Record of a Habitats Regulations Assessment of a project or spatially-specific plan

OGN 200 Form 1B (with structured tables for likely significant effect screening and appropriate assessment)

Document owner: Head of Business for Natural Resource Management

Version History:

Document Version	Date Published	Summary of Changes
2.0	21/10/2024	Following 2023/24 review of HRA OGNs

Next review date: October 2025

OGN 200 Form 1B

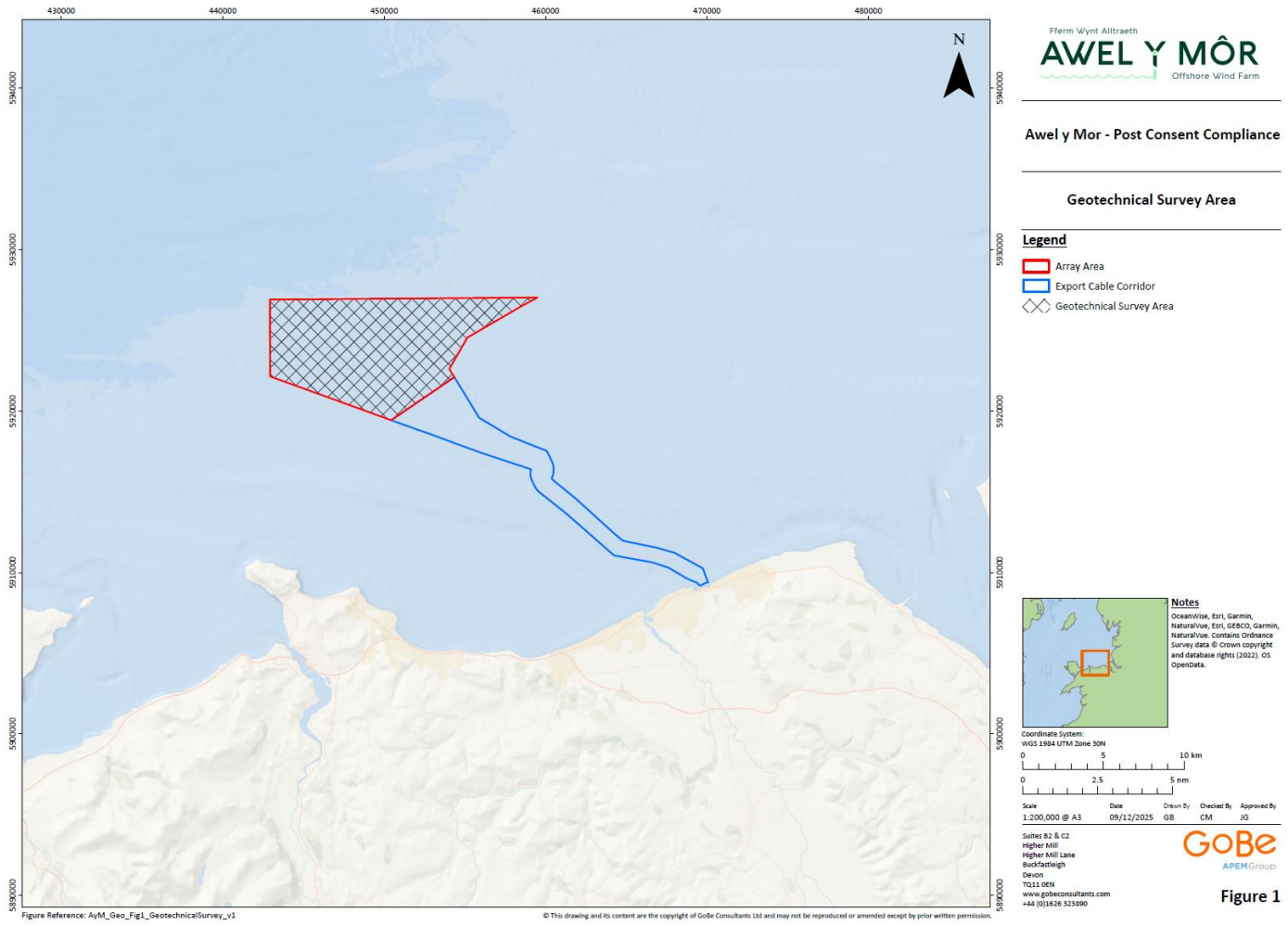
Record of a Habitats Regulations Assessment

