table 1**.

*Table 1 Vessel movements closest to landfall*

Activity	Predicted number of vessels on site	Indicative number of days vessels on site (per year)	Proportion of time vessels on site per year
Cable tail installation	3	20	5.48%
Export cable installation	2	20	5.48%
Export cable protection installation	3	12	3.29%

As shown in **Table 1**, there are very few vessels proposed to be used during the installation phase in close proximity to the landfall, and the duration of time that the vessels would be on site constitutes a very small proportion of the year. As such, no exceedances of the annual mean or short-term air quality Objectives or Critical Levels are predicted, taking into account existing baseline air quality in the area.

It is anticipated that, during operation, maintenance of the devices would occur at sufficient distance from landside receptors that significant impacts would not occur. Export cables would be inspected annually for the first two to three years, with the frequency decreasing in subsequent years. Due to the low number of vessel movements, impacts are therefore not anticipated to be significant. Vessel numbers associated with decommissioning are expected to be similar to those for construction, which are not anticipated to give rise to significant impacts.

The impact of pollutant concentrations on the deposition of nutrient nitrogen and acid to designated ecological sites is considered on an annual mean basis. Given the low proportion of the year in which the few vessels would be on site during installation, operation and decommissioning, it is not anticipated that their emissions would give rise to a significant annual mean impact.

Given the above, it is considered that impacts of airborne emissions from vessel activity would not be significant at human or ecological receptors.

#### **Query A.70**

The cumulative impact assessment undertaken in Chapter 22 of the ES provided quantification of the number of traffic movements anticipated to be generated by the Project, in addition to in-combination traffic flows generated by other small-scale plans and projects. These traffic flows were found to be significantly below the appropriate screening criteria<sup>1</sup> (1,000 vehicles per day or 200 Heavy Duty Vehicles (HDVs) per day). As such, significant impacts are unlikely to occur and a detailed assessment was not required. Furthermore, as discussed in the Air Quality chapter, it is not anticipated that any proposed larger-scale projects within the vicinity would give rise to significant volumes of additional traffic which would cause the screening criteria to be exceeded. In addition, the construction phase would be temporary in nature and therefore any in-combination traffic flows would not result in long-term impacts on designated sites. As described in response to query A.69, impacts from vessel emissions at landside receptors are expected to be negligible; therefore no

<sup>1</sup> Screening Criteria detailed in Highways England's Design Manual for Roads and Bridges LA 105 Air Quality

significant in-combination impact are predicted in the areas which would also experience emissions from road traffic.

Guidance provided by the Institute of Air Quality Management<sup>2</sup> states that the in-combination assessment should also consider industrial and agricultural emission sources. The search of cumulative projects compiled for consideration in the ES did not identify any agricultural projects which would contribute to in-combination nutrient nitrogen or acid deposition. The proposed biomass facility at Holyhead Eco Park was the only industrial source of emissions identified; whilst an outline planning application was consented for this project in 2016, it is understood that the project is currently on hold. As such, there may not be any temporal overlap of the construction or operation of the biomass facility with the construction of the Morlais Project. However, if they were to overlap, due to its size the facility would require an Environmental Permit to operate, and it would be required to meet specified emission limits to prevent significant impacts to receptors.

The assessment therefore considered the in-combination impact of traffic flows which were found to be sufficiently low in magnitude as to not require further detailed assessment. Emissions from other sources are not anticipated to have a significant in-combination impact at ecological receptors.

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<sup>2</sup> <https://iaqm.co.uk/text/guidance/air-quality-impacts-on-nature-sites-2019.pdf>