



Awel y Môr Offshore Wind Farm

Cumulative Effects Assessment Clarification Note

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1 Introduction

- 1 This clarification note has been drafted to support Awel y Môr Offshore Wind Farm Limited's (the Applicant's) response to the Written Representation (WR) (Document 2.2 of the Applicant's Deadline 2 submission) made by Natural Resources Wales (NRW) on the Awel y Môr Offshore Wind Farm (AyM) application documentation in relation to the Cumulative Effects Assessment (CEA) on marine mammal ecology and fish and shellfish ecology, and also their comments on developments considered within the onshore assessments.
- 2 Specifically, this clarification note has been drafted to provide further justification in response to NRW WR comments, specifically:
 - ▲ Paragraph 2.7.13 relating to the cumulative assessment of marine mammals; and
 - ▲ Paragraphs 2.5.7 – 2.5.9 relating to cumulative effects assessment in regard to fish receptors.
- 3 In addition the note provides an updated list of onshore developments that have been considered within the CEA to supplement the Applicant's response to ExQ1.10.38 (REP1-007).

2 Cumulative Effects Assessment Clarification

2.1 Marine Mammal and Fish and Shellfish Ecology

4 In its WR, NRW commented (in relation to marine mammals):

“NRW notes that there appear to be potential discrepancies and inconsistencies with respect to the assessment of cumulative effects from underwater noise between marine mammals and fish ecology. For example, we note that several projects are missing from the Marine Mammal Cumulative Effects Assessment although they are included and qualitatively assessed for fish and shellfish. We are working with the Applicant to understand and clarify these issues. NRW reserves our position on this matter until further clarity comes forward at which point, we may advise the Examining Authority further.”

5 In its WR, NRW commented (in relation to fish and shellfish ecology):

“.... NRW recognises that future developments will need to take account of the Awel-y-Môr predicted noise impact in their cumulative assessments. We do not, however, agree that there is no potential for simultaneous, partly overlapping, or sequential construction noise from planned offshore windfarms projects to adversely affect consecutive spawning seasons of fish species. We note that the CEA has focussed on impacts to Herring, however other VERs such as Atlantic cod are amongst the most hearing sensitive fish, are sensitive to anthropogenic noise, masking or disrupting mating and spawning behaviour, and have high intensity spawning and nursery grounds throughout Liverpool Bay (Ellis et al 2012). It should be noted that this point does not relate to the omission of particular projects in the CEA, rather it relates to the consideration of how impacts from construction noise on VERs within the spawning grounds in Liverpool Bay, will be considered in the absence of speculative or potential future regulations acting to mitigate the effects. NRW advises that the Applicant confirms whether the conclusion of minor adverse effects remains in light of this point.”

2.2 Applicant's Response

2.2.1 Methodological differences

- 6 The Applicant acknowledges that there are differences between the cumulative effects assessments applied to the fish and marine mammal assessments. The overarching CEA methodology is described in Volume 1, Annex 3.1 of the Environmental Statement (ES) (APP-042), however the topic-specific methodologies are described within the topic-specific chapters of the ES (in this case Section 7.13 of the Marine Mammals chapter (AS-026) and Section 6.13 of the Fish and Shellfish chapter (APP-052)). The differences between the two CEAs is a result of the specific methodologies applied to these two topics within the ES chapters.
- 7 As noted in NRW's WR, the CEA for fish and shellfish ecology includes a qualitative assessment of Tier 3 projects (the lowest tier) that are not included in the CEA for marine mammals. The level of detail available in the public domain regarding these projects is limited, with insufficient certainty as to their construction programmes to undertake a detailed CEA, however are described in the CEA for fish since they meet the Tier 3 criteria. It is noted that NRW considered the scope of the fish CEA to be appropriate.
- 8 Those projects for which a qualitative underwater noise assessment was undertaken for fish, but not for marine mammals, are as follows:
 - ▲ The North Wales Tidal Energy project;
 - ▲ Mostyn Tidal Lagoon;
 - ▲ Morgan Offshore Wind Farm;
 - ▲ Mona Offshore Wind Farm; and
 - ▲ Morecambe Offshore Wind Farm.
- 9 Due to the current stages that these projects are in the planning system, there is insufficient available data on either the project scale or timings on which to undertake a quantitative or semi-quantitative assessment.