Plan or project name, brief description or application reference number	RML2576 - Awel y Môr Offshore Array Area Geotechnical Survey
HRA iteration/version	N/A

1. Plan or Project Details

Information about the plan or project		
1	**Date application received**	23 December 2025
2	**Applicant details**	Awel y Môr Offshore Windfarm Ltd
3	**NRW team responsible for carrying out, or requiring to be carried out, the plan or project, and name of lead officer**	Jack Thompson – Marine Licensing Team

4	**Activity/ies proposed**	Offshore geotechnical site investigations will be undertaken to characterise the WTG and OSS locations. The geotechnical survey will comprise of up to 80 vibrocores and up to 265 deep push seafloor Cone Penetration Tests (CPTs), of which, up to 53 will be seismic CPTs. The samples will be located within the Array Area (see below). The exact locations of CPTs and vibrocores have not been determined at this stage. However, wherever possible, they will be evenly distributed around the Array Area in order to gather representative data across the site, and to avoid archaeological features. The geotechnical survey is expected to take place from April 2026 until June 2026. The total offshore survey duration will be up to 60 vessel days (including bad weather contingency). However, a licence has been requested up to April 2027 in case of delays.
5	**Relevant legislation or statutory basis**	Marine and Coastal Access Act 2009
6	**Location**	Awel y Mor Array Area, Irish Sea, North Wales



Latitude	Longitude
53.488	-3.860
53.467	-3.860
53.445	-3.859
53.433	-3.798
53.422	-3.746

		53.451 -3.692 53.446 -3.687 53.468 -3.676 53.475 -3.655 53.485 -3.627 53.491 -3.610
7	**Plan or project documents, including any application documents**	RML2576 - AyM_Marine_Licence_Application_Form_(Marine_Works)_RevA_2026 (1) (002) RML2576 - 2026-RWE-Awel y Mor-Geotechnical MLA Supporting Environmental Information RML2576 - Copy of AyM_Array_Area_Coordinates_20042023 RML2576 - 006727828-01 Offshore Geotechnical Sample Locations RML2576 - 005415890-01 AyM - Proposed Benthic Monitoring Approach and Justification
8	**Environmental Statement**	N/A
9	**Pre-application correspondence**	Extensive contact in relation to ORML2233. Consultation with Marine Licensing Team (Microsoft Teams meeting on 10/10/2025) to discuss and agree approach to separate licensing for the 2026 Array Area geotechnical survey. Correspondence from Marine Licensing Team on agreement of this approach (27/11/2025).
10	**NRW team responsible for preparing this HRA report, and lead officer**	Jack Thompson – Marine Licensing Team
11	**Team or person responsible for approving the plan or project (competent authority role)**	As per row 10.

2. Determining the need for a Habitats Regulations Assessment

2.1 Is there any possibility that the plan or project could negatively affect any European sites?	Yes
2.2 Is the whole of the plan or project directly and only connected with or necessary to the management of one or more European sites, for the purposes of conserving the habitats or species for which the European site(s) is/are designated?	No
2.3 Is there a possibility that the plan or project could affect any other feature of the European site(s) concerned, or of another European site, in a way that would undermine that feature's conservation objectives?	N/A

3. Considering the likelihood of a significant effect (LSE)

3.1 Renewal of a project authorisation on the same or more restrictive terms as an extant authorisation

Is this a renewal of an extant authorisation which complies with NRW approved criteria for ruling out significant effects of renewals (see Part 2 of OGN200) without conducting a project-specific LSE test?	No

3.2 Likelihood of significant effects (LSE) test

3.2.1 Which European sites might be affected by the plan or project?

(a)	**Based on the plan or project specification, or information provided in the application, it is considered that these European sites have features which could be negatively affected by the plan or project**	**Liverpool Bay/Bae Lerpwl SPA [UK9020294] North Anglesey Marine/Gogledd Môn Forol SAC [UK0030398] Pen Llyn a'r Sarnau/Lleyn Peninsula and the Sarnau SAC [UK0013117]**

(b)	**The potential for the plan or project to negatively affect these European sites was also initially considered, but can be ruled out without further consideration**	As works are only taking place in the array area, and not the transmission corridor, impacts on the following sites can be ruled out due to distance: **Dee Estuary SPA** **Dee Estuary SAC** **Dee Estuary Ramsar** **Menai Strait and Conwy Bay SAC** **West Wales Marine/Gorllewin Cymru Forol SAC [UK0030397]** **Bristol Channel Approaches/Dynesfeydd Môr Hafren SAC [UK0030396]** The above had initially been considered for **Harbour porpoise** as the activity falls within the Celtic & Irish Seas (Marine Mammal Management Unit). However, the impact upon harbour porpoise has already been considered in the assessment of the **North Anglesey Marine SAC** which is in closer proximity. As such, given these sites are located further away, further consideration does not need to be given as any impacts and mitigation regarding this feature have already been determined. **Cardigan Bay/Bae Ceredigion SAC [UK0012712]** The above had initially been considered for **Bottlenose Dolphin** and **Grey Seal** as the activity falls within the Celtic & Irish Seas (Marine Mammal Management Unit). However, the impact upon these receptors has already been considered in the assessment of the **Pen Llyn a'r Sarnau SAC** which is in closer proximity. As such, given this site is located further away, further consideration does not need to be given as any impacts and mitigation regarding this feature have already been determined.

		Pembrokeshire Marine / Sir Benfro Forol SAC [UK0013116] The above had initially been considered for **Grey Seal** as the activity falls within the Celtic & Irish Seas (Marine Mammal Management Unit). However, the impact upon this receptor has already been considered in the assessment of the **Pen Llyn a'r Sarnau SAC** which is in closer proximity. As such, given this site is located further away, further consideration does not need to be given as any impacts and mitigation regarding this feature have already been determined.

3.2.2 Screening for likelihood of significant effect

Table 3.2.2 Screening assessment

Designated site feature	**Relevant conservation objectives**	**Screening conclusion – 'SCREEN OUT', 'SCREEN IN' or 'IN COMB'**	**Explanation**
Liverpool Bay/Bae Lerpwl SPA			
Red-throated diver *Gavia stellata* (in non-breeding season)	NRW, Natural England and JNCC conservation objectives: liverpool-bay-bae-lerpwl-spa-conservation-advice.pdf (naturalresources.wales)	SCREEN OUT	The works are not located within the Liverpool Bay SPA, but are adjacent to it. There is the potential for disturbance from noise and visual impacts however, no impact pathway is predicted as potential disturbance will be both temporally and spatially restricted to the area where the surveys are taking place. Furthermore, ornithology receptors are likely to be habituated to vessel movements due to the existing presence of vessel traffic (such of that of the existing O&M vessels for the adjacent Gwynt y Môr offshore wind farm). Best practice techniques will be followed, including the avoidance of
Little gull *Hydrocoloeus minutus*	NRW, Natural England and JNCC conservation objectives:		

(in non-breeding season)	liverpool-bay-bae-lerpwl-spa-conservation-advice.pdf (naturalresources.wales)		aggregations of rafting seabirds and the avoidance of over-revving of engines. Vessel crews will be briefed on these best practice techniques.
Common scoter *Melanitta nigra* (in non-breeding season)	NRW, Natural England and JNCC conservation objectives: liverpool-bay-bae-lerpwl-spa-conservation-advice.pdf (naturalresources.wales)		
Little tern *Sternula albifrons* (in breeding season)	NRW, Natural England and JNCC conservation objectives: liverpool-bay-bae-lerpwl-spa-conservation-advice.pdf (naturalresources.wales)		
Common tern *Sterna hirundo* (in breeding season)	NRW, Natural England and JNCC conservation objectives: liverpool-bay-bae-lerpwl-spa-conservation-advice.pdf (naturalresources.wales)		
Waterbird assemblage	NRW, Natural England and JNCC conservation objectives: liverpool-bay-bae-lerpwl-spa-conservation-advice.pdf (naturalresources.wales)		
North Anglesey Marine/Gogledd Môn Forol SAC			
Harbour porpoise *Phocoena phocoena*	NRW conservation ojectives: North Anglesey Marine pSAC: Draft Conservation Objectives And Advice On Activities (naturalresources.wales)	SCREEN IN	Geotechnical investigations and survey vessel use will generate continuous noise and vibrations in the marine environment within the hearing range of harbour porpoise therefore, there is potential for auditory injury and disturbance from vessel presence/noise during operations.