- 10 As a result, if those projects outlined in the bullet points above were considered in the context of the marine mammal assessment, the same conclusion (as per the fish assessment) would be reached with regard to the inability to undertake a detailed quantitative or semi-quantitative assessment.
- 11 The Applicant acknowledges the potential for these projects to contribute to the extant cumulative effect from underwater noise on marine mammals, particularly from the offshore wind farm proposals, if they retain percussive piling as an option for foundation installation within their design envelope and construction programmes overlap. However, due to a lack of detailed information on these proposals, it is not possible to meaningfully consider their contribution the cumulative effect, and **therefore, there would be no change to the extant conclusions of the cumulative effects assessment (negligible adverse for grey seal, minor adverse for all other species (not significant in EIA terms)).**
- 12 Accordingly, the Applicant does not consider there to be benefit in a further update to the marine mammal assessment (at this juncture) on this basis and to do so would depart from PINS Advice Note 17, which indicates that assessments should be undertaken to an appropriate level of detail, commensurate with the information available at the time of assessment.
- 13 Clearly, once these future projects come forward with detailed proposals then a meaningful assessment can be undertaken, but the onus of this (due to timing of information availability) will likely be on those future projects to consider AyM amongst other known projects within their respective cumulative assessments.

2.2.2 Commentary on focus of the fish ecology assessment

- 14 With regard to the NRW comment on the focus of the CEA for fish being on impacts to Herring, the Applicant considers that all VERs have been given due consideration in the CEA. Paragraph 360 of the fish and shellfish chapter of the ES (APP-052) bases the cumulative TTS (injurious effects) assessment on the 186 dB SEL_{cum} threshold but notes that this worst-case would only apply to the most sensitive species (and lists herring as an example of such a species), concluding a non-significant effect.

- 15 This assessment conclusion was not restricted to herring and would also apply to other noise-sensitive species (such as cod) as a worst case, though would likely be lower for less noise-sensitive species. **Therefore, there would be no change to the extant conclusions of the cumulative effects assessment of underwater noise on fish (minor adverse (not significant in EIA terms) for all species).**

2.2.3 Commentary on potential future noise regulation

- 16 NRW noted in its WR that paragraph 359 of the Fish and Shellfish chapter of the ES (APP-052) included commentary regarding “a broadscale push from regulators and Statutory Nature Conservation Bodies (SNCBs) within the UK towards the use of technologies to reduce the noise emitted during offshore wind construction works.”
- 17 The Applicant provided this as contextual information in recognition of emerging technologies that may be employed to reduce noise emissions during the construction works at UK offshore wind farms, highlighting the uncertainty over their potential future application and therefore supporting the worst-case assessment undertaken by the Applicant in the absence of such measures.
- 18 The Applicant wishes to clarify that potential future regulation of underwater noise emissions was not relied upon when in determining the conclusion of minor adverse significance (not significant in EIA terms), and **therefore, the assessment conclusion of minor adverse (not significant in EIA terms) remains valid.**

2.3 Onshore

- 19 Within the First Written Questions the Examining Authority (ExA) requested clarification on the list of onshore developments within the CEA within Question 10.38 as follows:

Cumulative Assessment

Please explain the reason for the numerous blank boxes under the relevant topic areas, including 'Landscape and Visual Impact', in the onshore cumulative effects assessment matrix in the Cumulative Effects Assessment Methodology [APP-042] (e.g. planning ref 40/2018/1036– power plant, ref 44/2018/0855 / 44/2015/1075 – 99 dwellings, etc.)

- 20 The Applicant has provided an updated version of the onshore list of developments within Appendix A of this document, whereby the blank boxes have been removed. The Applicant confirms that the matrix within the table was used as a tool to assist screening of projects into the cumulative effects assessments within each individual ES chapter based on being within a screening range for a particular topic or having temporal overlap with AyM. The tool was not used as the basis for assessment itself but was presented to illustrate the methodology for assessment.