Pen Llyn a'r Sarnau/Lleyn Peninsula and the Sarnau SAC			
Bottlenose dolphin ***Tursiops truncatus***	NRW conservation objectives: Contents (naturalresources.wales).	SCREEN IN	Geotechnical investigations and survey vessel use will generate continuous noise and vibrations in the marine environment within the hearing range of bottlenose dolphin and grey seal therefore, there is potential for auditory injury and disturbance from vessel presence/noise during operations.
Grey Seal ***Halichoerus grypus***	NRW conservation objectives: Contents (naturalresources.wales).	SCREEN IN	

TABLE 3.2.3 Screening decision of the plan or project 'alone'	
(a) If the screening conclusion for all features for all sites in Table 3.2.2 is 'SCREEN OUT'	~~**The plan or project is not likely to have a significant effect on any European site, and no further consideration under the Habitats Regulations is required in order to determine the approval/application.**~~
(b) If the conclusion for any features in Table 3.2.2 is 'SCREEN IN'	**The plan or project is likely to have a significant effect on one or more European sites and therefore an appropriate assessment is required.**
~~**(c) If there are no features in Table 3.2.2 that are 'SCREEN IN' and any features that are 'IN COMB'**~~	~~**The plan or project is not likely to have a significant effect on any European sites when considered alone, but the possibility of significant effects in combination with other plans and projects needs to be considered.**~~

4. Appropriate assessment of the plan or project when considered alone

4.1 Assessment of plan or project as defined

Table 4.1 Appropriate assessment			
European site feature/s	**Description of impacts**	**Assessment in view of conservation objectives**	**Can adverse effect on site integrity be ruled out? 'YES' or 'NO'**
European site name: North Anglesey Marine/Gogledd Môn Forol SAC			
Harbour porpoise *Phocoena phocoena*	Geotechnical investigations and survey vessel use will generate continuous noise and vibrations in the marine environment within the hearing range of harbour porpoise therefore, there is potential for auditory injury and disturbance from vessel presence/noise during operations.	There have been several reports which state that various forms of Cone Penetration Tests (CPT), including Seismic CPT, produce immeasurable levels of underwater noise which are not capable of impacting marine mammal receptors. NIRAS have produced notes for Ran OWF (NIRAS, 2024), and Jammerland Bugt OWF (NIRAS, 2025) on underwater noise emissions from geotechnical survey activities. Both stated that there are no publicly available data on noise measurements for this type of equipment (CPT and seismic CPT); this statement is supported by GEO (a company which provides CPTs) which confirm that no noise measurements have yet been conducted. Therefore, it is not possible to compare noise levels to any thresholds. NIRAS (2025) considered the theoretical potential of seismic CPT equipment to produce noise, determining that noise may arise from the weight hitting the end cap, or the vibration of the frame. The former noise occurs inside a	YES