3 Appendix A: CEA Long List

Project/Planning Application	Data Source(s)	Data Confidence Assessment	Notes	Date of Application and Status of Development	Construction Period (red outline denotes Awel y Môr offshore construction period)											Distance to ES ECC (km)	Distance to ES Draft Order Limits (km)	Terrestrial Ecology and Nature Conservation	Archaeology and Cultural Heritage	Airborne Noise and Vibration	Traffic and Transport	Air Quality	Hydrology and Flood Risk	Geology and Ground Conditions	Landscape and Visual Impacts	Socioeconomic	Tourism and Recreation	Public Health
					2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030 - 2050													
45/2021/1248 Development of 5 Ha of land to form Coastal Defence scheme comprising of the formation of flood embankments ramps outfall structures and rock armour including landscaping habitat enhancements works	Denbighshire CC Planning Portal	High	Coastal protection works	2021, pending decision												0.469425	0.0	c	c	c	g	c	c	c	C	d	d	d
40/2018/1036 - Construction of a 5 MW flexible gas fired power plant	Denbighshire CC Planning Portal	High	Other energy generation infrastructure	2018, granted												9.1	0.0	c	c	c	c	f	c	c	c	c	c	d
45/2018/1197 - Construction of coastal protection scheme, incorporating interlocking rock revetment and recurved upstand sea wall to replace existing, raising of walkway, new and amended accesses and associated works (East Rhyl coastal defence improvement scheme)	Denbighshire Consultation Response	High	Building/housing developments	2019, Granted												0.420879	0.1	c	c	c	g	c	f	f	c	d	d	d
40/2021/0309 - Care home	Denbighshire CC Planning Portal	High	Building/housing developments	2021, Granted												7.9	0.1	c	d	g	c	c	c	c	c	d	d	d
40/2017/1232 - Erection of 7 no. industrial units with associated parking, landscaping, access road and external storage areas	Denbighshire Consultation Response	High	Building/housing developments	2018, Granted												8.405236	0.1	c	c	f	d	c	c	c	c	d	d	d
46/2021/0159 - Hybrid planning application for the redevelopment of 6.9ha of land incorporating the following elements: Hybrid planning application (full details and outline) for the redevelopment of 6.9ha of land incorporating the following elements: Full Details: - Erection of a commercial vehicles sales unit (sui generis) - Formation of associated parking area, landscaping and associated works Outline: Outline Planning application for the erection of 5 No. business buildings (Use Class B1 and B2) with all other matters reserved for further approval.	Denbighshire Consultation Response	High	Building/housing developments	2021, pending decision												8.756512	0.2	d	c	d	c	c	d	d	c	d	d	d
43/2017/1121 - Use of land for the siting of an additional 65 touring caravan pitches and 39 timber camping pods, storage building and associated works.	Denbighshire Consultation Response	High	Building/housing developments	2018, Granted												1.108652	0.2	d	c	d	c	d	d	d	c	d	d	d
45/2018/1215 - Erection of 109 dwellings and associated works (Phase 5).	Denbighshire Consultation Response	High	Building/housing developments	2021, Granted												1.885683	0.3	d	c	d	c	d	d	d	c	d	d	d
45/2021/0738 - Retrospective application for the change of use of dwelling (Use Class C3) to form a house of multiple occupancy (Use Class C4) for 4 people.	Denbighshire Consultation Response	High	Building/housing developments	2021, pending decision												1.654037	0.4	d	d	d	d	d	d	d	c	d	d	d
45/2021/0092. EIA screening and scoping opinion request for the proposed Central Rhyl Coastal Defence Scheme.	Denbighshire Consultation Response	High	Coastal protection works	2021, Screening Opinion issued												0.626787	0.4	d	d	c	d	d	d	d	d	d	d	d
44/2018/0855 - Details of access, appearance, landscaping, layout and scale of 99 dwellings submitted in accordance with condition number 1 of outline permission code 44/2015/1075 (reserved matters application).	Denbighshire Consultation Response	High	Building/housing developments	2019, Granted												3.958555	0.4	d	d	g	c	d	d	d	c	d	d	d
DNS application (PINS Ref: DNS/3247619). Elwy Solar Energy Farm	Denbighshire Consultation Response, PINS	High	Other energy generation infrastructure	2021, pending decision												7.159215	0.7	c	c	c	c	c	c	c	c	c	c	