		closed metallic cylinder, and so is effectively attenuated immediately; the latter would comprise only a low amplitude 'ringing'. Both of these noise sources would not lead to any impact on marine mammals at any distance. Further, Erbe and McPherson (2017) conducted a study on mini-CPT, but the noise from the CPT system was not possible to measure over the noise produced from the survey vessel (as it was using dynamic positioning), as mentioned in NIRAS (2024; 2025). Whilst not specific to seismic CPTs, it is anticipated that the vessel undertaking seismic CPTs for the project would also use dynamic positioning, which is expected to mask any noise from the geotechnical equipment. As mentioned above, CPTs are considered to produce immeasurable noise and therefore are quieter than geotechnical drilling. Reiser et al. (2011) as well as NIRAS (2024; 2025) state that the source level for vibrocore activity would be 187 dB re 1 µPa rms @ 1 m. Whilst this is higher than 142–145 dB re 1 µPa rms @ 1 m stated for geotechnical drilling in Table 4 of the Supporting Information for Array Area Geotechnical Survey Marine Licence, NIRAS (2024) concluded that the PTS impact range for vibrocore activity would be <10 m for harbour porpoise (the most hearing sensitive marine mammal considered), noting this was assuming a fleeing receptor and cumulative exposure over a period of 24 hours (weighted SELcum 24hr). Further, NIRAS (2025) concluded that the PTS impact range for vibrocore activity was	

		less than 1 m for harbour porpoise and seals (the only assessed marine mammal species). Additionally, Berwick Bank OWF (SSE, 2023) assessed vibrocore activities as having a SEL value of 223 dB re 1 µPa2s re 1 m, calculated based on a one hour sample time which is considered to be the typical maximum time to gather a sample. Whilst this source level is higher, the PTS threshold was only exceeded for VHF cetaceans (harbour porpoise), and the impact range was 5 m. In conclusion, although vibrocore operations produce more variable underwater noise levels, with some measurements exceeding those of geotechnical drilling, both activities will lead to negligible acoustic impacts on marine mammals.	
European site name: Pen Llyn a'r Sarnau/Lleyn Peninsula and the Sarnau SAC			
Bottlenose dolphin *Tursiops truncatus*	Geotechnical investigations and survey vessel use will generate continuous noise and vibrations in the marine environment within the hearing range of bottlenose dolphin and grey seal therefore, there is potential for auditory injury and disturbance from vessel presence/noise during operations.	There have been several reports which state that various forms of Cone Penetration Tests (CPT), including Seismic CPT, produce immeasurable levels of underwater noise which are not capable of impacting marine mammal receptors. NIRAS have produced notes for Ran OWF (NIRAS, 2024), and Jammerland Bugt OWF (NIRAS, 2025) on underwater noise emissions from geotechnical survey activities. Both stated that there are no publicly available data on noise measurements for this type of equipment (CPT and seismic CPT); this statement is supported by GEO (a company which provides CPTs) which confirm that no noise measurements have yet been conducted. Therefore, it is not possible to compare noise levels to any thresholds.	YES
Grey Seal *Halichoerus grypus*			

		NIRAS (2025) considered the theoretical potential of seismic CPT equipment to produce noise, determining that noise may arise from the weight hitting the end cap, or the vibration of the frame. The former noise occurs inside a closed metallic cylinder, and so is effectively attenuated immediately; the latter would comprise only a low amplitude 'ringing'. Both of these noise sources would not lead to any impact on marine mammals at any distance. Further, Erbe and McPherson (2017) conducted a study on mini-CPT, but the noise from the CPT system was not possible to measure over the noise produced from the survey vessel (as it was using dynamic positioning), as mentioned in NIRAS (2024; 2025). Whilst not specific to seismic CPTs, it is anticipated that the vessel undertaking seismic CPTs for the project would also use dynamic positioning, which is expected to mask any noise from the geotechnical equipment. As mentioned above, CPTs are considered to produce immeasurable noise and therefore are quieter than geotechnical drilling. Reiser et al. (2011) as well as NIRAS (2024; 2025) state that the source level for vibrocore activity would be 187 dB re 1 µPa rms @ 1 m. Whilst this is higher than 142–145 dB re 1 µPa rms @ 1 m stated for geotechnical drilling in Table 4 of the Supporting Information for Array Area Geotechnical Survey Marine Licence, NIRAS (2024) concluded that the PTS impact range for vibrocore activity would be <10 m for harbour porpoise (the most hearing sensitive marine	

		mammal considered), noting this was assuming a fleeing receptor and cumulative exposure over a period of 24 hours (weighted SELcum 24hr). Further, NIRAS (2025) concluded that the PTS impact range for vibrocore activity was less than 1 m for harbour porpoise and seals (the only assessed marine mammal species). Additionally, Berwick Bank OWF (SSE, 2023) assessed vibrocore activities as having a SEL value of 223 dB re 1 µPa2s re 1 m, calculated based on a one hour sample time which is considered to be the typical maximum time to gather a sample. Whilst this source level is higher, the PTS threshold was only exceeded for VHF cetaceans (harbour porpoise), and the impact range was 5 m. In conclusion, although vibrocore operations produce more variable underwater noise levels, with some measurements exceeding those of geotechnical drilling, both activities will lead to negligible acoustic impacts on marine mammals.	

4.3 Concluding the appropriate assessment of the plan or project alone

Table 4.3 Conclusion of the appropriate assessment alone	
(a) If Table 4.1, or the right hand column of Table 4.2 if applicable, is 'YES' for all features	**It has been ascertained that the plan or project, when considered alone, will not adversely affect the integrity of any European sites.**
~~**(b) If there are any 'NO's in the right hand column of Table 4.2**~~	~~**It has not been ascertained that the plan or project, when considered alone, will not adversely affect the integrity of one or more European sites.**~~
(c) Are there are any residual effects of the plan or project (net of mitigation measures) which, though not adverse	**NO**

on their own, could be significant when considered in combination with the effects of other plans or projects?	

6. Conclusion

HRA is not required because there is no conceivable impact on any European sites. (As documented in section 2.1)	
HRA is not required because the whole of the plan or project is directly connected with or necessary to the management of one or more European sites, for the purposes of conserving the habitats or species for which the site(s) is/are designated, and the plan or project is not likely to have a significant effect on any other European sites. (As documented in section 2.2 and 2.3)	
This project is a renewal of a current permission which complies with NRW agreed criteria for ruling out likely significant effects of a renewal without conducting a project-specific LSE test. Therefore, it is considered not likely to have a significant effect on any European sites, either alone or in-combination with other plans or projects. (As documented in section 3.1 of this form)	
The plan or project has been screened for likelihood of significant effects and is considered not likely to have a significant effect on any European sites. (As documented in section 3.2 of this form, and section 5 if applicable)	
In light of the conclusions of an appropriate assessment it has been established that the plan or project will not adversely affect the integrity of any European sites, taking into account any conditions or restrictions as applicable, either alone or in-combination with other plans or projects. (As documented in section 4 of this form, and section 5 if applicable)	**X**
In light of the conclusions of the appropriate assessment, it has not been ascertained that the plan or project will not adversely affect the integrity of any European sites, as documented in section 4 of this form, and section 5 if applicable. Approval for the plan or project cannot be given unless either: • **the plan or project specification, and/or the terms under which it might be approved, are modified so as to remove the risk of adverse effects, and a revised HRA is prepared, or** • **the plan or project (not being an SSSI consent*) satisfies the requirements for a derogation and a Derogation Notice is prepared and submitted for consideration by the appropriate authority, normally Welsh Ministers** **(*SSSI consents cannot be given as derogations)**	
Signed: J. Thompson **Name:** Jack Thompson **Position:** Senior Marine Licensing Officer	

Date: 23 January 2026	
Was this HRA conclusion an escalated decision? YES or NO	No

7. Consultation with the ANCB and how sections 2, 3, 4 and 5 of this HRA report (as applicable) take into account that advice.

Relevant section of the HRA report	Correspondence and/or meetings with the ANCB	Description of how the comments from the ANCB have been taken into account
3	02/03/2026	NRW A requested that marine mammals are screened in to the assessment due to the potential for noise/vibration from the works. Although no AEoSI is expected, evidence needs to be provided to demonstrate this.
4	09/04/2026	Marine mammals screened in to assessment. The applicant provided evidence to demonstrate that CPT and seismic CPT produce noise/vibration levels which are highly unlikely to result in AEoSI. Subsequently, NRW A provided a Form 3 agreeing with the conclusions of the HRA.