40/2021/0825 - Erection of 106 dwellings, construction of a new vehicular access and associated works.	Denbighshire Consultation Response	High	Building/housing developments	2021, pending decision												7.09827	0.8	d	d	g	c	d	d	d	c	d	d	d
44/2020/0346 - Change of use of agricultural land to form extension to existing touring caravan site: siting of 3 no. glamping pods and camping facilities; construction of toilet, shower and laundry blocks and associated works.	Denbighshire Consultation Response	High	Building/housing developments	2020, Granted												4.837618	0.8	d	d	g	d	d	d	d	c	d	d	d
43/2020/0773 - Erection of 35 no. dwellings and associated works.	Denbighshire Consultation Response	High	Building/housing developments	2020, pending decision												1.655245	0.9	d	d	g	c	d	d	d	d	d	d	d
43/2018/0750 - 133 dwellings	Denbighshire CC Planning Portal	Medium	Building/housing developments	2018												2.8	0.9	d	d	g	d	d	d	d	d	d	d	d
42/2018/0923 - 61 dwellings	Denbighshire CC Planning Portal	High	Building/housing developments	2018, granted												3.6	0.9	d	d	g	c	d	d	d	d	d	d	d
45/2020/0498 - Development of land in connection with existing hospital including the erection of a four storey community hospital.	Denbighshire Consultation Response	High	Building/housing developments	2020, Granted												1.169567	1.0	d	d	g	c	d	d	d	d	d	d	d
40/2021/0796 - Erection of a detached storage building.	Denbighshire Consultation Response	High	Building/housing developments	2021, Granted												8.09201	1.1	d	d	g	d	d	d	d	c	d	d	d
45/2017/1164 - Demolition of existing school buildings and erection of replacement school accommodating 920 pupils incorporating playgroup, nursery, primary and secondary places with associated play space, grass pitch, all weather pitch.	Denbighshire Consultation Response	High	Building/housing developments	2018, Granted												2.172563	1.1	d	d	g	d	d	d	d	d	d	d	d
46/2019/0806 - Development of 0.75 ha of land for residential purposes (outline application including access).	Denbighshire Consultation Response	High	Building/housing developments	2019, pending decision												7.975204	1.2	d	d	g	c	d	d	d	c	d	d	d
43/2019/0730 - 41 dwellings	Denbighshire CC Planning Portal	High	Building/housing developments	2019, granted												3.2	1.2	d	d	g	c	d	d	d	d	d	d	d
45/2021/0265 - Change of use of land to "Skyflyer Balloon" tourist attraction including the installation of concrete platform, mounting winch and associated Skyflyer Balloon and basket, siting of toilet and reception buildings, landscaping and associated works.	Denbighshire Consultation Response	High	Building/housing developments	2021, Granted												1.353497	1.2	d	d	g	d	d	d	d	d	d	d	d
45/2020/0725 - Conversion of existing offices to form 12 self-contained apartments, including demolition of extension to rear, erection of car port and sprinkler tank compound, landscaping and associated works.	Denbighshire Consultation Response	High	Building/housing developments	2021, Granted												1.522238	1.2	d	d	g	d	d	d	d	d	d	d	d
43/2020/0521 - Erection of 102 affordable dwellings, associated roads, open space, landscaping and infrastructure (re-submission of planning application 44/2019/0629)	Denbighshire Consultation Response	High	Building/housing developments	2020, pending decision												1.927921	1.3	d	d	g	d	d	d	d	d	d	d	d
45/2020/0096 - Change of use and alterations to former offices to form a 61 bed, 6 ward hospital for residential nursing and health care.	Denbighshire Consultation Response	High	Building/housing developments	2020, Granted												1.621673	1.3	d	d	g	c	d	d	d	d	d	d	d
45/2018/0822 - Construction of 41 housing association apartments for local residents over 55 years of age together with new and altered vehicular and pedestrian accesses, associated parking provision, and related work.	Denbighshire Consultation Response	High	Building/housing developments	2018, Granted												1.492233	1.3	d	d	g	c	d	d	d	d	d	d	d
45/2021/0187 - Change of use of land and erection of a Further Education Engineering Centre building, formation of a new vehicular access, construction of an internal site access road and car park, together with landscaping and associated works.	Denbighshire Consultation Response	High	Building/housing developments	2021, Granted												2.897721	1.4	d	d	g	c	d	d	d	d	d	d	d



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