Appropriate nature conservation body (ANCB) response to an internal HRA consultation

This form should be completed by the team or individual providing the ANCB advice to the competent authority team

TO: Jack Thompson, Marine Licensing Team

FROM: Siân Cuthbertson, Marine Area Advice and Management Team

SUBJECT: Habitats Regulation Assessment of RML2576 Awel y Môr Offshore Array Area Geotechnical Survey

Thank you for consulting Marine Area Advice and Management Team on the above. Our comments are as follows:

Marine Mammals

NRW (A) considers that the Applicant has incorrectly indicated on the application form that activities that could generate underwater noise are not being undertaken. We consider that this is incorrect as the activities applied for within this application do generate underwater noise. Judgements regarding the degree of impact of noise should take place within the assessment of impact. Any perceived conclusions about a lack of impact should not exclude activities from being correctly included in section 7(b) and thus result in a lack of clarity when the subsequent relevant sections (7bi & ii), and the supplementary form are not completed.

NRW (A) requests that the Applicant provides evidence to support their statements in section 4 of the supporting information that *"Seismic CPT hammers are very low energy impulsive sources, typically producing underwater sound levels weaker than vessel engine noise"* in Section 3.4.3 and *"Any noise from the site investigation surveys will be limited (geotechnical works will result in low*

frequency sound, at a level within or below the typical sound levels produced by shipping)". The supporting information currently states that the "*potential underwater noise from vibrocores and CPTs will be less than that of geotechnical drilling*" and quotes a value of "*142–145 dB re 1 µPa rms @ 1 m (30–2000 Hz) for drilling.*" However, no evidence is supplied to support this, and values from literature have estimated vibrocoring can generate 187.4 dB re 1 µPa·m. (Chorney et al. 2011)[1].

Given the levels of noise generated from the activities applied for, NRW (A) advises that that marine mammal SACs should be included in the HRA due to the presence of a clear impact pathway. However, the information supplied by the Applicant would support the majority of the assessment. **If clarity around noise levels is attained, NRW (A) would not anticipate an Adverse Effect on Site Integrity for Marine Mammals.**

Marine Ornithology

NRW (A) considers that the proposed geotechnical surveys are unlikely to result in significant disturbance to the ornithological features of Liverpool Bay SPA. This is provided the Applicant commits to utilising established vessel transit routes and avoids large aggregations of seabirds rafting, if identified by an onboard marine mammal and bird observer. The short duration, limited spatial extent, and seasonality of the works **support the conclusion that the activity can be undertaken during the summer months without a likely significant effect on the features of Liverpool Bay SPA.**

NRW (A) advises that these measures should be adhered to in order to ensure compliance with the Habitats Regulations.

For all other receptors NRW (A) agree with the conclusion of the HRA.

Signed:

Date: 02/03/026

[1] Chorney NE, Warner G, MacDonnell J, McCrodan A, Deveau T, McPherson C, O'Neil C, Hannay D, Rideout B. 2011. Underwater sound measurements. In: Reiser C, Funk D, Rodrigues R, Hannay D, editors. Marine mammal monitoring and mitigation during marine geophysical surveys by Shell Offshore, Inc in the Alaskan Chukchi and Beaufort seas, July–October 2010: 90-day report. Houston (TX), Silver Spring (MD), and Anchorage (AK): Shell Offshore Inc., U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Marine Fisheries Service, Office of Protected Resources, U.S. Department of the Interior, Fish and Wildlife Service, Marine Mammal Management. 3; p. 3.1–3.113.

Cyfoeth Naturiol Cymru
Natural Resources Wales

Appropriate nature conservation body (ANCB) response to an internal HRA consultation

This form should be completed by the team or individual providing the ANCB advice to the competent autority team

TO: Jack Thompson, Marine Licensing Team

FROM: Siân Cuthbertson, Marine Area Advice and Management Team

SUBJECT: Habitats Regulation Assessment of RML2576 Awel y Môr Offshore Array Area Geotechnical Survey

Thank you for consulting the Marine Area Advice and Management Team on the above. Our comments are as follows:

Following the updated HRA received on the 31st of March 2026 NRW(A) are now satisfied and agree that the project will not adversely affect the integrity of any protected site, provided that all mitigation measures and methods listed in the licenced documents are followed.

Signed: 

Date: 09/04/2026